BRADFORD CITY CENTRE
TOWNSCAPE HERITAGE SCHEME

Advice Note 5

Conservation Manual

Guidance on specification requirements and standards for Townscape Heritage Scheme grant-aided works

Conservation Principles

The conservation movement has its origins in 18th century enlightenment, antiquarianism and romanticism. It developed in the 19th century through The Manifesto for the Society for the Protection of Ancient Buildings written in 1877 by William Morris, The Ancient Monuments Protection Act 1882 and the founding of the National Trust.

In the 20th century, the State began to acknowledge the need for managed conservation and in the post war Town and Country Planning Acts, established the listing and legal protection of historic buildings.

International recognition of the importance of building conservation was achieved in 1966 with the publication of the Venice Charter by the International Council On Monuments And Sites, followed in 1981 by the Burra Charter. These are still the common standards for built and historic conservation, to which the United Kingdom have added their own conservation principles and processes.

The following conservation principles should be applied to all refurbishment, repair and new development within the Conservation Area. Conservation projects to listed buildings should only be undertaken by consultants who have appropriate qualifications and a proven record in the conservation of historic buildings.

The conservation process:

- **Consider the drivers for change** – Why does your building need a conservation project? Is your project being driven by the need for a change of use? Is the building in vulnerable condition?
- **Develop an informed viewpoint/understand the significance of your property** – What surveys or assessments are needed to help understand what is important about your building and why it needs to be conserved?
- **Evaluate possible opportunities and options** – Does the building only need basic preservation, or more complex adaptive reuse?
- **Develop your brief and proposals** – Are the works you propose the most appropriate solution?
- **Agree your solution** – Do you need statutory consents, such as planning, listed building or building regulations approvals?
- **Deliver the work** – Is your project being delivered by those with appropriate competence and knowledge?
- **Review you project** – Did you achieve what you set out to deliver?
- **Arrange for regular maintenance** – What do you need to do to make sure your building remains in the best possible state of conservation?

Sustainability

When a historic building becomes disused, under-utilised or subject to unsympathetic new use, its sustainability will be at risk. The most effective way of ensuring energy efficiency and financial sustainability is to keep historic buildings in good repair so that they last as long as possible, do not need replacement, and do not suffer from avoidable decay that would require additional resources to rectify. For example, a wall can be a third less energy efficient if damp.

When considering the sustainability of your conservation project, the need for energy efficiency and a lower carbon footprint should influence the selection of materials and work methods, as they can impact on thermal performance, weather resistance and quality of habitable space. Building materials and products should be sourced and procured in a sustainable manner.

Common Defects

In most cases, neglect and lack of maintenance are the main cause of premature building decay. Simple to deal with issues such as blocked or broken rainwater goods, gullies and drains, and dislodged or missing roof slates will allow water to penetrate the fabric of the building, and uncontrolled trees or climbing plants can disruption foundations or force open the fabric of a structure.

Ill-considered historic repairs or alterations are more often the cause of problems, than the age of the building fabric. In particular, the use of modern cement mortars to re-point old walls. Whilst walls do need to be re-pointed from time to time to protect them from the weather, using a cement mortar can increase the rate of decay and cause a great deal of damage. Such work is usually carried out with the best of intentions, but is harmful to the building fabric. Other examples are the use of chemically injected damp proof courses, proprietary water repellent solutions, and modern emulsion paints on old walls. Traditional buildings are usually built of porous materials that allow moisture to penetrate the fabric, and then evaporate away when environmental conditions are favourable, whereas modern construction focuses on moisture resistant building fabric. Such products will often prevent the proper evaporation of moisture from walls and can exacerbate any problems of dampness.

Repointing should only be carried out when the mortar has deteriorated leaving voids that leave the wall vulnerable to water penetration, or when the mortar is very soft. Comprehensive repointing is rarely necessary. The general principle should be that the mortar is slightly weaker than the brick or stone that the wall is composed of. Many lime mortars are by their nature soft, and this should not be used as a justification for repointing. The mortar should be regarded as sacrificial to avoid decay to the brick or stone.

Structural defects, such as cracking through masonry or bowing of roof finishes, should be investigated to ascertain whether they are the result of a recent incident, an evolving situation or largely settlement from the past. Not all movement in the fabric of a historic building will cause a structural problem that needs to be remedied.

The decay of timber in buildings is closely related to moisture levels. High levels of moisture modify the composition of timber in a way that makes it more susceptible to insect and fungal attack. The moisture content of timber should be kept below 20%. Poor ventilation will only increase dampness problems. Condensation on surfaces is indicative of moisture vapour unable to escape a building interior, due to inadequate ventilation.

