ULSTER ARCHITECTURAL HERITAGE SOCIETY

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LOSE OR REUSE

MANAGING HERITAGE SUSTAINABLY

Lydia Wilson

Preface

Whenever the Restoration team went to Northern Ireland lots of problems were always brought to our attention. There were concerns about the proliferation of poorly designed buildings going up in the countryside, worries about the low take up of Heritage Lottery Fund's Townscape Heritage Initiative for conservation areas and the lack of grants generally.

And then there was traffic charging through small towns and the supposed lack of public interest in the built environment. All those sorts of things. But we also saw some great buildings - from Derry to Belfast and out along the coast. We explored linen mills, canals, gaols, castles, churches and country houses and saw a lot more of a beautiful country than I, certainly, had ever experienced before. I had worked in Belfast previously making Puckoon and had met people then who were already making a difference with arts centres and community projects.

It was in Northern Ireland too, I seem to recall, that there were problems with slightly over-enthusiastic supporters rigging the Restoration vote with multiple calls but then that reflected the huge, ungovernable support that people could give. I never met louder or more passionate advocates of individual buildings. So I know that people have commitment and I despair of any political party that claims that people really don't care. I think we all care, but sometimes we don't see what we can do or how we can help.

This is a very useful and timely booklet. We need to be aware that, quite apart from the historic gains, we are living not in some ever demanding present but as part of a longer thread of continuity. The buildings around us are an investment. Some may be shoddy and in need of a spruce up but as we strive to wipe the labels off our plastic bottles and stick the beer bottles in the brown glass bins and the wine bottles in the green glass bins, we should also remember that cement production is one of the biggest producers of carbon dioxide in the world and that a dilapidated house or a redundant factory is a storage box of energy. It is energy that we can reuse and recycle if we choose to. Everything is done to encourage people to build new, even to the extent of getting grants from government to replace dwellings. It is crucial that we realize that one of the best contributions to sustainability is to recycle our buildings. Old buildings are like our senior citizens. Let's treat them with the respect they deserve.

Griff Rhys Jones
Writer, actor and presenter of BBC's 'Restoration' programme

Foreword

In the stimulating world of properly understanding the built heritage it could be argued that the issue of sustainability is nothing new - we have simply, and recently, misplaced our awareness of what it actually means. We risk reinventing the word because of a failure to recognise the close symbiotic relationship which previously existed between the natural and built environment, the skill and effort put into constructing our historic buildings, and the latent embodied energy which still exists within them. For more than half a century many have habitually disregarded this unique legacy in favour of the new. On the assumption that this is what we should all aspire to, we have become accustomed to the pressures and arguments that the past should be ignored in favour of a more hermetically sealed, artificially warmed and vented 'sustainably designed' new environment.

In this much needed publication the reasons behind why we have moved so far off track are ably exposed, as are the arguments to redress the balance in our current approach. In revealing the hazards and consequences of using modern synthetic materials, it explodes the myth of 'maintenance-free' claims, and explores the inevitable consequences. It offsets the arguments for undertaking work using replacement materials by revealing the worth of traditional construction. It promotes relatively simple steps that can be taken to preserve the integrity of the historic environment whilst establishing the added value that can be demonstrated by retaining and re-using the existing building stock as culturally, socially, financially and personally viable entities.

Against a background where there is a slow emerging awareness that the built heritage has some inherent value, a case is put forward that does much to promote that realisation on a wider front. However, the argument also recognises that there has already been a considerable loss of identity, and an evaporation of abilities to address that effectively. Much needs to be reversed to be successful in making that emerging understanding a true reality. Promoting the need to recognise that the same local knowledge, skills and materials used to put the buildings together in the first place are also needed to repair and maintain them in the future, the basis of a sound sustainability argument, in its truest sense, is well made.

In witnessing current attempts to emulate the quality and significance of traditional construction with modern alternatives, some might counter that things are not all that bad. But, the authentic original is that much better, and a well-chosen series of building case studies readily reveal the importance of their recognition, the benefits of their retention, and the joy of their resurrection. The promotion of these gains heralds the potential emergence of more vibrant communities who fully identify with their regional and local identity in their successful and innovative reuse of their historic buildings.

We intuitively knew how to be 'sustainable' for over 5000 years, and have had to instigate a learning process from the errors committed over the past 50 to be successful again. This well referenced, ably written, and appropriately sourced volume takes us a considerable distance along that route of rediscovery.

Ingval Maxwell OBE, DA Dun, RIBA, FRIAS, AABC, FSA Scot
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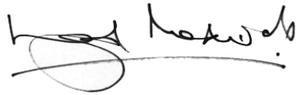

CHAPTER ONE

Sustainability

Sustainable adj. (of economic development or the utilization of natural resources) able to be maintained at a particular level without causing damage to the environment or depletion of the resource.

Government often refers to targets for 'sustainable development' or 'sustainable growth', but what do such phrases or concepts really mean? Sustainable development is an overused phrase, employed to convey a multitude of meanings – from growing our economy to managing consumption. Seen by some as inherently contradictory, its recognised international definition is:

Development which meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland Commission, 1987).

While it is unlikely that everyone will agree on the means to achieve this goal, there is a growing awareness of the need to act. Living sustainably means taking every opportunity to reuse or recycle resources sometimes taken for granted. It means having an awareness of how our actions will affect the countryside or town we live in, and trying to minimise negative impacts. Such a way of life is, in fact, a simple historic concept based on a duty of 'stewardship' or social responsibility: if we look after the places we cherish then we can pass them on to our children and grandchildren.

But we all need places in which to live, work and enjoy ourselves. So how can we meet our needs without stripping future generations of the resources they will need? This booklet examines the role of historic buildings in providing sustainable solutions in Northern Ireland, in particular in catering for housing needs.

Buildings – their construction, renovation or maintenance – can make an active contribution towards reducing our impact on the environment. Each chapter in this booklet looks at different aspects of how historic buildings of all types can help us live more sustainably – from reducing construction waste to preserving the character of the countryside, from limiting the production of energy-intensive modern materials to maintaining a vibrant high street. Current research informs contrasts between the cost of reusing old buildings, and that of demolishing them and building anew.

Each chapter concludes with a case study. These demonstrate how historic buildings can minimise construction waste, promote the use of environmentally-friendly materials, reduce the creation of planet-warming carbon dioxide, contribute to maintaining rural character, ensure traditional skills are retained, encourage a vibrant local economy and reinforce a sense of identity and civic pride.

Waste

Reusing heritage to reduce waste

A certain generation in Ireland, as elsewhere, grew up with the maxim 'waste not, want not' and no philosophy could be simpler for the retention and reuse of the country's historic built environment. (Ó'Dúlaing, 2004)

Mersey Street, Belfast

Around a quarter of the UK's yearly landfilled and incinerated waste is generated by the demolition and construction of buildings. Only 4 per cent of the 70 million tonnes of building waste produced each year is recycled: this is a shameful statistic. The production of new building materials – 6 tonnes for each and every person living in the UK every year – accounts for 10 per cent of our national energy consumption (Kent, 2000).

