



**Value Added:** the economic, social and environmental benefits from creating incentives for the repair, maintenance, and use of historic buildings.



THE PRINCE'S REGENERATION TRUST

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# 1. Executive summary

## The economic, social and environmental benefits of creating incentives for the repair, maintenance, and use of historic buildings

Extending the Exchequer's *Listed Places of Worship Grant Scheme* would enable local communities across the UK to restore Britain's historic assets to full public use, creating employment, safeguarding distinctiveness and stimulating regeneration in some of the most deprived areas of the UK.

The proposal is to:

1. Extend listed places of worship VAT reimbursement grants to listed buildings owned by charities offering public access.
2. Use VAT 'refund' grants akin to the scheme for listed places of worship to create incentives for the re-use of up to 10 locally historic buildings in the UK's 88 most deprived areas.

These single, simple, targeted measures would deliver tangible benefits to local communities and local economies (particularly in some of the most deprived areas of the UK) and would play a small, but significant role in combating climate change. By extending VAT relief on the renovation of listed and community buildings the Treasury could deliver widespread community benefit, which would also result in real economic benefits to the Exchequer in year four. The two-part proposal would extend the existing VAT exemption for places of worship to historic buildings and distinctive community buildings in some of the most deprived areas of the UK.

As **nef's** research proves, the initial outlay for this scheme is between £13 and £48 million per year. However, the social, environmental, and local economic benefits mean that within four years the scheme would deliver a net and growing benefit to the Treasury.

- In the first year, the cost of the proposed scheme is £13 million, which is paid out in grants.
- Calculating the benefits in line with the 'heritage dividend'<sup>1</sup> the scheme begins creating a net gain to the Exchequer measured by jobs created, welfare benefits saved, and economic benefits in the fourth year.
- A value has been put on these benefits using existing data. However, while these gains are important, they fail to measure the full benefits of this scheme in increasing social capital through empowering local residents to improve their areas, and strengthening the social cohesiveness of communities.
- And, taking locally important historic buildings from the brink of demolition by placing incentives on their re-use and refurbishment would save 490 tonnes of carbon per year. This has huge environmental benefits as the carbon emissions resulting from demolition and rebuild compared with refurbishment and re-use are a staggering seventy times greater.

## The current VAT rules: a perverse incentive

The current VAT system for the repair and maintenance of historic buildings has several perverse consequences. At present, the rules:

- Give concessions only to major alterations, provoking more change to historic buildings than is necessary.
- Discriminate against small volunteer-led charities like building preservation trusts, thus discouraging participation at the community level because of added complexity and wasted volunteer time and effort.
- Dilute the effectiveness of existing public investment in the historic environment by increasing the already-high cost of maintaining our most important buildings.
- Encourage the neglect of community assets, often leading to the loss of historically important local buildings.
- Undermine environmental sustainability by making small repairs and re-use proportionately more expensive than energy-intensive and wasteful major works, demolition or new build.

## Changing the rules: the social, economic and environmental benefits

This proposal will extend the existing exemptions for places of worship to charities that make their listed buildings open to the public; and create a targeted measure to include locally significant buildings in the 88 most deprived local authorities. This will support regeneration and local enterprise, encourage the preservation of local distinctiveness, strengthen third sector involvement in local communities, promote volunteering, and underscore environmental sustainability in historic conservation.

The direct benefits of the proposed scheme include:

### Strengthening local communities and regeneration

- Encouraging community-led use and re-use of local assets.
- Boosting regeneration and local enterprise in some of the most deprived areas of the UK through the wider 'heritage dividend'.

### Supporting third sector capacity and volunteering

- Making more effective and efficient use of scarce third sector funds and the volunteer resources that underpin efforts to strengthen local communities and preserve local distinctiveness.
- Extending benefits to small charities that are similar to those currently available to trading companies that offset VAT costs against VAT on trading income.

### Encouraging sustainability and the preservation of the historic environment

- Reducing the long-term costs from major works that result from neglect and encouraging ongoing proactive repair.
- Promoting sustainable re-use of buildings and construction materials and conserving embodied energy.
- Reducing the incentive to make unnecessary major changes to listed buildings (in order to secure VAT exemption).

The benefits of this proposal are clear, particularly since a mechanism for achieving them is already in place. Extending the *Listed Places of Worship Grant Scheme* is a simple and effective way to reap wide-reaching social, economic, and environmental dividends. Heritage Link, which submitted a complementary

proposal to the Treasury in January 2007, and English Heritage<sup>2</sup> are supportive, and initial conversations with the Church of England and the Charities' Tax Reform Group also indicate support for the proposal.

This proposal presents evidence of the following three points:

1. The problems created by current VAT rules on repair and maintenance of listed buildings.
2. Extending the *Listed Places of Worship Grant Scheme* – a targeted and efficient solution.
3. The costs and benefits of extending the *Listed Places of Worship Grant Scheme*.

## 2. The problem

### Problems created by current VAT rules on repairs and maintenance to listed and historic buildings

#### VAT rules privilege change to historic buildings

Major projects that change and adapt listed buildings to new uses, provided they receive local authority consent, are zero VAT rated. Where historic buildings are repaired or restored and their appearance and character are not changed, the full rate of VAT is charged. This acts as a strong incentive to make more changes to historic buildings than are necessary in order to benefit from the exemption. This incentive to *change* is at odds with Government policy on planning for historic buildings, which aims to preserve the historic fabric and emphasises the desirability of repair over alteration.<sup>3</sup>

In cases like Anchor Mills in Paisley, Scotland, organisations like the Prince's Regeneration Trust, which convert listed buildings for new commercial and residential uses, are able to benefit from zero ratings in converting to 'relevant residential purposes' and the ongoing repair and maintenance are borne by the commercial entities and the private tenants that occupy the spaces. While this is a useful situation in cases like these, smaller local efforts to keep buildings in good repair, to restore them to their original uses, or to provide community, social enterprise or charity space, are excluded and disadvantaged.



Anchor Mills

#### VAT on repair and maintenance halts worthwhile repair and re-use of listed buildings

The cost of keeping listed buildings in good repair is notoriously high, because of the need to use materials that are not popular today and the highly specialised skills required to work with them. For this reason, the irrecoverable VAT on repair and maintenance that charities must pay out adds to the costs, stopping these projects going forward.

The examples below show the types of projects undertaken by smaller organisations, such as building preservation trusts, utilising local volunteer-led efforts. They show how the VAT costs incurred compare with the scale of repairs needed to bring local architectural gems back into public use.

### ***Howsham Mill, Howsham, North Yorkshire***

Howsham Mill is a Grade II listed Georgian watermill on the River Derwent in North Yorkshire. It is a unique example of an early Gothic Revival watermill, and was in practical use until 1947. After falling into disrepair and facing demolition, the mill is currently being restored as an educational centre promoting renewable hydro energy. The work is being undertaken by a small community-based charity and building preservation trust, the Renewable Heritage Trust, set up specifically to bring the mill back into use.



*Howsham Mill  
(Photo: Tony Bartholomew)*

Since the restoration project started three years ago, the charity has brought together 200 local supporters, as well as other volunteers through Community Service Volunteers and the Duke of Edinburgh's award scheme. The project has acted as a focus for community building in the area - a particularly significant local impact as the area contains a scattered collection of commuter villages due to its proximity to York. The charity will encourage ongoing voluntary commitment once the mill is up and running.

The cost of repair work to the main mill building, the wheel-chamber and outbuilding is estimated at £72,300 (the rest of the project involves major alterations and installation of a new water wheel). The charity expects to incur a VAT bill of £12,653 on the repair component of the project. If VAT relief were available, the amount saved would almost entirely pay for restoration of the roof on the wheel-chamber and outbuilding.

### **Locally important buildings in deprived areas**

While the VAT costs on repair and refurbishment prohibit work on listed buildings, they also constrain the re-use of locally important buildings that could aid in regeneration and promote local economic activity. The Hastings Trust Offices, the Bargehouse at Oxo Wharf, and village halls illustrate three types of projects that would benefit from the proposed scheme.

