# CONDITION REPORT

## STAINED GLASS EAST WINDOW

# THE ANGLICAN CHAPEL NEWTOWN ROAD CEMETERY NEWBURY BERKS

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#### for NEWBURY CORPORATION BERKS

Commissioned by Mr Granville Taylor August-October 2011



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# THE ANGLICAN CHAPEL NEWTOWN CEMETERY NEWBURY BERKS CONDITION REPORT ON THE STAINED GLASS 1. INTRODUCTION

**NB** It has not been feasible to standardize the meaning of the colour of the arrows in every instance in the documentary colour photos; they are merely indicative and the text following each one explains its significance.

#### 1. INTRODUCTION

#### 1.1 OUR BRIEF: SCOPE AND INTENTION OF REPORT

Our aim is to provide you with all relevant information for you to make an informed decision on the future of the stained glass East Window.

- 1.1.2 <u>Information on the designer and maker of the stained glass window</u>, its history and significance.
- 1.1.3 <u>Present Condition of the stained glass</u>, INSIDE and OUTSIDE, illustrated with good quality documentary photos.
- 1.1.4 Recommendations for the Conservation/Restoration of diagnosed problems.

#### 1.2 INSPECTION VISITS/METHOD STATEMENT

#### 1.2.1 Inspection Visits

23 November 2010: Preliminary site visit and meeting with Mr Granville Taylor representing Newbury Town Council; Mr Brian Sylvester representing The Friends of Newtown Cemetery by Mr Robert Holloway, Director of Chapel Studio, Herts, colleague of Mr and Mrs San Casciani, who specializes in assessment of structural and glazing aspects of stained glass windows, including their external protection and the carrying out by his specialist Conservation Team of the work as detailed in the Report, monitored by Mr San Casciani. Photos taken, including the East Window OUTSIDE, which is used in this Report *PHOTO 28*.

18 August 2011: Site visit and meeting with Mr Taylor representing Newbury Town Council; Mr Brian Sylvester representing The Friends of Newtown Cemetery by Mr Paul and Mrs Paula San Casciani of Paul San Casciani Stained Glass Consultants, Oxford. Detailed documentary photos INSIDE of the stained glass East Window taken by Mr San Casciani. Site notes from Mr San Casciani's commentaries on the techniques and condition of all aspects of the glass painting and staining taken by Mrs San Casciani. NB it poured with rain the entire 3 hours of this visit rendering the grassy uneven ground treacherous underfoot, which precluded OUTSIDE photography of the East Window.

#### 1.2.2 Method Statement

All examinations are in accordance with guidelines for working practices issued by the Institute of Conservation (ICON), of which both Mr Holloway and Mr San Casciani are Accredited Conservator/Restorers. ICON adopts the Guidelines of the Corpus Vitrearum Medii Aevi, the international body regulating and advising best practice for ancient and historical stained glass. Its members are encouraged to attend Conference updates on their subject as part of their continuing professional development. Chapel Studio organised a recent Conference, held at Magdalen College Cambridge, September 2010, attended by Mr and Mrs San Casciani. All recommendations and their working practices are also in accordance with their statement 7.2 Philosophy of Repairs stipulated by English Heritage.

Each stained glass window is inspected internally and externally, using binoculars to scan it and concentrate on specific issues. All the high-resolution digital images taken by Mr San Casciani illustrating this Report are scrutinized on his computer, enlarging them to their highest magnification and using colour filters to reveal conditions often unobservable on site. These

photos are examined and analysed with Mr Holloway and all observations noted by Mrs San Casciani for incorporation into the Report.

#### 2. BRIEF DESCRIPTION AND HISTORY OF THE BUILDING

#### 2.1 THE ANGLICAN CHAPEL NEWTOWN ROAD CEMETERY

Owners: Newbury Town Corporation. In 1847 the Newbury Cemetery Corporation was set up by Act of Parliament. Its Anglican Chapel was built in 1850 and dedicated by the Bishop of Oxford, Samuel Wilberforce, famous for his part in debating the controversial Darwinian issues of this period. Simple ground plan of the building *FIGURE 1*. In the southern section another Chapel was built for dissenters, but this was demolished in the 1950s. The Ground Plan of the Cemetery which shows its size and large and ambitious layout can be seen on the Friends of Newtown Cemetery website, 2.2.3. In 1953 the 1847 Act was repealed and Newbury Town Corporation was given sole charge of the Cemetery.