Reusing buildings saves waste and reduces the need for new building materials. If we can reduce the amount of building materials we need, we will reduce our impact on the environment. A 2004 House of Commons paper issued by the Office of the Deputy Prime Minister (ODPM) explained:

It is simply better in sustainability terms to use and recycle old buildings than to demolish them and build new ones.

The conservation of existing structures is also part of a broader United Nations policy framework to protect the global environment. The UN Conference on Human Settlement (Habitat II) points out:

'Conservation, rehabilitation and culturally sensitive adaptive reuse of urban, rural and architectural heritage are also in accordance with the sustainable use of natural and human-made resources.' (UN, 1996)

Mill Street, Caledon

Historic buildings, all buildings in fact, contain 'embodied energy'. That is, the energy used to produce the materials which make up the building or, put another way, the energy contained in the building that would be wasted if that structure was demolished. Colm Murray, architecture officer of Ireland's Heritage Council, explains:

There is carbon locked in the timber used for a building, in the heat energy needed to kiln-fire a brick, or in the kinetic energy of a labourer who raised stone upon stone to build a wall. (Murray, 2002)

Our existing stock of buildings represents a huge investment in embodied environmental capital and energy, so why not explore every possible way of reusing them? To demolish a Victorian terraced house is to throw away enough embodied energy to fill a car with 15,000 litres of petrol and drive it around the world five times (English Heritage, 2004). None of this energy is wasted if the building is refurbished. A new terraced house, constructed from modern materials and with modern techniques, contains an even higher equivalent level of embodied carbon dioxide than the Victorian house. The adaptation and reuse of a Victorian or Edwardian terrace can, therefore, be much more environmentally sustainable than demolishing it to make way for new buildings.

So why demolish?

If a building has deteriorated beyond repair, it may be necessary to demolish it but this option should always be a last resort. Is the building really irreparable, or, as sometimes happens, is it being declared so by a developer or owner simply because this paves the way to a fast profit?

Lisburn Courthouse

Patrick Rossmore Collection, Irish Architectural Archive

If a 'waste not, want not' approach to housing development is adopted then every option for repair – so often possible for old buildings – should be explored. Heritage bodies and developers who work with historic buildings agree that much of the UK's historic building stock is robust and highly adaptable and, with regular maintenance, could survive almost indefinitely.

An often-used excuse for demolition is that there is no longer a use for a building. However, obsolescence was the excuse used for the now-regretted demolition of many fine, potentially reusable or convertible buildings in the 1950s, 60s and 70s. If we are trying to live sustainably, the claim that a building has outlived its useful life should not be acceptable for a structure that is repairable. With imagination such buildings have huge potential for reuse, as noted by one major campaigning body:

'Time has clearly shown that the sorts of building once derided as unwanted and obsolete are now in high demand. Simply damning a building as obsolete ignores the potential for creative reuse or adaptation, as well as changing trends and fashions – down at heel areas are repeatedly the next fashionable place to live.' (SAVE Britain's Heritage, 2006)

Lisburn Court House is a case in point: it was demolished in 1971 in spite of local opposition and favourable reports about its condition. Its attractive city centre location also made it a good candidate for reuse. Charles Brett commented in his book on court houses published in 1973 that, 'the building was by no means beyond restoration when it was demolished' and the Ulster Architectural Heritage Society in its 1969 list of historic buildings in Lisburn noted that, 'this building is of quite exceptional quality and well merits complete restoration'.

A sustainable urban solution

Northern Ireland needs a further 208,000 homes by 2015.

The Star Factory, Londonderry

According to the Department for Regional Development's 2006 housing review, Northern Ireland needs a further 208,000 homes by 2015 (DRD, 2006a). By 2025, the initial 250,000 figure envisaged in the Regional Development Strategy will also need to be revised upwards, to accommodate a projected population level of over 1.8 million. To mitigate the environmental effect of such growth, we need to reuse as many existing buildings as possible. Existing redundant buildings offer a route to achieving some of the housing target, without literally and metaphorically costing the earth.

CASE STUDY

Minimising Waste

Parliament Buildings, Stormont

Parliament Buildings, Stormont

Northern Ireland is home to one of the most high profile examples of sustainable building reuse in the UK. When the Northern Ireland Assembly was re-established in 1998, politicians resisted the temptation to vote themselves taxpayers' money to erect a new parliament building. Instead, they opted for a £20m refurbishment of Parliament Buildings at Stormont, a structure that had served intermittently as a seat of government since its opening in 1932. An imposing neo-classical structure faced in Portland stone and set in acres of parkland, Stormont was designed by Sir Arnold Thornley. The restored building and its green surroundings now act as a magnet for walkers and sightseers.

Some argue that expenditure on repairs to historic buildings is more likely to generate local employment and use local materials than spending on new construction. This was certainly the case at Stormont. A spokesman for Karl Construction, the main contractor for the restoration, noted in UAHS (1999):

The vast majority of the work was carried out by local people, proving that the skills and expertise of the past are still there and can respond to the challenge being set. Stone carving, gilding, intricate joinery, marble and terrazzo, fibrous plaster, cast bronze – all were carried out by Northern Ireland craftsmen and craftswomen.

The approach of the Northern Ireland Assembly contrasts with Scotland and Wales, where new parliamentary buildings were commissioned and initial estimates of cost exceeded. The far-sighted and commendable reuse of Stormont, an existing historic building containing huge amounts of embodied energy, set a sustainable example to the rest of the UK. Reusing existing building fabric will almost always minimise unnecessary financial and physical waste.

Parliament Buildings, Stormont, before,during and after restoration

Consarc Design Group and Chris Hill Photographic

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Cost

Reusing heritage to save money

There is hardly anything in the world that some man cannot make a little worse and sell a little cheaper, and the people who consider price only are this man's lawful prey. (Ruskin, 1893)

Tesco Metro, Belfast

Environment and Heritage Service

A recent study commissioned by Dublin City Council compared the costs of reusing a variety of existing buildings with the cost of demolishing and building anew (Carrig Conservation et al, 2004). It found that constructing new buildings on brownfield sites was more expensive than retaining and reusing existing buildings, except where the extent of building repair and refurbishment needed was extremely, and unusually, high. Crucially, the study found that, depending on the extent of repairs needed, overall development costs could be halved by reusing an existing building. Dublin City Heritage Officer Donncha Ó'Dúlaing noted:

'The study findings support the acknowledged international view that the re-use of buildings minimises the depletion of non-renewable resources and is therefore essential to sustainable development.' (Ó'Dúlaing, 2004)

These findings are supported by research in the north west of England, where it was found that the cost, over the course of 30 years, of repairing and maintaining a typical Victorian terraced house was between 40% and 60% cheaper (depending on the level of refurbishment) than replacing it with a new home. The repair and refit of a typical Victorian terraced home in Nelson, Lancashire, was in the region of £24,600, while a more substantial refurbishment was estimated at £38,500 (English Heritage, 2005b). The cost of demolition and rebuilding was estimated at £64,000 (SAVE Britain's Heritage, 2006).

The message is clear: repair and refurbishment is cost effective.