#### ***Hastings Trust Offices, 35 Robertson Street, Hastings***

The Hastings Trust is a charity that supports employment, training and volunteering initiatives in Hastings. Its headquarters is in a refurbished Victorian building located in one of the most deprived wards in the country. The building is in a conservation area, and stands on land significant in local history for being occupied by residents after land ownership disputes in the early 1800s (so much so that the occupiers declared their independence from the town).

The Trust bought the building in 1997 and undertook renovation work costing £120,000 (on top of the £65,000 it cost to buy the building). The building's purchase and refurbishment were funded by a variety of sources, including Single Regeneration Budget and English Partnerships funding, as well as a Charity Bank loan. The Trust paid full-rate VAT on the renovations – a total bill of £21,000. At the time this could have paid for two full-time trainee jobs, such as a resource centre worker and an environment project worker. As it was, the Trust ran out of money to finish the refurbishment work so the ten staff members ended up having to paint their own offices themselves.

The Hastings Trust is also a building preservation trust, and buys and renovates buildings for use by not-for-profit organisations, such as social enterprises and community groups. Because of the lower rents it charges, it is not in competition with other local landlords – it fills a gap within the local property market for social purpose organisations. VAT relief on refurbishment of these buildings (which include locally important buildings such as an old dairy) would therefore help the Trust to provide space for organisations working for the economic and social regeneration of Hastings.

### ***Bargehouse, Oxo Tower complex, Southwark, London***

The Bargehouse behind the Oxo Tower is an old industrial building that could be converted into arts/community facilities and retail units. It is currently used for temporary exhibitions, but needs continual patching up – the building’s insurers are concerned, for instance, about its water-tightness.

Here, costs prevented the Bargehouse from being renovated when work was done on the Tower itself. It would cost up to £6 million to renovate the Bargehouse, with a VAT bill of around £525,000. (Some VAT costs, on the renovations to retail space, could be reclaimed.) Coin Street Community Builders say the cost is the reason that work has not gone ahead, and that VAT relief would make it possible. Refurbishing the Bargehouse would benefit the local economy and community by reinforcing the regenerative effects from the renovations to the Oxo Tower.



*Bargehouse, Oxo Tower complex  
(Photo: Coin Street Community Builders)*

### ***Village halls***

Village hall refurbishments are prime examples of the local, community-based efforts that would benefit from VAT relief on renovations to locally important buildings. Around 6 per cent of village halls are listed, with 30 per cent in conservation areas. Unlisted village halls are usually locally significant buildings; the majority were built in the 1920s and 1930s, although many are converted Victorian school buildings.

Beyond their heritage value, village halls serve as important community hubs – for example in providing space for pre-schools and community activities, such as lunch clubs for the elderly. This is particularly so in rural areas. There are no national figures on the number of village halls in deprived areas, although an indication is given by Lancashire. There are approximately 160 village halls in Lancashire, where four of the county’s 12 districts are among England’s most deprived areas. This gives an average of 13 village halls per Lancashire district (including in the four most deprived districts).

Given their age, many village halls need refurbishment and modernisation. **nef**’s initial research has identified that these costs can range from £50,000 to £400,000 to bring a building up to scratch and to allow it to host activities benefiting the local community. Raising renovation funds typically falls to local societies and village hall committees, which rely on the voluntary efforts of local people. Local communities often struggle to secure funding for village hall renovations, as the example below illustrates, and VAT relief would make a significant difference to these community projects.

### ***Barley Village Hall, Barley, Pendle, Lancashire***

Barley Village Hall, housed in a nineteenth century Methodist chapel, is a focus for many community activities in this rural part of Lancashire. It is used by a variety of local organisations, including toddler groups, the Parish Council, the Women’s Institute and the local Young Farmers’ club. Barley itself is located in one of the most deprived areas of England.

The building has been used as a village hall for over 50 years, and in recent years has suffered from damp throughout and rot in the floors. It also needed general modernisation, such as new stairs to replace the steep and dangerous stairs put up in 1941 for ‘temporary’ access to upper areas.

After a long struggle to secure the necessary funding, the village hall committee and a few dedicated local people undertook repair and refurbishment work in 2006. The cost of this round of renovations, before VAT, was £52,480. No VAT relief was available on the work, so VAT was paid at the full rate – amounting to over £9,000, a large sum for a small community-run effort. The total amount paid for the village hall repairs was £61,663.

The £9,000 paid out in VAT could have covered the cost of additional repairs planned but not yet undertaken; for example, fixing leaks from damaged coping stones on the building’s gables, which is projected to cost £7,250. Alternatively, the



*Barley Village Hall*

VAT already paid could have been spent sand blasting and repointing the exterior stonework, which is expected to cost £3,900.

### **VAT rules put smaller charities with low trading income at a disadvantage**

Even if conversion enables zero rating, once a restoration has taken place, ongoing repair and maintenance works to all buildings incur full VAT. While trading companies may reclaim VAT as part of the balance between input and output tax, passing the VAT on to the 'final consumer' regardless of the building type, it is often impossible for charities to do this, making their repairs to historic buildings doubly costly. In principle, the charity is the 'final consumer'. In practice, this means charities pay more.

Smaller charities, especially those like local building preservation trusts set up to protect a locally important structure, are often small, voluntary, and not VAT registered. In order to have the opportunity to reclaim VAT they would need to become VAT registered, although they turn over far less than the recommended threshold of £60,000 or more. This adds a disproportionate administrative burden, and increases costs. It also means that these small voluntary groups must charge VAT on fundraising sales and the membership fees they receive from their neighbours. In addition, they pass on the costs of repair and maintenance to their 'customers', which are often small charities, micro-enterprises, and social enterprises unable to reclaim VAT for the same reasons. The following examples show the effects on small charities.

#### ***Pennybank Chambers, Clerkenwell, London***

Pennybank Chambers in Clerkenwell, London, is disadvantaged by current VAT rules that do not allow it to claim relief on repairs and maintenance. The charity that runs this locally important building offers workspaces solely to small creative sector businesses, designers and craftspeople. It could, as commercial enterprises do, 'opt to tax' the rents it charges to tenants and then recover the VAT it pays on repair and maintenance work. Because it wants to encourage creative activity, however, it has decided not to do this – if it did, its tenants would likely be priced out of the area.

As a result, the charity is at a disadvantage because it absorbs the cost of VAT on refurbishment and maintenance itself. This has meant it has had to put a self-imposed limit of £100,000 on renovation projects, which restricts its options on refurbishment work.

#### ***Stuckey's Warehouse, Langport, Somerset***

In the case of the current Stuckey's Warehouse renovation in the Somerset Levels, it is the building's prospective tenants – social enterprises and business start-ups – that will be disadvantaged by existing VAT rules. Like Pennybank Chambers, Stuckey's Warehouse does not get automatic VAT relief on repairs and maintenance. It has decided to take up the option to tax rents charged to its tenants so that it can recover the VAT paid on refurbishments and maintenance. This was felt to be the only viable course of action, as the scheme will otherwise become unworkable.

For future tenants, however, this means higher costs for their places in this Grade II listed building. Over a ten-year period, tenants will incur VAT expenditure of an estimated £4,088 per annum. As the Stuckey's Warehouse renovation explicitly aims to offer space to social enterprises and new small businesses, the added VAT burden will fall on many organisations that have social rather than commercial aims. At least half of the space is expected to be rented by organisations that are not VAT registered and therefore unable to recover the VAT charged. The overall effect is likely to lessen the redevelopment's positive impact in encouraging new businesses and social enterprises, and lead to fewer business start-ups and jobs created.



*Stuckey's Warehouse  
(Photo: Ecos Trust)*

## The current VAT regime is complex, often requiring costly advice

In order to minimise the VAT bill, these arrangements drive charities involved in heritage conservation to seek costly specialist tax advice, and creates myriad creative solutions, all within the bounds of the law. This puts small charities relying on non-specialist, non-expert local volunteers at a distinct disadvantage as they often lack the funds to pay for advice of this nature. In these instances, if they are aware of the option, they will often approach Her Majesty's Revenue and Customs (HMRC) directly for a ruling. This adds to the workload, cost and administrative burden on HMRC.