It may not be necessary to remove timber that has been affected by fungus, because fungus becomes inactive when the level of moisture is reduced. Chemical treatments for fungal or insect attack should only be carried out if the structural performance of the timber has been impaired, or to limit the spread of the problem whilst the timber is drying out. Precautionary treatment should not be applied to unaffected timbers.

Metals are often used in construction and their corrosion due to dampness can be exacerbated by other environmental factors. This can reduce their performance and that of surrounding materials, e.g. rusting and expansion of metal cramps in stonework or failure of cast iron beams.

Specification requirements for Townscape Heritage

Good practice suggests that before construction work commences, an appraisal of your historic building should be undertaken and the proposal detailed in drawings and specifications, identifying all works to be undertaken. This should include a dimensional survey to provide plans, sections, and external and internal elevations at an appropriate scale; a photographic survey; a condition survey, and an inventory and record of all surviving historic fixtures including chimney pots, rainwater goods, doors and windows, fitted joinery, plasterwork, carpentry features, equipment associated with the building use, metalwork, fixtures, materials and finishes. Surviving documentary evidence illustrating the development of the building and including historic maps, photographs or other illustrations should also be sourced.

A principal objective of repair is to retain the performance of the existing fabric. This is usually best achieved by using matching materials and traditional repair. This particularly applies to masonry, mortar, slates, carpentry and joinery materials.

Proposals should be based upon the maximum retention of historic fabric. Localised repairs shall be the rule, and wholesale replacement the exception, and this only when the repair of the original is not possible. This applies particularly to historic windows, doors and other building components.

Work to replace missing details should precisely match original sizes, sections and profiles. The significance of the replacement should be weighed against the original design concept. Reinstatement should be justified by strong evidence and research.

Works of alteration must comply with current legislation, and new uses should be sensitively sited and detailed.

The *'Honest Repair'* - The significance of the historic building should be taken into account when repairing it. Generally, repairs should be carried out without any attempt to disguise them, but should not be unduly obtrusive or unsympathetic. Different approaches may be adopted where aesthetic considerations are particularly significant.

Re-roofing

Generally, roof works should be of a comprehensive nature and any necessary associated repairs (to the roof structure, chimneys, leadwork or rainwater goods, etc.) should be undertaken at the same time.

Details of any new roof windows or skylights, roof vents, flue terminals, soil and vent pipes, aerials or solar panels should be approved before work starts.

Re-slating

Re-slating should be carried out re-using sound existing slates and/or new natural slates to match the existing, fixed with copper nails to battens which have been fixed with stainless steel nails. Reclaimed and new materials should not be mixed together on the same pitch. The slates, if possible, should be of British origin and appropriate to the region, laid in courses to match the existing. Detailing generally should be reinstated carefully to the original form, particularly at eaves, ridges and verges. Existing ridge and hip tiles or slates should be retained and re-set where possible, or should be replaced in slate, clay or stone to match the existing, as appropriate. Verges, ridge and hip tiles, etc. should be pointed neatly in a coloured gauged mortar designed to suit each individual location.

New lead flashings should be provided at all abutments and chimneys (cement fillets alone are not acceptable) and leadwork generally, should be checked and renewed or repaired as necessary. Provision should be made for ventilating roof spaces by an agreed method.

Chimneys

Chimneys requiring repair should be reinstated or re-built accurately to the original height and profile, in materials to match the existing (stone, brick or rendered masonry, as appropriate).

Original details, including the original style of chimney pots, should be reinstated wherever possible.

Leadwork

All flashings, soakers, cappings, valley and gutter linings and other weatherings should be in lead, to the weights and details recommended by the Lead Sheet Association, as described in the Lead Sheet Manual. Unless otherwise agreed, flat roof coverings, including to internal wells and dormer windows, should also be in lead. Appropriate provision should be made for ventilation below the lead, particularly where thermal conditions are likely to change e.g. where insulation or a new heating system has been installed.

Rainwater goods

Generally, any new or replacement rainwater goods required should be in cast iron, to the original pattern. Cast aluminium gutters are acceptable in cases where the original section is no longer obtainable in cast iron. Gutters and rainwater goods originally of a different material, such as lead, stone or timber, should be replaced accordingly, unless otherwise agreed.