Christ Church, Belfast

The study for Dublin City Council also made a comparison between the environmental costs involved in repairing an old building and the equivalent cost of knocking it down and replacing it with a new one. The results gave the retention of old buildings the environmental upper hand:

'The results show that a refurbished existing building performs better in environmental terms than a hypothetical newly-constructed building on the same site. In the buildings assessed for this report, the environmental impact per m2 is less in the refurbished building than in the hypothetical redeveloped building.' (Carrig Conservation et al, 2004)

The House of Commons 2004 committee paper on the role of historic buildings in urban regeneration admitted that the environmental performance of historic buildings – so often wrongly cited as one of their failings – could be 'as good as new build projects'.

That tepid endorsement does not take account of the environmental costs of every new-build project: either the loss of green space if the new building is constructed on a greenfield site, or – in the case of some brownfield sites – the embodied energy squandered by demolishing an existing building to make way for the 'environmentally-friendly' new one.

Clearly, wherever a choice exists, there are strong environmental arguments for reusing old buildings. English Heritage (2005a) notes:

When the energy used in demolition, site remediation and the construction of new houses is considered, there is a strong environmental argument for promoting the reuse of the historic built stock wherever a choice exists.

Lifecycle costs: the true costs of maintaining a building over its whole life

The cost of maintaining buildings of different ages over their entire projected lives differ. However, Carrig Conservation's study found that reused buildings continue to provide cost savings throughout their extended lives.

Poorly-maintained historic brickwork

Hearth

Furthermore, recent research for English Heritage (SAVE Britain's Heritage, 2006) found that older houses cost less to maintain and occupy over their long-term lives than more modern housing. Maintaining a Victorian terraced house costs £1,000 less per year than maintaining a similar-sized building erected in the 1980s. This is largely due to the fact that older buildings tend to be constructed of more durable materials than modern buildings. This is discussed further in chapter 4.

The government's Pathfinder scheme, which proposed the demolition of thousands of nineteenth century terraces in the north of England, has generated tremendous debate. It raises questions as to when retaining a historic building becomes economically unviable, necessitating demolition. Judging by the uproar of communities affected by the proposed demolitions, the answer is a resounding 'not yet'. Anti-demolition campaigners enlisted the help of ITV's television programme 'Tonight with Trevor McDonald', which proved that a house destined for demolition and replacement (at a cost of around £60,000) could be restored for £25,000. Far from being worthless or uneconomic to repair, many down-at-heel houses can, with minimal expenditure, be made into smart, comfortable, modern homes which also retain their value.

Lessons can be learnt from the English experience. There are undoubtedly some urban areas in Northern Ireland where politicians and civil servants have often been too eager to spend public money on expensive demolition projects without fully exploring – or even understanding – the cheaper option of restoration.

CASE STUDY

Cost

Portrush Town Hall, Co Antrim

Portrush Town Hall

Coleraine Council and Hearth Revolving Fund gave a lead in sustainable building practice by opting to restore rather than demolish Portrush Town Hall, a fine example of Victorian municipal architecture, solidly built in red brick. The building was closed in 1997 due to its poor condition. A plan to knock it down and rebuild in a similar style was proposed in 1999, at an estimated cost of £1.75m. This scheme was eventually rejected in favour of restoration, which cost £1.6m. £1m of this cost was covered by grants paid out only because of the building's architectural and historical importance (it is grade B1 listed). Value indeed for the local ratepayer. In addition only 30% of the bricks needed to be replaced, rather than the 70% initially suggested by those advocating its demolition.

Portrush Town Hall is an important example of how Northern Ireland's heritage can be reused cost-effectively and sustainably: the restoration saved money while also reducing the needless production of new building materials. At Portrush, costs would have been even less if the building had been properly maintained prior to, and after, its closure. Historic buildings which are left to deteriorate will, of course, need more work to bring them back from the brink. The old adage of a stitch in time saves nine is very appropriate here.

Portrush Town Hall: Cost Breakdown	Grants Received:	
Total Restoration Cost 2005/2006 (Approximate) £1,600,000	Heritage Lottery Fund	£961,000
	Environment and Heritage Service	£119,000
	Coleraine Borough Council	£500,000
	Total Grants Received	£1,580,000

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Patton, M. (2006) Portrush Town Hall. Perspective, 15 (3), May/June, pp58-61.
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CHAPTER FOUR

Longevity

Learning lessons from the past to provide longer-lasting buildings in future

When we build let us think we build for ever. (Ruskin, 1893)

Repairing and reusing a historic building is clearly less wasteful and usually less costly than demolishing it and building a new one but the overall success of a restoration project also depends on the quality of the materials used, and the skill with which they are applied. Understanding how a historic building works and using materials which work in harmony with – rather than against – the existing fabric will prolong the life of the structure, allowing it to provide a 'sustainable' home not just now, but for future generations. Furthermore, the production of some modern materials has a very negative impact on our environment.

Modern building materials and methods first started appearing towards the end of the nineteenth century. After the Second World War, there was an almost palpable break with the traditions and norms of the past, and the building industry was no exception. Post-war rebuilding was carried out in flexible, mass-produced and – in pure cost terms – cheap materials like pre-cast concrete, breeze blocks and artificial 'slates'. In the 1960s, new roads carved their way through, or tightly around, city centres and high rise flats provided a seemingly idealistic solution to a shortfall in habitable housing.

At the beginning of the twenty first century, however, there is growing recognition of the downside of redesigning cities to accommodate cars more comfortably than people, of building towers which fail to foster any sense of community and belonging, and of using 'cheap' materials whose production and relatively short life-span contribute disproportionately to global warming and the degradation of the planet. In the UK, repairable buildings are still demolished to make way for short-lived and energy-intensive replacements. In 2006 a steel-reinforced concrete block in London's Portman Square was demolished just over forty years after it was built: in 1962 it had replaced a structurally-sound (but then unfashionable) 1780s brick terrace.

Architect and sustainability expert Robin Kent contrasts the mass-market approach to cheaply-erected new buildings with the more holistic, environmentally-friendly approach of our ancestors:

> By contrast with modern factory processed, energy intensive, composite building materials, transported hundreds or thousands of miles to construct highly serviced 'sick' buildings, the construction of most of our historic buildings was broadly sustainable. Their materials were mainly locally sourced, with a high proportion of renewable resources, such as timber, straw, reed and hair, and produced by labour intensive methods, without costly industrial plant and without chemicals and pesticides. Still used for nearly 70 per cent of the world's housing, such materials are usually biodegradable or environmentally benign. (Kent, 2000)

Old buildings were built to last – and can be almost endlessly repaired. Reusing a historic building actively contributes to the recycling process, and therefore minimises the mining or creation of new materials, reduces waste and paves the way to a more sustainable way of life. When it comes to where we live, we will all benefit if we can re-learn the art of treading lightly on the planet's resources.

The source of many of the gases which cause global warming is the houses we live in: we use energy to heat our houses, but heat leaks out through walls, windows, doors and unlagged lofts. It is therefore up to all of us to do what we can to minimise the effects of our habitation, including insulating lofts, ensuring that windows and doors fit well and taking basic steps to save electricity.

Modern building regulations, which govern things like the minimum insulation requirements of new windows, are designed to reduce our impact on the environment, and rightly so. However, building regulations are designed specifically for new buildings, and take little account of the fact that historic buildings (pre-dating, as they do, modern central heating) were designed to be as draught proof as possible.