#### 2.2 KEY SOURCES

#### 2.2.1 Buildings of England Series, Berkshire (1966)

The following information is provided by Brian Sylvester: taken from the updated reprint, 2010, with additions by Geoffrey Tyack and Simon Bradley, Penguin Books, London.

(page 69) 'Newbury also has a Grecian lodge, but the chapel (1850. Possibly by *Clacy*), is Gothic. The architectural aspect of Berkshire cemetery design was dominated in the 1850s by the *Poulton & Woodman* Partnership, whose robust, idiosyncratic Gothic can be seen in the chapels and lodges of c. 1856-60 at Windsor, Abingdon and Wallingford.'

(page 395) 'Cemetery, Newtown Road. Opened 1850. One surviving mid-Victorian Chapel. Puginian Dec, of flint.'

#### 2.2.2 Information about the possible Architect

Mr Sylvester obtained from the Royal Institute of British Architects the following:

- 'John Berry Clacy, 1810-1880. Addresses 11 High Street READING(1837); 99 Broad Street READING (Post Office) (1842). He was a Postmaster as well as an architect, county surveyor, auctioneer and agent for a life assurance office.'
- 2.2.3 Website of The Friends: www.fnrc.co.uk In 2009 The Friends of Newtown Cemetery was formed in cooperation with Newbury Town Council and they have developed a comprehensive website. Its sections indicate the scope of their aims and activities, from recording, researching and conserving all the graves as an integral part of Local History; and recording all the flora and fauna as a community resource, in particular for educational purposes. The website has many fine photographs of the Cemetery through the seasons, and the Chapel in its setting by magnificent cedars.
- 2.2.4 Newtown Road Conservation Report 2007 A 66-page comprehensive Report with context photos of the Chapel on pages 6/23 and a series of historical maps. www.newbury.gov.uk

# 3. SHORT DESCRIPTION OF THE STAINED GLASS COMMISSION, ITS ARTISTIC IMPORTANCE AND THE TECHNIQUES IT ILLUSTRATES

#### 3.1 MAKER AND COMMISSION

An entry has been discovered by Mr David Clow during his hunt through the microfilm local newspapers of the period: Newbury Weekly News, 25 March 1875: 'Memorial Window. The painted window, which is a memorial to the late Henry Godwin Esq, has been placed in the Lower Cemetery Chapel. The subject is The Resurrection which has been treated with great beauty and effect. Messers Heaton, Butler and Bayne were the artists employed.'

#### 3.1.2 Outline History of the Studio

from the Appendix in Victorian Stained Glass Martin Harrison, Barrie and Jenkins, London 1980.

This firm was founded by Clement Heaton (1824-82) and James Butler (1830-1913) in 1855. They were joined by the designer Robert Turnhill Bayne (1837 -1915) in 1862 when they displayed at the International Exhibition in Kensington that year a window they made to his design which won first prize. This is featured in colour on the cover of the definitive book Victorian Stained Glass by Martin Harrison. Bayne had worked at another major Victorian Studio, Clayton & Bell and introduced some of their style characteristics into his designs, in particular the 'glazed diaper work' that is such a striking element of Clayton & Bell's windows. A 'diaper' is an overall pattern, usually painted on the glass, but by them developed into an ornate and highly decorative feature of glazing: usually a number of circles containing florets or symbolic motifs set within the glazing e.g. in the voluminous cloak of the sleeping soldier, bottom of Light c *PHOTO 19*. The 3, each with their own area of expertise, with their teams of highly trained craftsmen specializing in the different aspects of stained glass making — cartooning, glass cutting, glass painting and glazing — became prolific producers of stained glass in Great Britain and abroad.

Clement John Heaton (1861-1940) took his father's place in the firm in 1882 but left after a dispute in 1885. Butler's eldest son Clement James (1858-1929) also took an active part in the business, as did Bayne's eldest son Richard Cato (1870-1940) who eventually passed the business to his son Basil Richard (1897-1953) at whose death the firm closed. What remained of its Archive was sold at Christie's in 1975 and widely dispersed, some to the Victoria & Albert Museum, London; and to the Stained Glass Museum, Ely Cathedral, Cambs.