### *Oxo Tower and De La Warr Pavilion*

The Oxo Tower in Southwark, London and the De La Warr Pavilion in Bexhill-on-Sea are both iconic buildings whose refurbishment has spearheaded cultural and social regeneration in their local areas.

Negotiating complex VAT rules about exemptions has been costly for both buildings: for De La Warr it cost £45,000 (£25,000 for external advice and £20,000 of staff time) and for the Oxo Tower an estimated £40,000 (£20,000 for advice and another £20,000 of staff time). In each case, the charities concerned were able to claim some VAT relief on renovations because trading activities occur in the buildings.

Complex VAT exemptions are likely to disadvantage smaller charities even more. Smaller charities, like the one running Pennybank Chambers in Clerkenwell (see above), are not able to devote time or expense to negotiating VAT rules. In many cases small charities are not VAT registered or cannot undertake commercial activities to get VAT relief under current rules.



*Oxo Tower  
(Photo: Coin Street  
Community Builders)*

## Current rules offer no incentive to re-use local historic assets

Locally important historic buildings that are not statutorily protected are often nonetheless important landmarks or community assets. For this reason, many local authority conservation officers keep registers of these buildings, and refer to these buildings as 'locally listed'. Based on a survey of conservation officers in the most deprived local authorities, each local authority has around 300 buildings that fit this description.<sup>4</sup> The current VAT regime discourages the use/re-use, repair and maintenance of such buildings as there is no exemption to be had from carrying out significant alterations, and no incentive to use these assets is available. This encourages active demolition and redevelopment, or neglect until the building becomes dangerous and even more expensive to repair.

Conserving these buildings in good condition helps maintain the local character and distinctiveness that are central to the attractiveness of a location – to residents, businesses and visitors. Active use of iconic local buildings can play an important role in sparking and sustaining economic, social, and environmental regeneration.



*De La Warr Pavilion  
(Photo: De La Warr  
Pavilion)*

## VAT structures privilege tearing down buildings at huge environmental costs

Good buildings are incredibly energy-intensive to create. Given the recent Stern Report on climate change, the sustainability of preserving the embodied energy in historic buildings is another key reason to pursue re-use and repair. If the costs of transporting waste and construction materials to and from sites and the costs of rebuilding are taken into account, then re-using existing buildings is preferable in terms of net energy loss – a significant factor in minimising greenhouse gas emissions. This does not include the wider environmental costs of quarrying and production of construction materials, or the impact of disposing of demolition waste.

Once these are factored in, there are even stronger reasons why VAT relief for repairs and maintenance to historic buildings should be favoured on sustainability grounds. In our account of the costs and benefits of the proposed solution, a comparison of the environmental costs of demolition and rebuild versus refurbishing existing buildings is presented.

### 3. The solution

Extend listed places of worship VAT reimbursement grants to listed buildings owned by charities that offer public access and use VAT 'refund' grants akin to the scheme for listed places of worship to create incentives for the re-use of locally historic buildings in deprived areas

The proposal is to:

- Extend listed places of worship VAT reimbursement grants to listed buildings owned by charities offering public access.
- Use VAT 'refund' grants akin to the scheme for listed places of worship to incentivise re-use of up to 10 locally historic buildings in the UK's 88 most deprived areas.

The Listed Places of Worship Grant Scheme (LPoWGS), introduced by the Chancellor in 2001, now provides grants to reimburse the VAT costs associated with restoring and maintaining listed churches and other places of worship. This is both popular and effective.

Extending the scheme to all publicly accessible listed buildings owned by charities would be simple, clear and popular. In addition, grant relief of this type available to up to ten locally listed or locally important buildings being repaired or restored for community use in each of the 88 most deprived local authority areas would bring targeted, efficient support to communities. It would enable historic buildings of local, cultural importance to bring the social, environmental, and economic benefits to areas targeted by Government efforts.

Our proposed scheme would be of particular benefit to smaller community-based building refurbishment efforts run by charities that rely on local volunteers, such as building preservation trusts. Many of our case examples fall into this category. For these projects VAT relief would make a real difference. These smaller renovation projects typically involve buildings which will not attract significant funding from the major heritage bodies because the buildings are not listed Grade I or II\*. These projects assemble a patchwork of funding from a wide variety of sources including local fundraising. VAT refund grants would put the money back into the hands of these local initiatives, reaching a different population than the majority of English Heritage grants.

The precise details of the new scheme's operation will need to be refined. It is important that the scheme is simple and clear in the way it operates. One option is that local authorities from each area could be asked to manage the allocation for their area so as to identify the most worthy schemes. In general, it is anticipated that the existing administration for the LPoWGS could disburse the grants.

nef's initial research indicates that this scheme would be supported strongly by the heritage sector, as well as the Church of England and the Charities' Tax Reform Group. In addition, the Church of England's evidence shows that the LPoWGS has enabled more repair and maintenance to occur, and funds to go further. This is illustrated by the case study below. There is every indication that this effect would extend to other charities if the scheme were widened.

### **St Dunstan and All Saints Church, Stepney, London**

VAT relief from the LPoWGS has helped finance vital repairs to the historic St Dunstan and All Saints Church in Stepney, East London. A church was founded on the site in 952 and its bells feature in the old *Oranges and Lemons* nursery rhyme. In recent years, the deteriorating state of the church building has prompted almost £300,000 worth of repairs to the leaking tower and porch roofs, as well as to stonework copings.

The work was funded by £110,000 from English Heritage, paid net of VAT, with the remaining cost met through local fundraising efforts. St Dunstan's was able to recover some £37,500 of the VAT costs through the LPoWGS. This was fed directly back into the ongoing repair work, which was completed in 2006. In the rector's words, "The grant allowed us to undertake work in a highly deprived neighbourhood that would otherwise not have been done."



*St Dunstan and All Saints Church*

### **Benefits from this proposal**

There are several benefits to relieving the VAT on the repair and maintenance of listed buildings owned by charities:

- Repair and maintenance works on listed buildings would become more affordable.
- More repairs would be undertaken more quickly.
- Government funds which help to pay for these repairs would become more effective.
- The degeneration that leads to costly capital investment in alteration could be avoided, in some cases.

### **Restoring historic buildings prompts much wider economic, social, regeneration and environmental benefits**

The benefits of repairing and refurbishing listed buildings, and the potential for sparking regeneration by providing incentives for the re-use of local historic buildings are clear, demonstrable, and documented.

English Heritage has found that, on average, for every £10,000 invested in heritage buildings, the benefits accruing to the community include £46,000 of new investment, 41 square metres of improved commercial floor space, one new job, one safeguarded job and one improved home.<sup>5</sup>

Taking these figures as a guide, the £3 million of English Heritage grant funds currently spent on VAT could yield extra economic benefits of £14.4 million, over 50,000 square metres of improved commercial floor space, 300 new jobs, the same number of safeguarded jobs, and 300 improved homes.

According to nef's research, the social, economic, and environmental benefits accrue to the investment in both listed and unlisted historic buildings. The first two examples presented here, the De La Warr Pavilion and the Pendle Centre, are both listed. The first is a larger project, requiring millions of pounds, and the second is a smaller, local effort. Both have exerted effects on the local economy, from tourism to local business-to-business spending and increasing the livelihoods of local people. Both provide a cultural resource for the community and beyond, keeping local economies vibrant.

The second set of examples shows locally important but unlisted buildings. The first example is familiar to the regeneration community as a large and striking success – the Tate Modern's conversion of a disused power station in Southwark. The second is a smaller effort in a part of Bristol that, when it was restored, was on the edge of deprivation and decay. It is now noted as a major factor in the regeneration of South Bristol, enabling the area to experience a cultural and economic resurgence.