Structural timber repairs

Repairs to structural timber should be made by splicing in sound replacement timber of similar scantling (dimension) and species wherever possible, retaining all existing timber of historic value. Large sections of timber required for replacement should not be formed by laminating smaller sections. In situations where the use of steel is required to strengthen timbers to retain the historic fabric of a building, a conservation accredited structural engineer should be employed for this work. Specialist advice should be sought concerning any existing timber carrying decoration likely to be of historic importance.

A detailed specification and drawings should be approved for the repair or reinstatement of a timber-framed building or historic roof structure before any work is undertaken, and it is expected that these will be based on a careful and comprehensive survey of the existing structure.

Generally, in situ resin repairs to structural timbers are not acceptable, and it is important to maintain flexibility at joints in order to allow for some movement in the frame. Shakes (splits) in structural timbers should not be filled for cosmetic reasons.

All infill panels of historic interest (e.g. lath and plaster) should be retained wherever possible. The form and detailing of any new infill panels required should be agreed. If previously covered by lime render, repaired timber framing generally should be re-rendered and not exposed.

The use of sustainable timber

The Timber Trade Federation (TTF) has recently introduced a Responsible Producer Policy into its Code of Conduct. The first line of the Code of Conduct states: “Members are committed to sourcing their timber and timber products from legal and well-managed forests. All grant-aided buildings restored with Townscape Heritage Scheme funding will only use timber supplied by members of TTF. The Townscape Heritage Scheme Project Officer may check invoices to confirm this before releasing any grant monies.

Stonework repairs

Repairs to stonework should be carried out in natural stone to match the existing in both colour and texture, porosity, permeability, strength and durability, and should match the existing in size, profile and finish and should be obtained where possible from the same quarry as the original, and a detailed specification for this must be agreed before work starts. Cropped or split-face Sandstone is not an acceptable replacement for Yorkshire Point.

Generally, stone which has lost its structural quality or is badly decayed should be carefully cut out and matching replacement stone pieced in. Replacement stone should be cut to the full dimensions of the existing blocks, unless otherwise agreed, and face patches should never be less than 100mm deep. Samples of any new stone to be used should be approved. The face of new stone should be tooled to match the original unweathered finish, and all saw marks should be removed. Stone should always be laid on its natural bed, unless otherwise specified, and new stonework should be laid to match the existing wall (e.g. as ashlar work, or diminishing course Yorkshire Point). All replacement stone details should be cut accurately to the original pattern and profile; this is particularly important for cornices, mullions, hood moulds and other architectural features. Where the existing stone is badly eroded, replacement details should be agreed before work starts.

Dressing off should be limited to the removal of dangerous or loose material, and should be carried out with a bristle brush: chisels, particularly claw chisels, should never be used. Areas of unsound stonework should be carefully rebuilt as agreed, re-using as much of the existing stone as possible.

Unless otherwise approved, resin-based in situ “plastic” repairs to stonework are not acceptable, except for small areas.

Stonework re-pointing

Stonework should be re-pointed or bedded in an appropriate lime mortar mix (that is, one weaker than the adjacent masonry). Mortar mixes should be designed to suit each individual location. A lime based mortar should be used. The colour of the new mortar, which should match the original mortar before weathering, should be provided by the use of an appropriate aggregate. Proprietary coloured mixes, or coloured pigments should not be used. Joints should be carefully raked out manually to a depth of at least 25mm and up to 40mm, width of the joint and flushed out with clean water. Cutting out of existing mortar with mechanical discs is not acceptable. The joints should be solidly filled with new mortar as far back as possible between the stones and finished flush, then stippled back with a bristle brush to expose both the aggregate and the edges of the adjacent stone. Joints should on no account be struck, or finished proud of the masonry face to form “strap” or “ribbon” pointing, or feathered over the edge of eroded blocks. Where the existing stone is generally eroded, the face of the mortar should be kept back to the point at which the joint remains the original width. Re-pointing should not increase the width of the original joints.

Brickwork repairs

Decayed or damaged bricks should be cut out and carefully replaced with sound bricks to match the existing in type, colour and texture. Where structurally necessary, agreed areas of unsound brickwork should be carefully rebuilt, re-using the existing bricks where possible. Unless otherwise agreed, resin-based in situ “plastic’ repairs to brickwork are not acceptable.