Impact of modern materials on the environment

Using clay to make bricks, or stone to make slates, means that we are using the earth's natural resources. Unlike most modern, engineered materials, these resources can be almost endlessly recycled and reused. Robin Kent (2000) cites the example of Scottish slate, the roofing material used by the majority of historic buildings in Scotland, which is now entirely reused, quarrying having ceased in 1955. Even traditional materials which consume resources in production, like lime and bricks, are capable of recycling or reuse.

There are many new construction materials with which we could contrast less energy-hungry, reusable building materials. Two particularly nasty environmental performers – widely used in Northern Ireland and particularly damaging to our stock of historic buildings – come immediately to mind:

- PVC-u (unplasticised polyvinyl chloride), widely used for replacement doors, windows and downpipes; and
- Cement, mistakenly used to seal the exterior of historic buildings in order to protect them from water penetration. In fact, cement render serves to trap moisture inside old buildings, potentially leading to catastrophic structural damage.

PVC-u and the environment

PVC is an inherently unstable material constructed from a cocktail of environmentally-damaging chemicals and stabilisers. Because of this, the production and disposal of any type of PVC creates chemical waste, which is released twice: once during manufacture – a process which uses up many times the amount of energy required to produce a wooden window frame – and again when the material is disposed of, by incineration, in landfill sites or, to a very limited degree, by recycling. This chemical waste ends up in the environment and adds to the level of persistent toxins and organochlorides in the air, soil, water, food chain and human bodies. PVC contains six of the world's fifteen most serious industrial pollutants, as identified by the EU.

PVC has a relatively short lifecycle of around 20 to 30 years. When double-glazed PVC-u replacement windows were first mass-marketed in the UK in the 1960s and 70s, their biggest selling-point was that, unlike down-market old timber, the new material would last indefinitely, no-maintenance guaranteed. One ambitious slogan boasted 'You only fit double glazing once so fit the best...' However, thirty years later, the customers who fell for the first hard-sell are often unpleasantly surprised to find a new generation of salesman trying to sell them a PVC-u upgrade to replace their once-in-a-lifetime purchase. And nowadays, not even the most reputable window manufacturers will offer a guarantee for longer than 10 years.

The point is, there is no such thing as a long-lasting, maintenance-free building product. PVC-u doors and windows need to be cleaned every six months or dirt embeds itself in the material; prolonged exposure to ultra-violet light from the sun 'chalks' the surface, making it grainy and dirt-retentive, and pollution and sunshine eventually combine to yellow the surface and attack the structure, making the PVC increasingly brittle and prone to cracking. It is ironic then, given the maintenance-free myth peddled by PVC salesmen, that DIY stores have now started stocking paint specifically for PVC windows.

And then there is the problem of getting rid of the failing PVC once it has outlived its useful purpose in our homes, as doors, windows or downpipes. Incineration, landfill or recycling are the only answers. However, incinerating one tonne of PVC creates 0.9 tonnes of waste salts, which are still toxic, and recycling is problematic. In fact, only around 10% of a failed PVC window can be reused to make new PVC, which then requires bulking out with yet more stabilisers and chemicals. Landfill is not much better: according to a European Commission study on PVC published in 2000, significant quantities of PVC additives will continue to leach out of landfills in the future, and PVC recycling levels are unlikely to rise above 18% in future.

PVC-u vs. wood

Ordinary buildings in Ireland rely greatly for their beauty and ornamentation on the arrangement of their windows. These buildings, with their harmonious blend of windows and proportions, form the quietly attractive streets and towns that are a pleasing backdrop to our daily lives. It is not just the shape of the windows that creates this visual harmony. It is the pleasantly aged timber and glass, the appearance of the sash or casement, the mellowed old brick and stone, all gently rounded and softened by centuries of life, that together create the character of a building or street. (Roche, 1999)

Wooden windows and doors are much more sustainable than PVC, as long as the wood is from well-managed forests. Look out for the FSC logo, which means the wood has been approved by the Forest Stewardship Council.

Most importantly, however, wood is also repairable, which reduces the need to fell timber or produce more PVC for new windows. When a wooden frame starts to rot, flake or deteriorate, a carpenter can replace the unsound pieces with new bits of wood at a fraction of the cost of a replacement, providing a window that will last almost indefinitely. The Building Research Establishment tested the performance of an unmaintained softwood window frame, and found that after 28 years, it showed no signs of flaking, peeling or cracking and, while it showed some discolouration, structurally it was completely sound. Wooden windows do need to be properly painted and maintained, but if they are properly looked after they will last and last – some of the oldest sash windows in the UK, at Hampton Court Palace in London, date from the late 1600s.

In the most extreme cases rotten timber windows may need to be completely replaced. The old windows can then be stripped and mulched down for a hundred different reuses.

To stop precious energy escaping from historic wooden or metal windows, take simple steps to have them draughtproofed or consider installing secondary glazing, which provides added insulation by way of a second tier of glass, fixed close to the original. Installed sensitively, it is cost effective, reduces heat loss by up to 20%, cuts noise pollution and will not destroy the character of the historic building (English Heritage, 1994a). Note also that lagging the loft, where most heat in a building is lost, will provide much swifter environmental and financial benefits than even secondary glazing.

If considering replacing windows with PVC, the following key facts should be considered:

- Although PVC or wooden double glazing can roughly halve heat loss through window openings, the cost of installation means it takes at least 60 years to pay for itself in saved energy costs. (English Heritage, 1994b).
- In most cases, old windows can be repaired, draughtproofed and re-hung to slide smoothly and shut snugly at a fraction of the cost of installing new windows.
- Estate agents recommend protecting the value of houses by repairing and preserving characterful period features like wooden windows, fireplaces and cornices. BBC Good Homes magazine found in 2002 that removing wooden windows can reduce the value of a house by at least 10%. Liz Singleton, of Singleton and Daughter estate agents in Berkshire, warns (quoted in Cleaver, 2004):

If you want to know how to take £20,000 off your property overnight, fit PVC-u windows.

Cement and the environment

The manufacture of cement accounts for 3% of 'greenhouse gases' produced worldwide (Kent, 2000). As we continue to encourage industrial development – and countries like China and India embrace our 'western' way of life, with its motorways, factories and infrastructure underpinned by concrete and cement – the environmental impact of manufacturing this building material will only increase. It is unrealistic, perhaps, to use this booklet to urge limitations on the use of cement worldwide, but every step to reduce reliance on this energy-intensive, environmentally-unfriendly material is one to be cheered. There is a more environmentally-friendly alternative to cement and concrete. For this, we must again look to the traditions of our ancestors, and their use of lime for mortars and renders.

Cement vs. lime

Lime is less energy-hungry than concrete or cement. In fact, lime mortars and renders actually consume carbon dioxide as they set.

