

<p><b>Institution:</b> University of York</p>
<p><b>Unit of Assessment:</b> 34, Art and Design: History, Practice and Theory</p>
<p><b>Title of case study:</b> Stained Glass Apocalypse: The Conservation of the Great East Window, York Minster</p>
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)          The Great East Window of York Minster, featuring the Apocalypse in 77 scenes designed by John Thornton of Coventry, 1405-8, is the largest expanse of medieval glass in Britain and one of the world's great masterpieces of monumental painting. Uniquely for any conservation project of the kind, research by four art historians at the University of York has underpinned, shaped and enabled both its conservation and its interpretation. Their research guided the conservation method statement, central to the success of the £10.5 million Heritage Lottery Fund grant that is paying for the conservation work as part of the <i>York Minster Revealed</i> project. The research also continues to inform daily work on every panel through the East Window Advisory Group, of which the York art historians are members. Unprecedented in stained glass conservation, this partnership between scholars and conservators has established a new benchmark for best practice, recognized by national institutions. The York art historians' research has also enabled the display and interpretation of the window to the public, as a central feature of the tourist experience and economy in York, and in other media, including newspapers, television and the worldwide web.</p> <p><b>2. Underpinning research</b> (indicative maximum 500 words)          The conservation of York Minster's Great East Window is underpinned by the world-leading position in stained glass research of the History of Art Department at the University of York. Three members of staff currently specialize in this area – Ayers, Brown and Norton - building on foundations laid by Professor Emeritus Richard Marks. This departmental specialization is expressed in the research generated in the Stained Glass Research School, the MA in Stained Glass Conservation and Heritage Management, and the British Corpus Vitrearum project, a British Academy research project located at York which aims to provide an online survey of the nation's stained glass. Brown is Chair of the British Corpus and Ayers is Vice-President of the International Corpus (under the auspices of the Union Académique Internationale).</p> <p>Marks's widely recognised standard book on English stained glass addresses a comprehensive range of issues that inform the understanding of any work in this medium, from historiography and iconography to patronage and production (#3.1). It considers Thornton's activities in both York and Coventry. In addition, Ayers's recent monograph on Merton College, Oxford explores issues of institutional context, meaning (including word and image relations), working practice and restoration history (#3.2). At Merton College, as at York, documentary evidence allows assessment of the working practice by named glaziers, including a number of Thornton's contemporaries.</p> <p>Brown and Norton, meanwhile, are the leading authorities on the architectural history and stained glass of the choir of York Minster, exploring the East Window within its architectural setting, and informing an understanding of its patronage, history and meaning. Brown was appointed to the Department in 2008 as an established expert on the Minster, having published a monograph on the glass (1999) and an architectural history of the Minster (2003). Norton's published work, developed with the aid of a major grant from English Heritage (£297,000 awarded in 2005-7), provides a new reading of the East Window within the overall architectural context of the Minster's eastern arm, demonstrating that it is a coherent culmination to the wider representation of sacred history there (#3.3). His article on Archbishop Scrope, executed by Henry IV in 1405, frames the window within the turbulent ecclesiastical politics at the time of its creation (#3.4). More recently, Brown's published research has explored changing principles of historic restoration and conservation at York Minster, underpinning and informing the conservation process today (#3.5).</p> <p>An independent research project has also explored the chemical composition of the East Window's glass. A three-year, Leverhulme Trust funded research collaboration between Ayers (Co-I) and Professor Ian Freestone (PI, then University of Cardiff), the leading glass scientist in this field, undertook innovative compositional trace-element analysis of the glass, providing insights into the history of the window and the working practices of its maker ('Composition, Corrosion and Origins of Medieval Stained Glass: An Interdisciplinary Study', 2007-10, £130,000). This has allowed the identification of batches of materials as they were used within the window, assisting in the planning of panel-by-panel conservation, and providing a corroborative method for identifying intruded materials (#3.6).</p> <p>The research was carried out by <b>Richard Marks</b> (appointed as Professor of Medieval Stained</p>

## Impact case study (REF3b)

Glass 1992, retired 2008, now Professor Emeritus), **Christopher Norton** (appointed as Lecturer 1984, promoted to Senior Lecturer 1993, Reader 2001, Professor 2007), **Tim Ayers** (appointed as Lecturer 2005, Senior Lecturer 2008), and **Sarah Brown** (appointed 2008 as 0.5 Lecturer, in conjunction with an 0.5 post as Director and Chief Executive of York Glaziers Trust).