### ***De La Warr Pavilion, Bexhill-on-Sea, East Sussex***

Restoring the modernist, Grade I listed De La Warr Pavilion on the south coast has so far cost £7.8 million and triggered considerable regeneration in the surrounding area. De La Warr's catchment area includes some of the most deprived local wards, including the Bexhill ward of Sidley and the Hastings ward of Baird (where 60 per cent of children are from low-income households). Early estimates indicate the renovated pavilion's wider economic and social benefits include:

- Increased local employment: 10 to 15 new full-time staff, 10 to 15 new part-time staff and 60 casual staff have been taken on at the pavilion since the refurbishment; 85 to 90 per cent of staff are locally based.
- A 60 per cent increase in volunteer numbers: there are now 16 to 20 volunteers each year, largely for gallery and event-based activities. Volunteer hours total some 2,000 hours per year.
- An increase of 80 per cent in the number of artist educators used to deliver the pavilion's community programmes (the number now stands at 30).
- Four new small businesses (shops and galleries) have opened in the area since the building's refurbishment.
- Existing firms in the area have benefited from additional business: around 75 per cent of all suppliers to the pavilion are locally based. Local firms supply goods worth £30–35,000 to the pavilion's shop per year.
- Significant tourism gains as visitor numbers have escalated from 150,000 annually to 500,000 per year.
- The value of the pavilion has risen from £500,000 pre-refurbishment to £9 million following restoration. There have also been knock-on gains for properties in the surrounding area – anecdotal evidence from estate agents is that De La Warr's refurbishment has increased local house prices.
- Local residents have benefited from greater cultural and educational opportunities: space for public or community facilities has doubled (including the formerly disused main gallery and a new education studio), while schools and families have benefited from community programmes. In total, De La Warr has worked with 2,300 families through Sure Start schemes, 1,500 students on school visits, 130 teachers, and 2,000 adults.
- The refurbished pavilion has helped in local branding efforts to promote Bexhill-on-Sea, particularly those directed at attracting investment – De La Warr features prominently in the local Council's regeneration plan for potential investors to the area.



*De La Warr – before restoration  
(Photo: De La Warr Pavilion)*



*De La Warr – after restoration  
(Photo: De La Warr Pavilion)*

### ***Pendle Heritage Centre, Nelson, Lancashire***

Pendle Heritage Centre is located in one of the most deprived local authority areas of the country. A building preservation trust, the Heritage Trust for the North West, refurbished the complex of Grade II listed buildings at a cost of £4 million. The refurbishment has had numerous flow-on economic and social benefits, helping to regenerate the community and contribute to a sense of cultural vibrancy in the area.



*Pendle Heritage Centre  
(Photo: Leader Times  
Newspapers)*

- As a tourism attraction, the heritage centre has seen an increase of visitors from 5,000 at the start of renovation work in 1980 to 100,000 in 2005 – sustaining and boosting business to the local village's 30 shops.
- The heritage centre itself has a sizeable impact on local businesses: 60 per cent of its shop's stock is locally sourced, as well as all of the food in the cafeteria and shop.
- Twenty-one staff are employed by the heritage centre, all of whom live locally.
- Pendle Heritage Centre has over 40 volunteers on an ongoing basis.

In addition to listed buildings' potential for helping to make communities more vibrant and economically viable, locally important historic buildings offer the potential for regeneration, re-using existing landmarks and historically important cultural resources. While the first example is rather striking, even a fraction of these benefits brought to deprived local authorities would represent a substantial improvement in communities.

### ***Tate Modern, Southwark, London***

The conversion of a former power station into the Tate Modern has had an enormous cultural and economic impact on London, and on Southwark, one of the most deprived local authority areas, in particular. In 2001, McKinsey was commissioned to assess the economic benefits that the Tate Modern had brought after one year of operation. It found:

- An estimated total economic benefit of around £100 million, of which £50–70 million was specific to Southwark.
- The direct creation of 467 jobs at the Tate Modern, on top of 283 employed during construction. Of the gallery's staff, 30 per cent live locally.
- An overall employment effect of some 3,000 jobs created in London, over half of which were specific to the Southwark area.
- A 23 per cent increase in hotel and catering businesses in the surrounding area from 1997 to 2000. This generated an estimated 1,800 new hotel and catering jobs in Southwark.
- Significant flow-on economic regeneration effects following the Tate Modern's opening: property prices, commercial investment levels, commercial development and increases in new businesses in Southwark all rose at rates faster than the corresponding London average.
- A tremendous effect on tourist numbers to the area: after only one year, the Tate Modern had become the third, most-visited tourist attraction in Britain.



*Tate Modern  
(Photo: Tate, London  
2007)*



*Turbine Hall, Tate Modern  
(Photo: Tate, London 2007)*

### **The Tobacco Factory, Southville, Bristol**

The Tobacco Factory in Southville, Bristol was refurbished between 1995 and 2000 into an arts and community centre. It preserved a culturally important building – which would otherwise have faced demolition – in what was then a deprived area on the fringe of one of the country's 88 most deprived wards. The area is no longer considered so, partly as a result of the regeneration resulting from the unlisted building's £1.2 million refurbishment. The renovation has resulted in specific economic and social benefits:



*Tobacco Factory  
(Photo: George Ferguson)*

- The creation of new businesses: the number of businesses on the local high street has doubled in the last ten years, including the creation of eight new independently owned shops. Space was made available for local businesses in the Tobacco Factory itself, especially for those that are independent, local and part of the creative sector.
- The Tobacco Factory directly employs 45 staff, all of whom live in Bristol and 90 per cent of whom live within walking distance of the building. Other offices within the complex employ an additional 100+ staff.
- Volunteering activity is encouraged in order to run activities at the centre and work front-of-house.
- Approximately 75–80 per cent of products and services are locally sourced, and all building and construction work is procured from local firms.
- The building helps attract visitors to south Bristol, which in the past was often overlooked as a tourist destination.
- Following the building's renovation, an old cinema opposite the Tobacco Factory has been bought with the intention of converting it into flats. A nearby disused brewery has been bought by the Tobacco Factory's owner and is being restored back into use as part of a mixed employment and residential scheme.
- There has been a knock-on effect on residential development in the area, accompanied by increased house prices. Local estate agents frequently cite the proximity of the Tobacco Factory in their sales pitches.
- The Tobacco Factory has formed a strong part in the local identity of south Bristol, particularly in the wake of refurbishment. This has helped challenge negative perceptions of the area, an impact known locally as the 'Tobacco Factory effect'.
- Greater community building and cultural opportunities are offered through the site's theatre, community market, and spaces for community use.
- Educational outreach occurs through the theatre's work in running classes and working closely with local schools.

These benefits are present in varying degrees in the restoration, repair and re-use of listed and locally important buildings. Extending the LPoWGS to enable the cost of VAT to be refunded via a grant to charities and regeneration agents will help to pump-prime efforts to keep communities vibrant.

### **Environmental benefits**

Whilst the environmental benefits of repairing, refurbishing and saving buildings from demolition do not result in savings of public expenditure in the short term, the impacts in terms of climate change are substantial. As the recent *Stern Review on the Economics of Climate Change* shows, halting the speed of climate change is essential. The key finding of the 700-page report was that the longer climate change is left unmitigated, the greater the economic cost to society; the so-called

'Procrastination Penalty'.<sup>6</sup> Immediate and aggressive mitigating action is necessary.

Using existing buildings rather than demolishing and building new structures preserves their embodied energy, decreasing primary energy use and, therefore, atmospheric carbon dioxide emissions. 80 per cent of UK's primary energy is currently derived from fossil fuels, and must be reduced if we are to prevent runaway climate change.<sup>7</sup> Although repairs and maintenance will also require energy, **nef** has provided an estimate of the carbon emissions saved by refurbishing historic buildings in deprived areas rather than demolition and new build (Appendix 3).