Whereas modern buildings rely on hard renders like cement to seal walls and exclude moisture, old buildings rely on permeable, flexible lime to allow the masonry to 'breathe'. Cement render or mortar, applied to an old building, traps water in the structure, leading to damp and rapid deterioration of historic fabric. Similarly, most modern paints and stone consolidants will lock moisture in the walls of old buildings, hastening their decay. Modern paints also contain solvents, petro-chemicals and environmentally-damaging plasticizers. Lime wash, used on all old buildings as a matter of course until the late nineteenth century, protects the building materials beneath while allowing any moisture in the building to escape.

Repairing a historic building using materials that work with – rather than against – the structure will, simply, prolong its life.

CASE STUDY

Longevity

Robb's Ferry House, Co Armagh

Robb's Ferry House

This single-storey, mud-walled cottage with a corrugated iron-over-thatch roof was at serious risk of loss before new owners came to its rescue with a sensitive domestic restoration. Once the home of ferrymen who rowed locals across the River Bann, Robb's Ferry House had languished on the Northern Ireland Buildings at Risk Register for several years: it was vacant, deteriorating, and had new dwellings encroaching on all sides.

Before it was abandoned, its poor condition was exacerbated by a kitchen extension which severed a drainage channel around the building, causing rain water to pool around the walls and seep inside. Previous patch repairs used an impervious cement render which further trapped water in the fragile mud walls.

The new owners carefully restored the cottage using environmentally-friendly materials including lime mortar and lime wash. A local joiner made new timber windows to replicate the existing ones, using FSC-approved wood.

The restoration of Robb's Ferry House has not only rescued a derelict vernacular building from ruin, it has proved the worth of reusing existing resources and employing tried-and-tested building materials which don't cost the earth. Re-thatching is planned for a future phase of work, which will also include restoration of the existing outbuildings.

The owner, David Morton, explains why he took the project on:
'It has been a challenge restoring Robb's Ferry House but it's been very satisfying too. We have shown that it is possible to make a house with all modern amenities from an old mud-walled cottage. Robb's was built sustainably from local materials – mud, lime, stone and straw – and it was restored with those same materials. You can't get more sustainable than that!'

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CHAPTER FIVE

Community Historic buildings as part of a shared culture, and a focus for social regeneration

Caledon Courthouse

It is no coincidence that houses in historic villages like Moira, Hillsborough and Strangford command higher prices than those in poorly designed new towns like Craigavon. Many people want to live in historic places because they provide a sense of continuity, place, tradition and belonging. The houses have a comfortable, human scale; the layout of the streets discourages speeding cars, and architectural character, quirkiness and individuality are the norm. Historic towns contain an immense stock of places with character and interesting stories attached to them. Unfortunately, the contribution of such character towards happiness or contentment is difficult to measure – but, as some small indication, imagine the uproar if historic Hillsborough or the ancient walls of Derry were bulldozed tomorrow.

How highly we value our heritage can be reflected in its price: people are often prepared to pay more for homes with historic character. Andrew Wadsworth, of UK developers Waterhouse, notes:

It is hard to think of many examples of good residential conversions being less valuable per square foot than new build residential. (Drivers Jonas, 2006)

While it is obviously not true to say that historic buildings are the only ingredient for a happy, healthy community, they do contribute towards our sense of wellbeing. In a UK survey of Radio 4 listeners in 2006 85% of those questioned said they would prefer to live in a traditional-looking home.

…history and heritage are part of our cultural oxygen – often unseen or unthought about, but, nonetheless, a daily subliminal source of stimulation, awe, aesthetic pleasure…The evocative power of a building set in a treasured (and often man-made) landscape is as much a part of us as that old chipped souvenir mug on the kitchen shelf – the precious memento of a long past family visit. (Dawnay, 2006)

History and historic buildings undoubtedly have a following. The popularity of BBC2's 'Restoration' programme, in which Cookstown's Lissan House came second in the UK-wide poll of viewers (Restoration, 2003), indicates a level of public interest in historic buildings. Our shared culture doesn't just encompass iconic National Trust houses or grand demesnes: it includes cottages, humble terraces, clachans, follies, towers, docks, bridges, warehouses, statues and countless other beautiful structures that have served us though the ages, and contribute to the shared history which makes Northern Ireland unique.

Many different values can be attached to our historic assets, according to a 2004 report from Heritage Link: they add richness and variety to our townscapes and landscape, they have commemorative, religious, cultural or architectural value, and they embody historical and archaeological information about past people, societies, economies and industries. In an attempt to measure the intangible benefits of living in an historic city or town, Carrig Conservation's 2004 study considered the cultural contribution of historic buildings. It found that Ireland's built heritage plays a large part in providing a sense of place, belonging and shared culture. That is not to say that good quality modern architecture does not contribute to a shared sense of culture – rather, the findings urge us to recognise the fact that our stock of historic buildings already does so. Dublin City Heritage Officer Donncha Ó'Dúlaing notes:

Historic structures are at the core of establishing a visual sense of heritage and cultural value in an area. To create a new building that will be considered part of an area's architectural heritage in the future usually demands a high level of design and quality of materials.

In a 2004 House of Commons paper, the UK government also recognised the fact that our historic environment provides us with distinctively characterful and interesting neighbourhoods that are recognisably 'somewhere' rather than 'anywhere'. In Northern Ireland, our two distinct cultures have clashed in the past but the more positive news story is that heritage can – and does – unite us in a shared history. We hope that it will also play an important role as the backdrop to a peaceful and sustainable environment for everyone to cherish in future.

Roe Valley Workhouse, Limavady
Amnesty Malley

Mourne Homesteads

Mullycovet Mill

Thriving communities are made up of much more than people living in historic buildings or towns, but historic settlements hold valuable lessons for those in charge of planning for future growth and development. Our ancestors were good at growing their villages organically, adding to settlements according to community needs and using materials in harmony with their surroundings. Rapid population growth and a marked increase in the rate of development over the last 150 years have caused that skill to falter, but the latest urban planning research points to lessons from the past. Mixed-use, high-density, historic neighbourhoods on a 'human' scale are now a model for sustainable communities.

The British Urban Regeneration Association says that historic buildings can act as focal points around which communities will rally and revive their sense of civic pride, and that care should be taken not to destroy old buildings before their potential is realised (quoted by English Heritage, 2005b). In its 2004 report the House of Commons Housing, Planning, Local Government and the Regions Committee stated: Heritage-led regeneration reinforces a sense of community pride, makes an important contribution to the local economy and acts as a catalyst for improvements to the wider area. The government also recognises that the sympathetic conversion of historic buildings is often at the heart of regeneration, which 'reduces the use of natural resources and energy and helps add value and distinctiveness'.

The impact of development should be judged not only in economic terms, but also in terms of more intangible improvements to quality of life. Research published in 2002 by the Joseph Rowntree Foundation found that care of the historic environment – particularly key buildings and local landmarks – is a critical factor in determining how positive people are about their locality in deprived inner city areas. While countless studies have investigated the economic benefits of conservation-led regeneration, communities all over Northern Ireland will testify that restored historic buildings can become a catalyst for social change.

CASE STUDY

Community

A Townscape Heritage Initiative in Moneymore and Draperstown, County Londonderry

The Plantation of County Londonderry became the responsibility of the City of London by a charter of James I in 1613. The appearance of Draperstown and Moneymore today is as a result of rebuilding carried out in the 1830s by the Drapers' Livery Company, which was the grantee of both settlements. In 1979 and 1980 the two town centres were designated as conservation areas.