- 3.1.3 <u>Significance of this Memorial Window</u> This memorial window must have been commissioned promptly and carried out efficiently because there were only 8 months between the death of Henry Godwin and its installation at his memorial service. The great importance attached to his memorial is further illustrated by the imposing stone cross on his grave which was designed as and remains the focal point of the avenue looking west as you come out of the Chapel.
- 3.1.4 <u>Information about Henry Godwin, the individual commemorated</u> Information supplied by Brian Sylvester and the Friends website

Henry Godwin was born in Bath in 1811 and came to Newbury in 1837. He was a Fellow of the Society of Antiquaries: 2 of his books are on their Library database: Worthies and Celebrities connected with Newbury and Neighbourhood printed by Blacket 1859; The English Archaeologist's Handbook published by the scholarly Oxford Press, Parker, 1867. He was cofounder of the Newbury District Field Club with Silas Palmer MD. His Memorial Window and Cross are therefore an integral part of the Cemetery, representing an important character in the town life of his period.

#### 3.2 SUBJECT OF THE WINDOW

3.2.1 Its Theme: The Resurrection. This is the obvious choice for a cemetery Chapel as the mourners congregated were in need of spiritual solace and the designer was committed to provide it. He was aware both of historical examples of stained glass and those of his contemporary competitors. The style is not in the Gothic Revival manner: the scenes are not set in architectural surrounds so favoured by Pugin, but are pictorial, following what has been termed 'the Nazarene School' – a group of painters in Rome in the 1840s whose pictorial representations of Bible stories and figures became influential. In the main Lights, the central one is dominated by the figure of the Risen Christ with hand raised in blessing and a banner of victory held high -- this has many precedents; likewise the witnesses: on the left the expected female group of 'the three Marys'; on the right male disciples St Peter and St John. All perceived as saints as they wear haloes. The symbolism of the triumph of eternal life is maintained in every detail by Bayne, nothing is insignificant. The diaper patterns that dignify the principal figures are relevant to the meaning of each person and they have precedents in medieval and renaissance paintings as well as continental stained glass. In each Light stylized apple trees with apples are depicted

symbolising the Fall of Man through eating this forbidden fruit from the Tree of Knowledge. Christ's redemptive power is symbolised by the eye-catching blossoming apple branch that rises by the tomb as Christ appears in transcendent white. The Tracery above blazons the sacred letters associated with Christ: 'IHC' 'CHI RHO' and the Alpha and Omega "I am the Beginning and the End" exhorting the Faithful to rejoice in the Saviour and feel no dismay at death.

#### 3.3 ARTISTIC IMPORTANCE

3.3.1 <u>Consistent Level of Artistic Achievement</u> Heaton, Butler & Bayne maintained high standards during an epoch of heavy demand for stained glass windows. Certainly their known output is as copious as that of the other major Studios of the Victorian period, but a full inventory as yet does not exist. It is very important, therefore, that every window they produced should be taken care of.

#### 3.4 THE TECHNIQUES EMPLOYED

- 3.4.1 Range of Technical Achievement The East Window is a significant example of the manifold skills of glass painting and staining; kilnwork; cutting and glazing the workforce could command. Paul San Casciani, trained as a specialist in traditional glass painting at James Powell & Son, a major Studio founded in 1844, and now with a lifetime's experience, comments on the proficiency of the glass painting, characterised by a dark thin trace line executing all the fundamental drawing lines including the outlining of the facial features and the folds of the garments. The forms are not heavily modelled but rely on the skilful delineation of this line. Before he had actual proof of the makers of this window, it was obvious to him that it was the work of a major Studio. The accomplished way all the beautifully-designed diaper patterns on the garments have been carried out with an elegant trace line and the application of silver stain which when fired becomes a beautiful golden hue, proves that all this was carried out by experienced craftsmen and such time-consuming skilled work must have made the commission expensive. Christ's cloak decorated with a complex pomegranate pattern imitating damask is a superb example.
- 3.4.2. These Glass Painting Skills in the Context of 1870s problems As described by Martin Harrison on pages 51-52, in the 1870s various Studios produced painted glass that quite soon began to lose its painted detail. Glass paint is a vitreous enamel in powder form that, when mixed with water and other agents becomes a painting medium. When painting is completed it is fired in a kiln and should fuse with the base glass and become permanent. However, as William Morris himself lamented, the glass paint bought by some Studios including his at this period contained too much borax, a flux that is necessary in order to help the paint fuse, but if in too high a ratio, it does not fire properly and gradually the paintwork comes off. It was hoped that increasing borax would allow glass paint to fire at a lower temperature, therefore be more economical, but this proved a disaster in many cases and we are still reaping the consequences of this today in having to conserve Victorian windows with severe paint loss. Careful hands-on tests across this window do not show any deterioration; and Harrison names Heaton, Butler and Bayne as a Studio that escaped the problem to a large extent. This was possibly because Heaton had researched glass paints and developed his own. Hardman's Studio was notorious for this problem and that is one of the reasons why we suspected that this window could not have been produced by them.