The results are astonishing. A simple calculation reveals that approximately 70 times more carbon is embodied within a newly built one-storey office building principally made from steel compared to the basic-grade refurbishment of an already existing building of similar size.<sup>8</sup> This does not include carbon emissions associated with the demolition process including transport of materials to landfill. When factored into the equation, the benefits of providing incentives for the re-use of existing buildings on environmental grounds are clear.

Historically important buildings in deprived areas currently offer regeneration agents little incentive to repair and re-use them and the VAT relief grants could make a substantial contribution to the economic viability of this environmentally responsible approach.

## 4. Modest costs, demonstrable benefits

### The long term economic, social and environmental benefits of incentives for the repair and re-use of historic buildings

nef's analysis shows that **the first year's rebate grants for this scheme would total approximately £13 million.**

As take-up increases over time, the benefits and the costs rise to **a maximum grants cost of £48 million** in the tenth year.

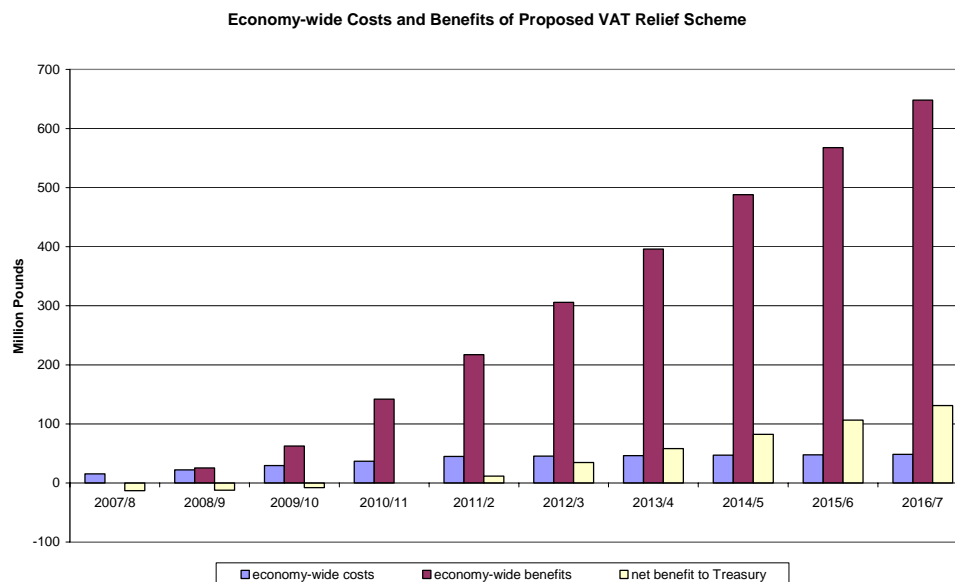
However, the social, environmental, and local economic benefits created would mean that the **scheme would deliver a net gain to the Exchequer of £11.5 million in the fourth year, and that the benefit delivered would continue to grow over the life of the scheme.**

- Calculating the benefits in line with the 'heritage dividend' the scheme begins creating a net gain to the Exchequer measured by jobs created, welfare benefits saved, and direct economic benefits in the fourth year.<sup>9</sup>
- A value has been put on these benefits using existing data. However, while these gains are important, they fail to measure the full benefits of this scheme in increasing social capital through empowering local residents to improve their areas, and by strengthening the social cohesiveness of communities.
- In addition, placing incentives on bringing locally important historic buildings back into use rather than demolishing them brings a 70:1 advantage in terms of carbon costs for each building not demolished. Our estimates show that the scheme could save 490 tonnes of greenhouse gas from emission into the atmosphere.

As shown Appendix 1 our estimates detail both the costs and benefits arising from both parts of the scheme: that which targets listed, publicly accessible buildings owned by charities and the element that targets non-listed historic buildings in deprived areas.

The graph overleaf shows the cost of the scheme, the value of the benefits that accrue to society, and the net effect on the Exchequer. Calculations relating to the uptake and impact of the scheme were based on data for the LPoWGS from 2001 to 2006, the National Amenity Societies-commissioned study of repair and

maintenance costs of listed buildings,<sup>10</sup> and recently accessed DTI construction industry statistics.<sup>11</sup>



Note: The net benefit to Treasury is given by the extra tax revenue generated by additional economic activity, less the cost of VAT relief scheme grants. For detailed figures on cost and benefits, see Appendix 1.

## Estimating the costs

The overall cost of the proposed scheme is estimated at £13 million in the first year of operation, rising to a maximum of £48 million in the tenth year. **nef** has used the most up-to-date figures available, backed by surveys of repair and maintenance projects across the UK.

### Listed buildings owned by charities and open for public access

According to the National Amenity Societies study, the cost of building works to all listed buildings in 1998 was estimated at £5,900 million at 1998 prices.<sup>12</sup> (This figure includes the value of repair and maintenance work, alterations and work for which VAT was reclaimable as an input tax.) Assuming that the repair and maintenance of listed buildings has kept pace with the industry average, this would mean the total cost of works to listed buildings was £9,500 million in 2005, at current prices.<sup>13</sup>

If we assume that five per cent of this expenditure relates to listed places of worship,<sup>14</sup> this leaves about £9,000 million of expenditure for works to listed buildings that are not churches or other places of worship. Using a conservative estimate that 15 per cent of this is for buildings owned by charities and open for public access,<sup>15</sup> the estimated current spending on alterations and repairs to buildings eligible for the first part of our proposed scheme is £1,350 million.

In order to work out the cost of our proposed scheme, we multiplied this figure of £1,350 million by: (a) estimated take-up rates over the life of the scheme; and (b) the VAT rate, adjusted to allow for the value of building works that do *not* bear the cost of VAT (i.e. alterations to listed buildings or work for which VAT is reclaimable as an input tax). Estimates of take-up levels were derived from those for the listed places of worship scheme; whilst the VAT rate adjustment is based on findings from the National Amenity Societies study about the extent of building work subject

to full-rate VAT.<sup>16</sup> Appendix 1 sets out our detailed calculations on take-up and resulting scheme costs, for each year of the scheme's operation.

According to our calculations, we estimate that this part of the scheme will cost £7 million in the first year, rising to an annual cost of £42 million in the tenth year. This is the direct cost of grants to be paid out, and excludes both the net benefits the scheme would deliver to the Exchequer over time and the benefits to society more widely.

### ***Bringing historic buildings in deprived areas back into use***

The second part of our proposed scheme applies to buildings of local historic importance in deprived areas. Under the scheme, up to ten buildings in each of the 88 most deprived local authority areas would receive grants refunding VAT paid on repairs and refurbishment. The cost of this part of the scheme is expected to be in the region of £6 million per year.

The total value of repair costs to buildings eligible under this part of the scheme is given by multiplying the average cost of repair and maintenance to historic buildings by 880, the proposed cap set on the number of buildings in deprived areas that could be granted VAT relief in any given year. The inflation-adjusted figure for this average cost is £39,620,<sup>17</sup> which (multiplied by 880) gives a total cost of refurbishment works to our eligible buildings of £34.9 million. Multiplying this by the 17.5 per cent full rate of VAT gives £6.1 million. This is the maximum amount that would be paid out each year in grants to refund repair and maintenance VAT costs for historic buildings in deprived areas, and therefore represents the annual gross cost to the Exchequer from this part of the scheme.

## **Estimating the benefits**

**nef's** estimates of the direct economic value of the benefits of this scheme are based upon the English Heritage 'heritage dividend'. As expressed in the cost-benefit analysis (Appendix 1), for every £10,000 invested in heritage projects an additional £46,000 of additional investment is leveraged. The study also indicates that this £10,000 investment also corresponds to one job created, one job safeguarded, and the creation of approximately 41 square metres of commercial floor space.<sup>18</sup> The economic benefits of job creation and business space are therefore included in calculations for the revenue received by the Exchequer, and are compared with the cost of the grants made to reimburse VAT costs.