In 1999 the Drapers' Towns Partnership was established by Workspace (Draperstown) Ltd and Moneymore Heritage Trust. The aim of the Partnership was the economic and social improvement of both towns. A total of £3.4million was invested in the towns over the following seven years in a heritage-led regeneration scheme part-funded through the Heritage Lottery Fund's Townscape Heritage Initiative (THI).

The benefits of this targeted investment have been social, economic and regenerative. The two community development associations have discovered the benefits of working together in partnership. New, self-sustaining businesses have been created and commercial trade has increased for existing ones. In total, 74 properties have benefited from the scheme to a greater or lesser extent – from complete restoration to the renewal of details like signage.

In 1995 a report by the Historic Buildings Council of Northern Ireland (HBC) urged authorities and the community to recognise the benefits of managing our unique historic towns and villages sustainably.

The then HBC Chairman Primrose Wilson said: Conservation is not a mask to place over our towns and villages to destroy their individuality, but a philosophy for controlled change to make the most effective and sustainable use of our resources.

The thriving successes of Moneymore and Draperstown are living proof of this statement.

Communities in many other towns and villages in Northern Ireland have benefited from THI schemes. By acting as a catalyst for further investment and by setting conservation standards, partnerships have been established and historic fabric has been restored, enhancing the environment for local communities. In Lisburn and Londonderry the NI Housing Executive, as part of THI schemes in both cities, recently promoted Living Over the Shop (LOTS), a programme designed to breathe life back into town centres outside shopping hours. In Armagh, Heritage Lottery Fund investment in the Mall, one of Ireland's finest urban parks, has not only restored the park but created an area for informal recreation enjoyed by locals and visitors alike.

In 2006, with the aid of a Fulbright Scholarship, Rhonda Phillips of the Center for Building Better Communities at the Department of Urban and Regional Planning, University of Florida, studied the effects of heritage-led regeneration in Northern Ireland. She said: 'Heritage resources play a key role in regeneration. The Townscape Heritage Initiative is a programme... focused on sustainable conservation and beneficial reuse of heritage resources at the community level.'

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Moneymore village

CHAPTER SIX

Economy

Historic buildings as catalysts for economic regeneration and employment

Tourism

Belle Isle Estate, Fermanagh

The obvious and immediate economic benefit offered by historic buildings and towns is revenue from tourism: historic attractions in the UK get around 62.5 million visits each year. The generic economic success of historic cities like Edinburgh, Bath and York is a testament to the attractiveness of their environment, and the fact that visitors simply want to spend time (and money) there. The Heritage Lottery Fund notes:

> Heritage attractions play a critical role in the UK's tourism industry, contributing significantly to the £26.5 billion generated by UK residents within the UK and the £11.7 billion generated by overseas visitors. (VisitBritain, cited in Heritage Lottery Fund, 2005)

It should therefore be a matter of common sense to protect our historic assets, and develop our environment in a way that makes those who live there want to stay, and visitors want to linger.

Northern Ireland's historic assets are also a powerful draw for tourists – it would be a challenge to market Belfast to visitors without such attractions as its City Hall, St George's Market or the Opera House. According to a 2000 MORI poll, 93% to 95% of us think historic buildings provide interesting places to see and things to do, and encourage tourism.

The Merchant Hotel, Belfast

Todd Watson

Historic buildings are very often a key part of an economically healthy urban environment, partly because the people who visit or live and work in towns feel comfortable with their scale and traditional design. This fact is born out by the popularity of old buildings for use as offices and businesses: in terms of commercial rents, listed buildings in England consistently outperformed new-build structures between 1980 and 2004, according to research published in May 2006 by English Heritage and the RICS. The message is clear: lots of people want to work in old buildings of character.

According to a report by English Heritage (2005b), restoring the historic environment creates jobs and helps underpin local economies. 88% of those polled by MORI believe that the historic environment is important for creating jobs and boosting the economy. Heritage bodies have demonstrated again and again that initial investment in heritage-led regeneration projects levers significant amounts of other capital and helps to sustain and create jobs. These findings are supported by the Heritage Lottery Fund, whose £100m investment in restoring historic buildings in Northern Ireland has attracted increasing numbers of visitors to the country, underpinned local jobs and generated a much-needed cash boost for local economies.

Buxton in the midlands of England provides a powerful example of the positive economic impact of regenerating town centre buildings. David Fairbanks, senior management consultant at construction consultancy Gleeds, explains:

'When the University of Derby invested £28m in establishing a new combined Higher and Further Education campus that included moving the existing FE provision from the outskirts of the town into its heart, it took on a series of restoration projects including the 1785 Devonshire Royal Hospital, once the great stables serving Buxton Crescent. The University consequently saw a 42% rise in student applications, and it is estimated Buxton will enjoy a £25m per annum boost to its local economy.'

Thriving High Streets

While an attractive historic environment provides a place where people want to live, it can also help to attract external investment and sustain existing businesses of all types. However, this 'sustainable high streets' cycle only works if the majority of businesses are locally owned. If a high street is packed with chain stores, the money generated by such stores is less likely to benefit local people: chains are centrally owned and run, and often geared towards pleasing their shareholders.

Lisburn Road, Belfast

The New Economics Foundation explains:

Replacement of locally owned outlets by retail multiples can damage the local economy as profits drain out of the area to remote corporate headquarters and local employment is destroyed. (New Economics Foundation, 2004)

Consider the Lisburn Road in Belfast, which is home to an array of independent cafés, pubs and restaurants, and a large number of non-chain clothes and gift shops. There is an economic cycle which benefits everyone who lives or works on the Lisburn Road: essentially, the area is attractive to local visitors and shoppers, which allows businesses to be successful, employ people and generate wealth. The fine urban grain of narrow building frontages and small, attractive shop fronts are a large part of the success of the road. They help create a unique 'village' identity where independent shops can thrive.

Over the past decade, figures from the Department of Trade and Industry (DTI) show that the UK has lost nearly 30,000 independent food, drink and tobacco retailers – or over 40% of its total stock of such shops. Every week, 50 specialist shops close: across the UK butchers, bakers, newsagents, tobacconists, fishmongers, greengrocers, and family-owned general merchandisers are being replaced by a bland, carbon-copy townscape of multiple retailers, fast food chains and global fashion outlets (New Economics Foundation, 2003). Supermarkets have brought us increased choice and driven down prices, but we should bear in mind that sustainable communities need a quota of local shops to create local wealth and prosperity. Shopping locally also cuts travel pollution. Should the unthinkable happen and our local high streets close down, we will all be poorer for the loss of local identity, character and community.

St George's Market, Belfast


St George's Market, Belfast
Heritage Lottery Fund


g2 design

St. George's Market, by the Lagan in the centre of Belfast, is a landmark building architecturally, historically and economically. Designed by J.C. Bretland and built between 1890 and 1896, its handsome street façades of triumphal Roman arch motifs in red brick with sandstone dressings provide an interesting example of how to adapt classical motifs to utilitarian needs. Larmour (1987) calls its interiors 'light and spacious…with glazed roofs carried on [Belfast-made] cast-iron columns'. McGill noted in 2006 that the market had faithfully served the people of Belfast and the surrounding area by selling 'everything from Atlantic shark to zips'.