#### **4. PREVIOUS INTERVENTIONS**

#### 4.1 SURPRISING ABSENCE OF REPAIRS

4.1.1 No Obvious Evidence of Repairs None of the Lights or Tracery of this Window shows actual re-glazing. The only cluster of mending leads is seen in Light b *PHOTO 13* purple arrow. As it explains in the commentary, these are probably 'face leads' repaired in situ.



#### PHOTO 1 18.08.2011 THE ANGLICAN CHAPEL INTERIOR

EAST WINDOW in Context

CHAPEL PLAN WINDOWS

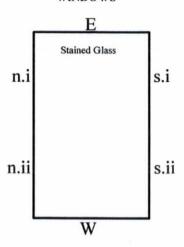


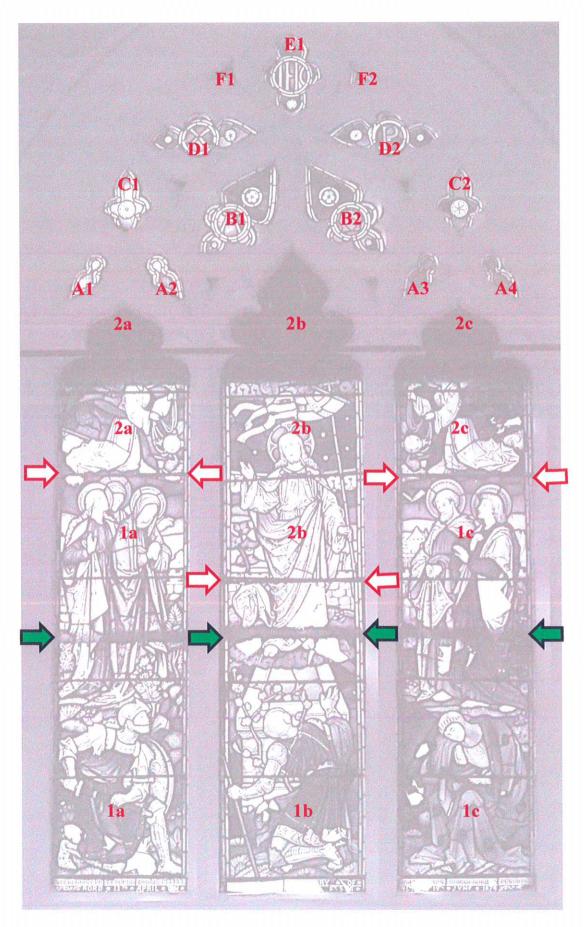
FIGURE 1 above



PHOTO 2 18.08.2011

# INTERIOR looking West

NB though the West Door, in the far distance is sited as the focal point the Memorial Cross on the grave of Henry Godwin to whom the Stained Glass Memorial East Window is dedicated, dated 1874.



<u>EAST WINDOW</u> FIGURE 2 : CVMA International Numbering System. <u>white arrow</u>: division; green arrow: shadow of metal bar division on OUTSIDE protective window.