### ***Environmental benefits***

Whilst the environmental benefits of repairing, refurbishing and saving buildings from demolition do not result in direct savings to the Exchequer in the short term, the impacts in terms of climate change are substantial. As the recent Treasury-commissioned *Stern Report on Climate Change* shows, halting the speed of climate change is essential.<sup>19</sup> Using existing buildings rather than demolishing and building new structures preserves their embodied energy. Repairing and maintaining, rather than undertaking a large structural overhaul also preserves energy.

In this analysis (Appendix 3), **nef** has provided an estimate of the carbon benefits of saving historic buildings in deprived areas from demolition. There is currently little incentive to repair and re-use these buildings in regeneration areas. As noted earlier, the ratio of carbon emissions from rebuild compared with refurbishment is a staggering 70:1. Looking at the benefits in this way offers a clear motivation for creating incentives for refurbishment and re-use. However, the benefits are likely to be far greater, as this 70:1 benefit is in terms of carbon emissions alone and

doesn't take into account the environmental impact of demolition or waste to landfill.

In terms of the cost-benefit analysis, if only one in four of the projects benefiting from the VAT refund grants in deprived areas were saved from demolition, the benefits would be valued at £37,000 for the saving of 490 tonnes of carbon emissions. While this figure seems small, this is due to the way in which environmental degradation is currently measured. Clearly, there are environmental benefits that add to the social, economic, and regeneration benefits.

### **Now is the time to act**

The social, environmental, and economic cases for extending grant relief to listed, publicly accessible buildings owned by charities and to re-using historic buildings in deprived areas far outstrip the costs.

The measures proposed here will bring benefits to the charities and areas that would be best served by this small but substantial boost to restoration and repair budgets.

Now is an excellent time to act, thus signalling the Government's commitment to local volunteers working together to preserve and to build on the distinctiveness of their communities; its commitment to using heritage as a lever for regenerating deprived communities; and its commitment to halting the speed of climate change through more sustainable treatment of historic buildings.

# Appendix 1

## Cost-benefit analysis

Note: Excel spreadsheet attached to electronic version of this report.

CB ANALYSIS																					
line	£ million 2006 prices	2007/8	2008/9	2009/10	2010/11	2011/2	2012/3	2013/4	2014/5	2015/6	2016/7	2017/8	2018/9	2019/20	2020/1	2021/2	2022/3	2023/4	2024/5	2025/6	2026/7
<b>COSTS</b>																					
<b>A: Listed buildings</b>																					
1	memo item - value of all eligible schemes	1,403	1,431	1,460	1,489	1,519	1,549	1,580	1,612	1,644	1,677		assumed to grow at 2% per annum in real terms								
2	take-up	10%	20%	30%	40%	50%	50%	50%	50%	50%	50%		follows LPOW grant scheme take-up patterns 2001 to 2006								
3	memo item - gross cost to Exchequer																				
3	(assumes 5% net rate)	7.02	14.31	21.90	29.78	37.97	38.73	39.50	40.29	41.10	41.92		preliminary estimates to VAT team were at 10%, however this increases the benefits commensurately.								
4	new schemes (dept on price elasticity)	6.66	13.60	20.80	28.29	36.07	36.79	37.53	38.28	39.04	39.82										
<b>A: 88 most deprived local authorities</b>																					
5	Cost of schemes (£M)	34.87	34.87	34.87	34.87	34.87	34.87	34.87	34.87	34.87	34.87										
6	generated activity	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72										
7	memo item - gross cost to Exchequer	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10										
8	<b>Overall cost to Exchequer</b>	<b>13.12</b>	<b>20.41</b>	<b>28.00</b>	<b>35.88</b>	<b>44.07</b>	<b>44.83</b>	<b>45.60</b>	<b>46.39</b>	<b>47.20</b>	<b>48.02</b>										
9	<b>Total extra direct investment</b>	<b>15.38</b>	<b>22.31</b>	<b>29.52</b>	<b>37.01</b>	<b>44.78</b>	<b>45.51</b>	<b>46.24</b>	<b>46.99</b>	<b>47.76</b>	<b>48.54</b>										
<b>BENEFITS</b>																					
10	leveraged new investment (£M) Memo item		70.75	102.63	135.78	170.22	206.01	209.33	212.71	216.16	219.68		The projections to the right show benefits accruing from investment during 2007/8 to 2016/7. Each year's investment has benefits counted only for ten years.								
11	new job (no)		1,538	2,231	2,952	3,701	4,478	4,551	4,624	4,699	4,776	4,854									
12	cumulative no of new jobs		1,538	3,769	6,721	10,421	14,900	19,450	24,075	28,774	33,550	38,403	36,865	34,634	31,682	27,982	23,504	18,953	14,329	9,630	4,854
13	safeguarded jobs																				
14	new jobs (value) (£M)		20.19	49.47	88.21	136.78	195.56	255.29	315.98	377.66	440.34	504.04	483.86	454.57	415.83	367.26	308.48	248.76	188.07	126.39	63.71
15	new jobs (value to Exchequer) (£M)		5.69	13.95	24.87	38.56	55.13	71.97	89.08	106.46	124.13										
16	new volunteers benefit		0.23	0.33	0.44	0.56	0.67	0.68	0.69	0.70	0.72	0.73									
17	cumulative volunteers benefit		0.23	0.57	1.01	1.56	2.23	2.92	3.61	4.32	5.03	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76
18	increase in commercial floor space (M2)		63,061	91,477	121,019	151,721	183,616	186,574	189,590	192,667	195,806	199,007									
19	cumulative increase		63,061	154,538	275,557	427,277	610,893	797,467	987,057	1,179,725	1,375,531	1,574,538	1,511,477	1,420,000	1,298,981	1,147,261	963,645	777,071	587,481	394,813	199,007
20	increased turnover (£M)		25	62	110	171	244	319	395	472	550	630	605	568	520	459	385	311	235	158	80
21	increased profit from turnover		5	12	22	34	49	64	79	94	110	126	121	114	104	92	77	62	47	32	16
22	return to Exchequer (VAT) (£M)		2.52	6.18	11.02	17.09	24.44	31.90	39.48	47.19	55.02										
23	benefit from reduction in future rehabilitation				30.76	44.62	59.03	74.01	89.57	91.01	92.48	93.98	95.52	97.08							
24	tons of carbon saved	490.30	490.30	490.30	490.30	490.30	490.30	490.30	490.30	490.30	490.30	0.00									
25	carbon reduction credit (£)	34,321	34,321	34,321	34,321	34,321	34,321	34,321	34,321	34,321	34,321										
26	Overall benefits	0.03	25.50	62.43	142.06	217.18	305.73	396.05	488.16	567.40	647.93	729.75	706.05	671.01	525.51	464.80	391.34	316.68	240.82	163.73	85.39
27	net cost/benefit flow	-15.35	3.19	32.92	105.06	172.40	260.23	349.80	441.17	519.64	599.39	729.75	706.05	671.01	525.51	464.80	391.34	316.68	240.82	163.73	85.39
28	discounted cost/benefit flow	-15.35	3.08	30.73	94.75	150.24	219.11	284.57	346.75	394.62	439.79	517.33	483.61	444.06	336.01	287.15	233.58	182.63	134.19	88.15	44.41
29	net cost/benefit to Exchequer	-13.12	-12.20	-7.87	0.01	11.58	34.74	58.26	82.17	106.45	131.14	1948.28	net benefit to Exchequer over ten years								
year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<b>Other input items</b>																					
ratios expressed per £10,000 of investment unless specified																					
30	net VAT rate	5%	Deprived area new scheme generation rate:									25%									
31	real growth rate	2%	volunteer hours ratio:									30									
32	no of schemes per LA area	10	volunteer hours benefit (£/hour):									5									
33	Mean size of scheme (£)	39,620	reduction in future rehabilitation ratio with lag of 4 years:									2									
34	no of most deprived LA areas	88	increase in commercial floor space:									41									
35	new investment ratio	4.6	increase in turnover ratio to floor space (£/sq m/p.a.):									400									
36	new job ratio	1	increased profit ratio to turnover:									20%									
37	safeguarded job ratio	1	discount rate:									3.5%									
38	value per job (£ p.a.)	13,125	price elasticity of investment in R&M:									95%									
39	benefit to Exchequer per job (£ p.a.)	3,700	mean rate of VAT on increased turnover:									10%									
40	tons of carbon saved/£10000 of investment	0.5625	carbon reduction credit @£70/tonne:									70									
												<b>Total discounted benefit over full analysis period</b>									
												<b>4699.42</b>									

## Appendix 2

### Notes on cost-benefit analysis: assumptions

#### Conclusions

The proposal is estimated to have a net present value of over £1.9 billion over ten years, on the basis of conservative estimates. Taking into account benefits for ten years after each year's investment raises the net present value to £4.7 billion. The Exchequer will bear a net loss for only the first three years of the programme and will show a net gain of over £390 million over the ten years.