**3. References to the research** (indicative maximum of six references)

- 3.1 R. Marks, *Stained Glass in England during the Middle Ages* (London, 1993). [Described as ‘a remarkable success’ and ‘a massive enterprise’ in a review by Phillip Lindley, *Burlington Magazine* 136 (June 1994), pp. 384-5.]
- 3.2 T. Ayers, *The Stained Glass of Merton College, Oxford*, Corpus Vitrearum Great Britain, VI, 2 vols (London, 2013). [The result of a twelve-year research project supported by Merton College and by peer-reviewed grants from the AHRC (research leave), and The Paul Mellon Centre for Studies in British Art (Senior Fellowship); entered in REF2 as Ayers, output 1.]
- 3.3 C. Norton, ‘Sacred Space and Sacred History: The Glazing of the Eastern Arm of York Minster’, in *Glasmalerei im Kontext. Bildprogramme und Raumfunktionen*, Akten des XXII. Internationalen Colloquiums des Corpus Vitrearum, Nürnberg, 29 August – 1 September 2004 (Nürnberg, 2005), pp. 167–82. [Included in the Department’s submission to RAE 2008, in which the Department was described as ‘world-leading’ in ‘religious art’ and ‘medieval studies’, and 95% of its outputs graded at 2\* or above.]
- 3.4 C. Norton, ‘Richard Scrope and York Minster’, in P.J.P. Goldberg (ed.), *Richard Scrope, Archbishop, Rebel, Martyr* (Donington, 2007), pp. 138–213.
- 3.5 S. Brown, ‘Stained Glass Conservation at York Minster: Past Histories, Future Challenges’, in L. Pilosi, M. Shepherd and S. Strobl (eds), *The Art of Collaboration: Stained Glass Conservation in the Twenty-First Century*, Proceedings of the 2009 Corpus Vitrearum Forum on the Restoration and Conservation of Stained Glass Windows (London/Turnhout, 2010), pp. 57-64. [Paper given to a symposium at the Metropolitan Museum of Art, New York, and peer-reviewed by the editorial committee of the International Corpus Vitrearum.]
- 3.6 I. Freestone, J. Kunicki-Goldfinger, H. Gilderdale-Scott, T. Ayers, ‘Multi-disciplinary Investigation of the Windows of John Thornton, focusing on the Great East Window of York Minster’, in L. Pilosi, M. Shepherd and S. Strobl (eds), *The Art of Collaboration: Stained Glass Conservation in the Twenty-First Century*, Proceedings of the 2009 Corpus Vitrearum Forum on the Restoration and Conservation of Stained Glass Windows (London/Turnhout, 2010), pp. 151-8. [Evidence of quality as in 3.5.]

Outputs can be supplied on request.

**4. Details of the impact** (indicative maximum 750 words)

The most important impact has been the protection and preservation of one of the largest and most significant works of medieval art in Britain, for York Minster, the City of York and the broad public that is concerned with Britain’s heritage. By enhancing the tourist experience at York Minster, York’s principal tourist attraction, the conservation project has made a major contribution to the economy of an important English city. The success of this project is also now transforming conservation practice nationally and beyond the UK.

**Conservation and Interpretation**

The East Window Advisory Group (EWAG), set up in 2005, has been the central mechanism for facilitating the impact of the Department’s research on the conservation project, which has been ongoing throughout the assessment period (#5.1-3). EWAG’s membership includes Marks, Norton, Ayers and Brown; the Minster architect and other representatives of the Minster; and conservators at York Glaziers Trust, which Brown also directs. Without the EWAG’s earlier academic research, rigorously tested findings and collectively drafted method statement (2009, #5.2), which has guided the conservation of the window throughout, the Minster would not have secured the necessary approval of the Cathedrals Fabric Commission for England, required by the Care of Cathedrals Measure (the ecclesiastical equivalent of Listed Building Consent) before conservation projects of this kind can proceed (#5.4-5). The EWAG’s contribution was also central to the construction of the Minster’s case for the £10.5 million grant from the Heritage Lottery Fund (2011) for *York Minster Revealed*, which has financed the window’s conservation (#5.6, 5.8).

In the application of the EWAG method statement, and thus in meetings discussing each panel individually, the underpinning research has informed understanding of the glaziers’ working

practices and design processes, and issues of both restoration and meaning. For example, questions of narrative structure, and word and image, of the kind explored in the research of Ayers, Brown, Norton and Marks, have been crucial to the restoration of a window that represents the first and last books of the Bible: in the re-ordering of the panels, as well as in the conservation of their individual contents.

The results of the conservation and restoration of the East Window are demonstrated by the illustrations below, which show the transformation in the appearance of just one panel, out of 144 main-light panels and 144 tracery panels. In this, as in each case, the Department's art-historical research has underpinned the interpretation of meaning and change over time, informing the restoration of clarity to the design and improved legibility for visitors.



*East Window panel 7j, before and after restoration. (Photo: York Glaziers Trust, Courtesy Dean and Chapter of York)*

Research by scholars in the Department has also underpinned unprecedented public access to the window and to the processes of its conservation (# 5.5). Within the Minster, a £750,000 display (opened in October 2012) has, as its dramatic centrepiece, the 'orb': a custom-designed structure for the changing display of conserved panels from the East Window, alongside photographs taken before conservation, accompanied by interpretation based on EWAG research (#5.9).