The building has long been a favourite with Belfast's shoppers but by the 1990s St George's Market was dilapidated and in danger of closure. In 1996-7, with the help of a substantial grant from Heritage Lottery Fund, the building had a major overhaul. The indigenous markets continue but they have now been joined by others such as the Saturday City Food & Garden Market, which sells local speciality foods and organic produce. In October 2006 St. George's was voted the 'most atmospheric market in the UK' by Observer Food Monthly. The commendation read:

This beautiful Victorian market, established in 1890, sells everything from shoelaces and tea towels to brill and turbot…Producers from the four corners of Northern Ireland gather here, so you can buy heather honey from the Mournes; organic, free-range chicken, eggs, and lamb from Limavady; and thirst-quenching apple and berry juices or prize-winning bacon, wild boar sausages and Galloway beef from Armagh. The market is covered, so you won't get wet, but when it's sunny, shards of light shine through the glass ceilings highlighting this architectural gem.

St George's Market, Belfast

Jill Jennings

g2 design

Following the award, market research by Millward Brown found that 7,200 people shop in St. George's Market each week, spending around £9.4m annually. The report also found that 20% of these shoppers then take their custom to other parts of the city. Andrew Irvine, Belfast City Council's markets development officer, reports:

'This scheme has exceeded its aims in many ways. It is one of very few markets across the UK which is full and has a waiting list of traders.'

The building also has another use, as an events and conference venue. Irvine adds:
'We can accommodate up to 2,000 people and the market can be divided and presented in many different ways.'

St George's Market has an undoubted 'wow factor' which has attracted investment to the city and provided a vibrant focus for economic activity. In May 2000 St George's was awarded the Millennium Commendation from the Civic Trust. This award is given annually to outstanding examples of architectural and environmental design that benefit local areas and communities.

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St George's Market, Belfast
g2 design

Skills Historic buildings as sustainers of traditional skills

Communities which pride themselves on their historic assets require skilled craftsmen to maintain and repair them, as the Heritage Lottery Fund explains:

> Skills are part of the UK's hidden heritage. Our historic landscapes and buildings and the collections in our museum and galleries were created and maintained by skilled craftspeople who combined technical expertise with an appreciation of beauty. (Heritage Lottery Fund, 2004)

The crafts used in building existing structures represent centuries-old knowledge tied firmly to economic and environmental common sense: they are tried and tested means of achieving the enclosure of a space. However, traditional heritage skills are dying out at an alarming rate: there are fewer than 40,000 craftsmen with the necessary specialist skills to maintain the UK's historic environment, which includes over half a million listed historic buildings. Architect Peter Murray, who worked on a £20 million project to restore the Tower of London, explains:

> Craftsmen had to be flown over from Europe to complete the work using traditional skills which have continued to be nurtured in European countries. (The Training Foundation, 2004)

Part of the problem is the disappearance of the traditional apprenticeship system, which means that skills which existed formerly are now passed on to fewer and fewer practitioners. There is also an issue with image: thatching a roof or repairing a window frame is not seen by most school leavers as terribly glamorous. However, nurturing essential heritage skills like harling, pargeting, thatching, dry stone walling, lime slaking, stone masonry, frieze restoration and hedge laying is vital. If we do not have skilled craftsmen and women to repair and maintain our buildings, all the 'reuse and recycle' arguments of the previous chapters will come to nought. Griff Rhys Jones, presenter of the BBC's Restoration programme, notes:

> The future of the UK's heritage relies on the skills of many thousands of individuals. We sometimes think that money is most needed for bricks and mortar, but it's people who put bricks and mortar together. (Heritage Lottery Fund, 2004)

Rather than see a skills shortage as a crisis, however, we could treat it as an opportunity to boost future employment. The Heritage Lottery Fund recently set up a £6 million bursary scheme to fund the training of new heritage workers, which should benefit both our historic settlements and the communities which live in them. Such initiatives which recognise the contribution of skilled craftsmen in protecting our shared cultural assets, deserve wider recognition and government funding.

Mourne Homesteads, Co Down

The mission statement of Mourne Heritage Trust is 'to sustain and enhance the environment …and contribute to the well-being of Mourne's communities'. Addressing the loss of traditional vernacular buildings and the disappearance of rural skills are key components of the Trust's work, and it was with this purpose in mind that the Mourne Homesteads scheme was set up.

Mourne Homesteads

To date, the Mourne Homesteads project has supported the restoration of seven derelict traditional dwellings as modern homes for local people. In 2007 the project was awarded a Europa Nostra Diploma in the Cultural Landscapes category. Crucially, however, the project organisers recognised that there was little point in restoring such buildings if the skills to repair and maintain them continued to die out. The restoration project was therefore run in tandem with a comprehensive programme of courses in traditional building skills.

During the course of the restoration project three hundred people took part in twenty-seven different training courses covering subjects as diverse as traditional joinery, thatching, stone masonry and the use of lime. An exhibition promoted the courses in counties bordering the Mournes, and a wide range of people (from home owners to building professionals) took part. A practical written guide aimed to provide continuing education and information for home owners, craftsmen and professionals.

At the launch of the Mourne Homesteads Project Professor Patrick Murphy, Heritage Lottery Fund committee member, said:

> This project…gives people the chance not only to learn about and experience our traditional building skills but to practice them first hand on authentic restoration projects.

In 2006, Home & Dry, a sub-committee of the Ulster Architectural Heritage Society which has been organising events for historic building owners and professionals since 2001, ran a joint event with the Mourne Heritage Trust using the restored buildings as 'best practice' examples of how to keep traditional skills alive.

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Head Road, Silent Valley

Northern Ireland's countryside is a precious amenity, available for all to enjoy. The rolling green fields which characterise our country are part of our heritage – something which we cherish and which most of us recognise should be passed on for future generations to enjoy.

In 1978, a report from the Northern Ireland Office led directly to the relaxation of the country's planning laws. The presumption against new building in the countryside – still enforced in England, Wales and Scotland – was overturned in Northern Ireland, opening the floodgates to applications for new rural dwellings. The effect was immediate and long lasting: between 1993 and 2003 more than 30,000 new dwellings were approved in the Northern Irish countryside (Department for Regional Development, 2004).

In 2005/06, there were more than 12,000 planning applications for new houses in the Northern Irish countryside – three times the combined total number of applications for such buildings in England, Wales and Scotland during the same period, and five times more applications than a decade previously (Department for Regional Development, 2006b). This is despite the fact that the combined population of mainland UK is 58 million, thirty four times greater than that of Northern Ireland. Building in this way covers the Northern Irish countryside with the equivalent of a town the size of Ballymena every year: if we continue in this way, we are in danger of losing our rural landscape altogether. Dawson Stelfox in his opening remarks as Chairman of the Historic Buildings Council's 1999 conference on Regenerating Communities through Heritage remarked that housing development in the countryside was

> using up valuable agricultural land and the precious resource of the countryside at an alarming rate – over 100,000 acres since WW2 of agricultural land [is] now [covered] in housing whilst thousands of redundant buildings in towns and country remain unused.