#### General Notes

- a) Schemes carried out in one year are assumed to provide benefits in the following year and for a further nine years.
- b) The net present value figure takes account of benefits accruing only in the ten years following each year's investment. Offsetting revenues accruing to Treasury in years after 2016/17 are ignored.

#### Input Assumptions Column 1

- c) Row 30: net VAT rate. The 1999 Built Environment VAT study reported that the net rate of VAT on all repair and maintenance (which includes zero-rated alterations and amounts offset-able against output VAT) for listed buildings was 3.3 per cent and that the rate for National Trust properties was 3.1 per cent. We have assumed 5 per cent for the purposes of this calculation, which we think is realistic. Increasing the assumed rate would increase the gross costs to the Treasury but would also ramp up the benefits in proportion and would mean an equivalent increase in returns to the Exchequer from increased employment, increased VAT receipts from generated activity etc.
- d) Row 31: we have assumed a 2 per cent real growth rate in activity in the listed buildings' sector over the study period, reflecting the growth of recent years. We think this is realistic but reducing this growth rate makes no material difference to the level of benefits.
- e) Row 32: we illustrate the benefits for ten schemes per deprived area. The spreadsheet allows exploration of a different size of project.
- f) Row 33: the mean size of a scheme is derived from the 1999 study, (excluding schemes for major alteration to residential and commercial use, which are not to be included in the project) increased by the index of repair and maintenance costs from the DTI.
- g) Row 34: the number of most deprived Local Authority areas in the country.
- h) Row 35: the ratio between grants and leveraged investment found by the English Heritage 'Heritage Dividend' study.<sup>20</sup>

- i) Row 36: the number of new jobs created per £10,000 of heritage investment found by the Heritage Dividend study.<sup>21</sup>
- j) Row 37: the number of safeguarded jobs per £10,000 of heritage investment. *NB: No value has been assigned to this in our calculations.*
- k) Row 38: value to the economy per job created: based on a **mean** cost per hour (to employers) of £7.50, including National Insurance etc.
- l) Row 39: value to Treasury of a created job, based on a study by the Joseph Rowntree Foundation.<sup>22</sup>

There are some offsetting financial savings for the Exchequer from getting the unemployed into work in the form of higher tax revenues and reduced benefit expenditures. New calculations estimate that these amount to an annual average saving of £3,712 per additional person in work.

- m) Row 40: tonnes of carbon saved per £10,000 of investment in repair and maintenance. This figure is based on an estimate of 9 tonnes of embedded carbon in a building equivalent to a small house<sup>23</sup> and an assumption that 25 per cent of *generated* projects under the non-listed buildings element of the scheme result in the refurbishment of a building that would have otherwise been replaced by a new one.

### **Input Assumptions Column 2**

- n) Row 30: deprived area generation rate: we assume 25 per cent of the schemes would not have gone ahead without the offer of VAT relief. Strictly speaking, this should mean that the VAT relief on these generated schemes should not count as a cost to Treasury, as they would not have gone ahead without the project. To remain on the conservative side we have ignored this.
- o) Row 31: volunteer hours ratio: we assume every £10,000 of grant generates 30 hours of volunteering a year. This is based on our own research and is conservative.
- p) Row 32: we value this volunteer work at the minimum wage (rounded).
- q) Row 33: £1 of investment in repair and maintenance today is assumed to result in a saving of £2 (on average) of more drastic rehabilitation four years later. Of course the multiple for, say roof repairs, is much greater, while that for say, interior decoration, might be lower.
- r) Row 34: according to the Heritage dividend study, £10,000 of grant led indirectly to an average of 41 square meters of improved commercial floor space.<sup>24</sup>
- s) Row 35: we estimate that this leads, on average, to £400 increase in turnover. (**nef** research.)
- t) Row 36: we estimate that this can be expected to generate a gross profit rate of 20 per cent.
- u) Row 37: following the Green Book, we use a discount rate of 3.5 per cent real.
- v) Row 38: we assume that for every £100 of VAT rebated on listed buildings, £95 is spent on more repair and maintenance. This is a combination of some schemes which have finance as a constraining factor and which can find matching finance (with a price elasticity of perhaps 2) and those schemes which have a fixed amount of work to be done with any savings devoted to the core work of the charity in question.
- w) Row 39: mean rate of VAT on increased turnover takes into account zero-rating on food, books etc.
- x) Row 40: carbon reduction credit: We value each tonne of embedded carbon at £70.<sup>25</sup>

### **Calculations**

- a) Line 1: based on the 1999 Built Environment Study of the listed buildings' share of all repair and maintenance, increased to 2005 level based on DTI figures for repair and maintenance, and assuming that 15 per cent of the value of all listed schemes is

carried out by charities whose buildings are open to the public, and so are eligible for the proposed scheme.<sup>26</sup> Given that only 7.6 per cent of Grade I and II\* listed buildings are owned by charities, this is likely to be on the high side. Estimated cost to the Treasury of the scheme is therefore likely to be on the high side.

- b) Line 2: take-up of the scheme is assumed to follow the experience of the LPOWGS, which appears to have peaked with a take-up rate of 50 per cent after five years.
- c) Line 3: gross cost to the Treasury based on the value of eligible schemes times the take-up rate and net VAT rate (see input notes above).
- d) Line 4: effect of scheme on extra repair and maintenance in the sector (see input notes above), based on Vat rebated and price elasticity.
- e) Line 5: cost of deprived area schemes based on the number of schemes per local authority and mean cost of each scheme (see input notes).
- f) Line 6: a proportion of this is activity that would not have taken place without the rebate.
- g) Line 7: gross cost to the Treasury is the full rate of VAT (17.5 per cent) rebated on the total value of the deprived area schemes.
- h) Line 8: overall cost to the Treasury is the sum of line 3 and 7.
- i) Line 9: Total extra investment in repair and maintenance generated by the proposal is line 4 plus line 6.
- j) Line 10 gives the total investment, including indirect investment, generated by the proposal, according to Heritage Dividend estimates. It is a memorandum item as it does not feed directly into the cost-benefit calculations.
- k) Line 11 gives the number of new jobs created (see input notes). This is line 9 (of the previous year) times the new job ratio.
- l) Line 12 adds jobs created this year to jobs created in previous years.
- m) Line 13 allows for safeguarded jobs to be input if desired.
- n) Line 14 gives the total value of new jobs to the economy (the number of jobs times value).
- o) Line 15 calculates the return to the Treasury of new jobs (number times value to the Treasury).
- p) Line 16 calculates the value of volunteer hours (last year's investment times number of hours generated times value per hour).
- q) Line 17 adds the value of volunteer hours generated this year to that generated by previous years' investments.
- r) Line 18 estimates the commercial floor space generated by last year's investment.
- s) Line 19 adds this year's floor space to that generated in previous years.
- t) Line 20 calculates the increased turnover resulting from the increase in floor space.
- u) Line 21 estimates the increased profit resulting from the increased turnover at the average gross profit rate.
- v) Line 22 estimates the return to the Exchequer from VAT on the increased turnover.
- w) Line 23 estimates the value of future reduced rehabilitation costs based on repair and maintenance four years earlier.
- x) Line 24 estimates the tonnes of carbon saved this year by restoring instead of building anew.
- y) Line 25 values the benefit from this reduced embodied carbon dioxide.
- z) Line 26 summarises the benefits from the proposal (line 14+line17+line21+line 25).
- aa) Line 27 deducts from line 26 the cost in line 9 for the benefits net of cost.