Accompanying interactive displays have been similarly informed by departmental research. For example, the cutting-edge 3D digital model of the Minster's development c.1100-1500 has been constructed with reference to Norton's unpublished research on the Minster's eastern arm. As a result of these new attractions, between October and December 2012 visitor figures to the Minster rose by 21%. A team of 15 volunteer stained glass guides has also been trained in association with the opening of the 'Bedern Glaziers Studio' in a formerly disused medieval building, and managed by the Glaziers Trust, directed by Brown (#5.10). Since its opening in January 2009, over 6,000 people have witnessed the conservation in progress for themselves, with a sharp increase since the launch of the orb (1212 visits between October 2012 and May 2013).

**Web access:** Since October 2011, a 'Panel of the Month' feature on the York Glaziers Trust website has enabled the public to follow the project's progress, attracting nearly 12,000 virtual visits (# 5.11). **Media:** The window was also the subject of a BBC4 Documentary, *Britain's Most Fragile Treasure*, part of the BBC/N&A series *Handmade in Britain* to which Ayers, Brown and Marks all contributed (#5.12). On 22 October 2012, the unveiling of the orb was featured on *BBC Breakfast*, the *BBC One O'Clock News* and *ITV Calendar News*. On 29 October 2012, the orb was also featured on the BBC *Inside Out* programme for Yorkshire and Lincolnshire. In addition, in April

2013, conservation work on the East Window featured on BBC Two's *Escape to the Country*. **Press Coverage:** The project has been featured in the local and national press, including the *Dalesman*, *Daily Telegraph*, *Independent*, and *Daily Mail*.

This hitherto unprecedented application of art-historical research within a sustained partnership between academics, conservators and the patronal institution is now regarded as best practice for medieval stained glass conservation: it 'has clearly set new standards for major conservation projects of this kind' (Peter Draper, Commissioner (2001-11), Stained Glass Sub-Group, Cathedrals Fabric Commission, #5.5), and 'will undoubtedly serve as a model for future restoration not only in York but in the rest of the UK and Europe' (Richard Shephard, Chamberlain of York Minster and Director of Development, # 5.7). It has been followed by the Jesse Tree Window Advisory Group at Salisbury Cathedral (involving Brown), and the conservation of the Great East Window at Wells Cathedral (involving Ayers and Marks). Endorsed by the Cathedrals Fabric Commission for England, such partnerships are also being explored across Europe. Brown spoke on this topic in the conference series 'Cattedrali Europee, Conservazione Programmata', in Pisa in May 2013.

#### **5. Sources to corroborate the impact** (indicative maximum of 10 references)

##### **Unpublished Reports confirming the role of the Department in the EWAG and York Minster Revealed Project:**

- 5.1 EWAG, 'Report and Recommendations to the Dean and Chapter of York', nos 1-4 (November 2005; June 2006; November 2006; March 2008).
- 5.2 EWAG and York Glaziers Trust, 'Method Statement for the York Minster East Window Stained Glass Conservation Project', final version, September 2009.
- 5.3 S. Brown, 'York Minster's Great East Window: Panel Order', August 2012.

##### **Statements corroborating the importance of the Department's research and EWAG to the Minster, Cathedrals Fabric Commission, and public access:**

- 5.4 Statement from Andrew Arrol, Surveyor of the Fabric, York Minster, confirming the importance of the project to the understanding and conservation of the Minster.
- 5.5 Statement from Peter Draper, former Commissioner (2001-11), Stained Glass Sub-Group, Cathedrals Fabric Commission for England (currently Commissioner, English Heritage), confirming the importance of the project's research to consultation with statutory regulatory bodies, the setting of standards for major conservation projects, and the inclusion of the public through tours and displays.
- 5.6 Statement from Mark Hosea, Director, *York Minster Revealed*, confirming the importance of the EWAG to *York Minster Revealed* and to its success in winning HLF funding.
- 5.7 Statement from Dr Richard Shephard, Chamberlain of York Minster and Director of Development, York Minster Fund, confirming the importance of the research to funding for York Minster and the project's status as a model for future restoration.

##### **Other Sources (Websites and Media):**

- 5.8 Details of the Heritage Lottery Funded project, *York Minster Revealed*, of which the conservation of the window is a major element, appear at <http://www.yorkminsterrevealed.org> and <http://www.yorkglazierstrust.org/?idno=996>.
- 5.9 Information about the public display of the conservation project at York Minster and the 'orb' appear at <http://www.yorkminster.org/about-us/york-minster-revealed-ymr/the-orb.html>.
- 5.10 Information on public, guided access to the conservation project, informed by the narrative derived from the EWAG research, at Bedern Glaziers Studio, set up by the York Glaziers Trust with the support of the HLF, can be found at <http://www.yorkglazierstrust.org/?idno=995>.
- 5.11 S. Brown, 'Panel of the Month' entries, from October 2011 onwards, on the York Glaziers Trust website ( <http://www.yorkglazierstrust.org/?idno=1011>).
- 5.12 BBC4 Documentary: *Britain's Most Fragile Treasure*, featuring Ayers, Brown, and Marks, part of the BBC/V&A *Handmade in Britain* series, transmitted 12, 13, and 17 October 2011 and repeated Spring 2013: <http://www.bbc.co.uk/programmes/b0161dqq> and <http://www.vam.ac.uk/content/articles/h/britains-most-fragile-treasure/>. We can supply a DVD on request.