Brickwork re-pointing

Re-pointing of external brickwork should be kept to the absolute minimum structurally necessary and comprehensive re-pointing for cosmetic reasons is not acceptable. Care should be taken to finish the points to match the surrounding work and the width of the original joints should not be increased. Re-pointing and any necessary re-building of existing brickwork should be carried out in an appropriate lime mortar (that is, one weaker than the adjacent bricks), the starting point for which should be based in consideration of the original mortar used. Detailed advice about mortar mixes and lime for use in re-pointing brickwork is as already described under “stonework re-pointing”. The joints should be carefully raked out manually to a depth of at least 18-25mm, depending upon the width of the joints, flushed out with clean water and the new mortar pressed well in. Cutting out of existing mortar with a mechanical disc is not acceptable.

The joints should be finished to match the original or existing joints (e.g. lined out or tuck pointed) or, unless otherwise agreed, finished flush (not struck or raised), neatly and cleanly, with the mortar brushed back as described under “stonework repointing” to expose the edges of the adjacent bricks. Mortar for re-pointing should be coloured by the use of an appropriate sand to match the original joints before weathering. Proprietary coloured mixes or colouring additives should not be used.

Rendering

Re-rendering and render repairs generally should be carried out in a lime mortar mix. The mix and character chosen should match the strength of the original rendering or stucco, unless otherwise agreed. New rendering should be applied in three coats, and no metal beads or stops should be used externally; arrises and angles should be formed in the traditional manner. Cracks in existing render should be cut back to the masonry face and the surrounding render undercut to provide a key. Cornices, window surrounds and other mouldings should be re-run in situ with a template in the traditional manner, to the full original profile and accurately formed: mouldings should be copied from in undamaged existing section cleaned of all paint. Other decorative features should be reinstated carefully to the original pattern. It is important for all existing features requiring repair to be recorded by photographs, drawings and templates, if necessary, before work starts. Coursing (or blocking) lines should be reinstated in areas of new render, where appropriate. Subsequent redecoration of rendered areas should with traditional lime wash or mineral

pigments where appropriate: otherwise, with a smooth, water-permeable masonry paint system. Textured or impermeable sprayed coatings are not acceptable. The proposed colour scheme for redecoration should be agreed.

Windows and doors

Windows and doors are important to the character of buildings. Existing windows and/or external doors should be retained and carefully repaired wherever possible; it is important to retain and repair surviving early casements. If replacement is unavoidable, the new windows should be accurate replicas to the original design, in both pattern and detail. Timber sections, especially mouldings, should be to the original profile; this is of particular importance for glazing bars and meeting rails to horizontal sashes. Double-hung sliding sashes should be hung on cords pulleys and weights. Spring balances for sashes are not acceptable. Details of any new windows proposed which are not replica replacements of existing should be agreed. When an architecturally significant building is concerned, a sample window for approval may be required.

UPVC replacements are not acceptable, replacement window frames must be made from timber obtained from local and sustainable sources wherever possible. Townscape Heritage Scheme grant aided properties which are listed buildings, shall be single-glazed, but where properties are to be used for living accommodation over shops, it may be necessary to install secondary glazing on the inside of the windows.

Reinstatement of traditional windows replacing poor or modern windows and doors would enhance individual buildings, the streetscape and promote local characteristics. Existing old, especially crown, glass should be retained and re-used in new windows, as replacement with modem float glass will always adversely affect the appearance. New door and window furniture should be to the original pattern. New and/or repaired external joinery should be painted with a gloss paint system (unless otherwise agreed) and not stained.

Ironwork

Decorative ironwork, such as balconies, canopies or railings, should be carefully repaired or, if absolutely necessary, reinstated accurately to the original pattern and detail, in a similar material (unless otherwise agreed). Existing decorative ironwork requiring repair or replacement should be recorded by photographs or drawings before work starts, and the existing paint finish analysed to determine the original colour scheme. Drawings for any new/replacement ironwork will be required for approval. New or repaired ironwork should be painted with a gloss paint system, to the original colour scheme. Any alternative colour scheme proposed should be agreed.

External works

Boundary walls, fences and gates should be repaired to match the existing, or reinstated to the original design. The installation and design of any new such elements must be approved. External paving should be in appropriate natural materials, such as Cobbles or Yorkstone setts, to match the existing, where relevant and/or laid in the traditional manner. A detailed scheme for any external landscaping proposed, including any planting, lighting, signage and street furniture, should be submitted for approval.

Security

The use of obtrusive security features is not acceptable and seldom necessary for effective crime prevention. Bradford Council Supplementary Planning Documents detail policy on what can be considered. West Yorkshire Police Architectural Liaison Officers can offer project specific security advice.

Special features or materials

Where unusual features or materials special to the building or area exist, or are required, the specification for their repair or reinstatement should be agreed with Bradford Council Conservation Officers.