- bb) Line 28 discounts this net figure at the discount rate.
- cc) Line 29 sums the effect on the Treasury (line 15 + line 2).

## Appendix 3

### The environmental impact of new build and restoration

Description	Value	Units
<b>New Build</b>		
Initial embodied energy for a generic single-storey office building in the UK -principally a steel structure (based on Yohanis and Norton 2002 estimation)	9.50	GJ/m <sup>2</sup>
	2639.10	kWh
Conversion factor of primary energy to <b>kg of carbon</b> *	0.05	kgC/kWh
kg of <b>carbon</b> per metre squared	119.55	kgC/m <sup>2</sup>
†Social cost per metre squared	<b>8.37</b>	£/m <sup>2</sup>
<b>Refurbishment</b>		
<sup>1</sup> Embodied energy for major refurbishment (basic-grade)	0.14	GJ/m <sup>2</sup>
	37.50	kWh
kg of <b>carbon</b> per metre squared	1.70	kgC/m <sup>2</sup>
†Social cost per metre squared	<b>0.12</b>	£/m <sup>2</sup>
<sup>2</sup> Embodied energy major refurbishment (medium-grade)	0.18	GJ/m <sup>2</sup>
	50.00	kWh
kg of <b>carbon</b> per metre squared	2.27	kgC/m <sup>2</sup>
†Social cost per metre squared	<b>0.16</b>	£/m <sup>2</sup>
<sup>3</sup> Embodied energy major refurbishment (top-grade)	0.25	GJ/m <sup>2</sup>
	69.45	kWh
kg of <b>carbon</b> per metre squared	3.15	kgC/m <sup>2</sup>
†Social cost per metre squared	<b>0.22</b>	£/m <sup>2</sup>
<b>Comparison between New Build and Refurbishment</b>		
<b>Ratio</b> of new build embodied energy/carbon : basic-grade refurbishment per metre squared	<b>70:1</b>	
<b>Ratio</b> of new build embodied energy/carbon : medium-grade refurbishment per metre squared	<b>53:1</b>	
<b>Ratio</b> of new build embodied energy/carbon : top-grade refurbishment per metre squared	<b>38:1</b>	
<b>Notes</b>		
*The carbon emission factor for primary electricity is used in calculations for Climate Change Agreements, where all energy use is reported in terms of primary energy, and is the best conversion factor available for estimation of emissions from a variety of different energy uses (Carbon Trust).		
† The social cost of Carbon is estimated to be £70 per tonne. Estimate taken from Clarkson and Deyes (2002) in a review of the literature on the social cost of Carbon.		
<sup>1</sup> Median of range 0.10-0.17 GJ/m <sup>2</sup> used (from Howard and Sutcliffe, 1994)		
<sup>2</sup> Median of range 0.13-0.23 GJ/m <sup>2</sup> used (from Howard and Sutcliffe, 1994)		
<sup>3</sup> Median of range 0.17-0.34 GJ/m <sup>2</sup> used (from Howard and Sutcliffe, 1994)		

#### References:

- N. Stern (2007), The Economics of Climate Change: The Stern Review (Cambridge University Press, 712pp)
- R. Clarkson and K. Deyes (2002), 'Estimating the Social Cost of Carbon Emissions', Government Economic Service Working Paper 140.
- Y.G. Yohanis and B Norton (2002), 'Life-cycle operational and embodied energy for a generic single-storey office building in the UK', Energy, 27, 77-92.
- N. Howard and H. Sutcliffe (1994), 'Precious Joules', Building, 11, 48-50
- DTI (2006), UK Energy Sector Indicators 2006 <http://www.dti.gov.uk/files/file29802.pdf>
- Carbon Trust, Energy and carbon conversion fact sheet, <http://www.carbontrust.co.uk/publications/publicationdetail.htm?productid=CTL004>

## Appendix 4

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## Endnotes

<sup>1</sup> English Heritage (2002) *Heritage Dividend 2002: Measuring the Results of Heritage Regeneration 1999-2002*, English Heritage, London.

<sup>2</sup> English Heritage (2003) *VAT – Seize the Time*, English Heritage, London.

<sup>3</sup> Planning Policy Guidance note 15: *Planning and the historic environment* 1994, e.g. Annex C.

<sup>4</sup> In February 2007, **nef** surveyed 25 of the 88 most deprived local authorities, with a response rate of 50 per cent. The median number of buildings locally listed was 300. The responses ranged from 100 in London Borough of Enfield and in Brighton and Hove, to nearly 6,000 in Bradford. It should also be noted that 'local lists' are not kept in some boroughs, due to the varied resources for building conservation officers in different areas. In cases where a local list is not kept, applicants would need to meet pre-established criteria for local importance.

<sup>5</sup> English Heritage (2002), op. cit.

<sup>6</sup> Stern N (2007) *Stern Review on the Economics of Climate Change*, HM Treasury, London. Available at [http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm) [21 February 2007].

<sup>7</sup> UK Department for Trade and Industry (2006). UK Energy Sector Indicators 2006 <http://www.dti.gov.uk/files/file29802.pdf> accessed February 2007.

<sup>8</sup> The differences in embodied carbon decrease proportionately for a medium or top-grade refurbishment programmes, with 52 and 38 times less embodied carbon respectively, compared to a new build. The calculations assumed that the buildings adhere to current building regulations in terms of operational energy efficiency.

<sup>9</sup> English Heritage (2002), op. cit.

<sup>10</sup> Jeremy Eckstein Associates, Cultural & Heritage Sector Research (1999) *VAT and the Built Heritage: The impact of VAT on repairs and alterations to listed properties. Commissioned by the National Amenity Societies*, Tax Group.

<sup>11</sup> UK Department for Trade and Industry. Output And Employment In The Construction Industry: Third Quarter 2006 Tables 1 and 3a. <http://www.dti.gov.uk/files/file29802.pdf> accessed February 2007.

<sup>12</sup> Jeremy Eckstein Associates (1999), op. cit.

<sup>13</sup> Based on DTI construction industry statistics, op. cit. Construction industry inflation data is available to 2005.

<sup>14</sup> Based on results from the Church of England Research and Statistics Department's 2003 parochial return survey, with an uplift to account for non-Church of England places of worship.

<sup>15</sup> This assumption is based on patterns of listed building ownership for buildings on English Heritage's Buildings at Risk register, adjusted to take account of the size of buildings and whether they are publicly accessible.

<sup>16</sup> Jeremy Eckstein Associates (1999), op. cit. This study found that in 1998 only 3.3 per cent VAT was paid on building work to listed buildings, presumably because the bulk of the work comprised alterations or because the VAT cost on repairs and maintenance was reclaimable as an input tax. We have used a more conservative adjusted VAT rate of 5 per cent in our calculations, so as not to underestimate the potential fiscal cost of the scheme to the Exchequer.

<sup>17</sup> Based on findings of the Jeremy Eckstein Associates (1999) study, op. cit.; and adjusted for construction industry inflation to 2005, DTI construction industry statistics, op. cit.

<sup>18</sup> English Heritage (2002), op. cit.

<sup>19</sup> Stern (2007), op. cit.

<sup>20</sup> English Heritage (2002), op. cit.

<sup>21</sup> Ibid.

<sup>22</sup> Gardiner, Karen (1997) 'Bridges from benefit to work: A review' Joseph Rowntree Foundation

<sup>23</sup> Source: Master Builder. March 2005 and **nef** estimates

<sup>24</sup> English Heritage (2002), op. cit.

<sup>25</sup> Source for carbon reduction credit

<sup>26</sup> Jeremy Eckstein Associates (1999), op. cit.

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