Northern Ireland's Regional Development Strategy (RDS), produced by the Department for Regional Development in 2001 and covering the next 25 years, recognises 'concerns about the cumulative impact of development in parts of the countryside', admitting that in many areas our rural landscape and the visual amenity of the countryside is 'compromised or threatened by inappropriate development'. The RDS blames past planning policies for the following acute pressures on our rural resources:

- loss of agricultural land and habitats
- weakening of towns and villages, where ribbon development has caused boundaries to extend and intrude into neighbouring towns or rural areas
- increased traffic on rural roads
- increasing visual impact of more structures in the landscape
- unnecessary extension of infrastructure and services
- growing threat of pollution from septic tanks

While bemoaning the loss of countryside, however, the government has also earmarked for Northern Irish rural areas 108,000 new houses over the next 10 years. These will be situated either in small rural towns or in the countryside. If we really require this volume of new housing, we must investigate ways of mitigating its effect, including restoring and reusing existing (but redundant) rural houses.

Keeping the character of rural areas alive

New buildings are often sited near the road and next to each other – a pattern of ribbon development more suited to urban settlements. Too often, new rural buildings have triggered road widening, new street lighting and footpaths – features which steadily erode rural character.

> Significantly, new rural dwellings have often been erected at the expense of existing vernacular buildings: of 30,000 vernacular thatched cottages in Northern Ireland in the 1950s, only around 120 now remain intact. (EHS, nd)

What can be done?

- Reuse and restore old buildings. The Ulster Architectural Heritage Society produces a Buildings at Risk catalogue, which lists properties in need of new uses.
- Support and lobby for initiatives such as the draft Planning Policy Statement 14: Sustainable Development in the Countryside, which seek to protect the natural environment whilst encouraging the reuse of traditional buildings.

CASE STUDY **Countryside**

Ballydugan Mill and Cottages, Downpatrick, County Down

Ballydugan Mill

Ballydugan Cottages

The rural townland of Ballydugan, close to historic Downpatrick, is home to several recent historic building conversions which have regenerated the area by providing employment and encouraging tourism. These include an extraordinary mill and a clachan, or cluster, of traditional cottages.

The eight-storey former flour mill was built in 1792 by John Auchinleck but had closed by 1857. Having been vacant for 130 years it was bought in the late 1980s by a local building contractor, who painstakingly restored it over 12 years, in the process converting it to house a restaurant, guesthouse, and wedding and conference venue. It is now a fine marker in the gently rolling hills of the countryside, and a reminder of the area's role in Northern Ireland's industrial history.

Not far from the mill is a group of early nineteenth century former dwellings and outbuildings which had been empty for years before their recent transformation into self-catering holiday accommodation. Although in a poor state when work first started, sympathetic private owners have retained many historic features. The buildings' restoration reused resources, saved waste and helped to preserve local skills. Importantly, it also saved a group of vernacular buildings from becoming another sad statistic in the story of Northern Ireland's fast-disappearing rural heritage.

Magherally Cottage, Banbridge, County Down

Magherally Cottage

Magherally Cottage near Banbridge is another rural success story. Unoccupied for over half a century, this rare and remarkably intact vernacular house has been converted to self-catering holiday accommodation.

The cottage is a typical rural vernacular dwelling: single-storey and only one room deep, with a narrow entrance lobby (complete with spy-hole) backing on to the hearth. Built into a hill, with the gable end facing towards the road, it had been extended lengthwise over its lifetime with stone outbuildings stepping down the slope.

As part of the restoration, the owners lowered the ground around the cottage to prevent damp penetration, underpinned the external walls, re-thatched the roof and re-slated the stone outbuildings with local slate. Internally, the accommodation now comprises three en suite bedrooms, living room, kitchen and storage space. The result is a striking transformation which has allowed the building to be used for twenty first century living, while preserving its unique historic character and contribution to the rural scene. Its reuse has sparked a great interest amongst locals, amazed that a building in such a poor state of repair, and empty for years, could be so successfully rescued.

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Looking to the Future

Bridge Street, Lisburn

Healthy, sustainable communities are those that work together to protect and preserve their culture, encourage employment and a vibrant economy, and make the best use of the resources available to them without compromising the ability of future generations to meet their own needs. We are far from that ideal goal, but we can all nevertheless take steps towards a future vision of environmental, economic and social sustainability. Learning from the practical examples in this booklet is a good place to start.

It is hoped that future generations will become increasingly aware of how to manage their resources wisely. In the meantime, initiatives such as the Ulster Architectural Heritage Society's Home and Dry programme, with its associated website promoting preventative building maintenance (www.homeanddry.info), deserve wider recognition.

Historic buildings are not the solution to all our problems but they have many valuable lessons to teach us about the use of reusable and environmentally-friendly construction materials, and the importance of a thriving local community. They also provide ways of encouraging tourism, reducing waste, creating jobs and mitigating the effects of new development – both in the town and in the countryside. To demolish them is most certainly not a sustainable approach.

And they make Northern Ireland a unique place to live – surely something worth treasuring, both for this and for future generations?

CASE STUDY

Looking to the Future
Ormeau Park House, Belfast

Ormeau Park House, Belfast

As we look to the future we need exemplars of good practice to follow. In Northern Ireland approximately 20% of our current housing stock was built before 1920. It would be very wasteful to demolish these buildings which contain so much embodied energy. Hearth, which is a housing association specialising in restoring historic houses for the rental market, recently decided to undertake a project to demonstrate sustainability in action.

In 2007 work started on Ormeau Park House. Once the head gardener's cottage for Belfast's oldest municipal park, it was built in 1878 to designs by Timothy Hevey. In 2005 Hearth was approached by Belfast City Council and offered a fifty year lease. The house had been badly vandalised, is not listed and is somewhat isolated. However, it has a fine setting in an area of housing need.

Hearth looked at the building and assessed the constraints and advantages. A conservation policy was drawn up to give guidelines on how the historic building could be restored while applying eco technology. The proposals at the time of writing include using the roof space as a solar collector for warm air which will be utilised by a mechanical ventilation and heat recovery system, and dry lining the building with increased insulation to the walls, floor and roof. A heat pump which will provide renewable energy to service underfloor heating and domestic hot water will also be installed. The scheme includes recreating the former conservatory to provide passive heat to the living space in summer and to act as a buffer against heat loss and cold air infiltration in winter.

Hearth estimates that there will be both short and long term benefits from this project. They include the retention of an important element in the park landscape, the provision of social housing in an area of need, a reduction in CO2 emissions and life cycle cost savings of approximately £25,000 (made up of heating running costs, plant maintenance and replacements) over 20 years.

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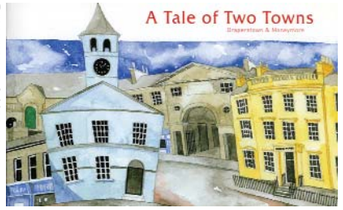

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St George's Market, Belfast before restoration.
Glyn Satterley

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St George's Market, Belfast after restoration
Jill Jennings

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Front cover: Main Street, Killough.
Back cover: cottages at Dyan.

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