Consultants with experience of work on historic buildings

The successful delivery of Townscape Heritage relies on the skill of those managing projects. The professional expertise of consultants will be assessed by the Townscape Heritage Scheme Project Officer by reviewing references requested by grant applicants. The level of expertise demonstrated should be comparable to the complexity of the individual conservation project.

Conservation Accreditation schemes for consultants working on important historic buildings include:

Chartered Architects Conservation Register, operated by the Royal Institute of British Architects (RIBA)

Register of Architects Accredited in Building Conservation (AABC), operated by AABC Register Ltd.

Directory of Accredited Conservationists, operated by the Chartered Institute of Architectural Technologists (CIAT)

Conservation Accreditation Register for Engineers (CARE), operated jointly by the Institution of Civil Engineers (ICE) and the Institution of Structural Engineers (IStructE)

Chartered Surveyors Building Conservation Accreditation Scheme, operated by the Royal Institution of Chartered Surveyors (RICS), for a range of professionals including chartered building surveyors and chartered quantity surveyors.

Further advice and information

Historic England - www.historicengland.org.uk/advice/
Historic England are the public body that looks after England's historic environment. They champion historic places, helping people understand, value and care for them.

The Society for the Protection of Ancient Buildings - www.spab.org.uk/advice/
The Society for the Protection of Ancient Buildings (SPAB), is a charity, involved in all aspects of the survival of buildings which are old and interesting. SPAB's principal concern is the nature of their "restoration" or "repair", because misguided work can be extremely destructive. To SPAB the skill lies in mending them with the minimum loss of fabric and so of romance and authenticity. Old buildings cannot be preserved by making them new. SPAB deliver a Technical Advice Line - 020 7456 0916.

The Institute of Historic Building Conservation - www.ihbconline.co.uk/toolbox/
The Institute of Historic Building Conservation (IHBC) is a professional body and charity, representing the interests of conservation specialists in the built and historic environment, promoting built and historic environment understanding, enjoyment and access, supporting conservation for its delivery of public benefit, and enabling IHBC members to deliver conservation.

The Sustainable Traditional Buildings Alliance - www.responsible-retrofit.org/
The Sustainable Traditional Buildings Alliance (STBA) is a collaboration of organisations that acts as a forum for sustaining and improving traditional buildings. STBA developed the Responsible Retrofit Knowledge Centre.

The Victorian Society - www.victoriansociety.org.uk/
The Victorian Society is the charity championing Victorian and Edwardian buildings, providing advice on about adapting Victorian and Edwardian buildings to the way we live now, while keeping what is special about them, and seeking to engage the public in campaigns to help increase the likelihood of conserving buildings.

The Georgian Society - www.georgiangroup.org.uk/
The Georgian Group is an charity created to campaign for the preservation of historic buildings and planned landscapes of the 18th and early 19th centuries.

Twentieth Century Society - www.c20society.org.uk/
The Twentieth Century Society is a membership organisation which campaigns to safeguard the heritage of architecture and design in Britain from 1914 onwards.

Period Property - www.periodproperty.co.uk/
The Period Property website was established to facilitate an active community of interest for the benefit of people who share a passion for living in, and caring for, buildings that constitute part of our British heritage.

Maintain Our Heritage - www.maintainourheritage.co.uk/
Maintain our Heritage is a group of building conservation campaigners, academics and others who realised how building conservation had become focussed on rescuing historic buildings in advance states of decay, rather than preventing them from decay through appropriate and timely maintenance.

The Building Conservation Directory - www.buildingconservation.com/
Cathedral Communications publish an in print and online directory of products and services for the conservation of historic buildings.

Planning Policy Guidance

National Planning Policy Framework - Conserving and enhancing the historic environment
www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment

Bradford Council Conservation Areas
www.bradford.gov.uk/environment/conservation-areas/what-is-a-conservation-area/

Bradford Council Listed Buildings
www.bradford.gov.uk/environment/listed-buildings/what-is-a-listed-building/

Publications

British Standard 7913:2013 – Guide to the conservation of historic buildings

Historic England Practical Building Conservation series (2012-15), published by Routledge

Repair of Ancient Buildings by A R Powys (1929, 4th edition 2016), published by SPAB

Historic Building Conservation series by M Forsyth (2012-14), published by Wiley-Blackwell

Conservation of Historic Buildings by B Fielden (3rd edition 2003), published by Routledge

For further advice on making your application and for an application pack, please contact:

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