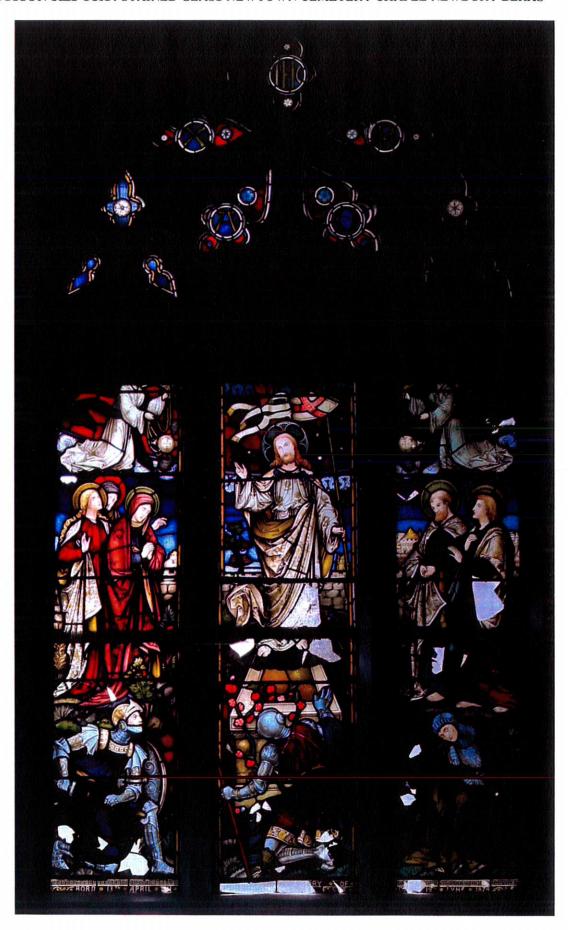


PHOTO 3 18.08.2011 EAST WINDOW Heaton, Butler & Bayne Studio 1874

#### 5. CONDITION ANALYSIS

#### 5.1 EAST WINDOW LIGHT a (left)

Size: 2ft 1in wide (measured) x 7ft 9ins high (estimated)

Summary of Problems as indicated in PHOTOS 5, 6, 7, 8: 18.08.2011

General Comments The Light is made up of only 2 Panels, as indicated on Figure 2: 1a runs from the inscription up as far as the haloes of the Three Marys; 2a, a censing angel, makes up the rest of the Light including the cusps of the windowhead. These are obscured by the metal sheet of the protective window OUTSIDE, but the glass is intact PHOTO 23. The window suffered vandalism evident in the holes in the glass presumably before the protective OUTSIDE window was installed. The glazing which consists of all the leaded and soldered pieces of glass made rigid and watertight by the application of leaded light cement brushed under the leaf of each lead, has been gradually failing over time. This is an inevitable process because, as a general rule, lead being a malleable material eventually loses its tensile strength along with its leaded light cement that gradually begins to disintegrate, become friable and fall out. The structural weakness of the glazing grid is worsened by the slow loosening of the copper ties applied to the Panel at regular intervals along the line of the tie (fixing) bar and tied to it. The Light has many cracks (indicated by red arrows) caused by stress because of the failure of the glazing and the ties. Panel 1a is particularly subject to pressure cracks because it is so tall. Window Lights comprising several Panels spread the stress, but of course it is difficult for a designer to accommodate divisions into the design without interrupting the coherence of a scene.

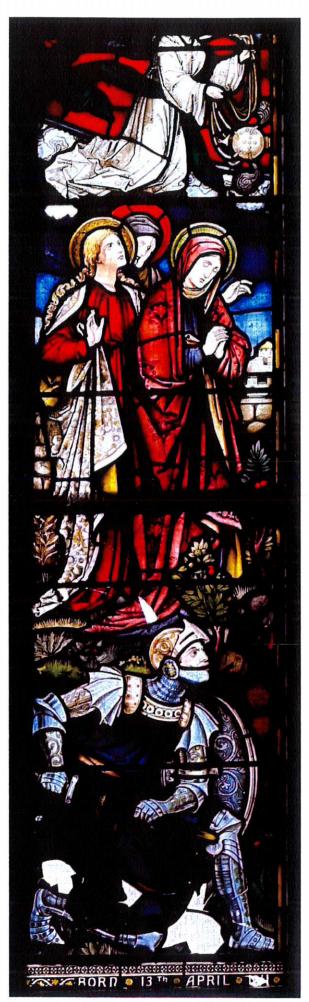
Glass The lower part of Panel 1a especially the areas at the base of the soldier figure, has suffered the worst damage. It appears that before the protective window OUTSIDE was put in place, pieces of glass were vandalized, probably by throwing stones, leaving gaping holes. The missing piece in front of the kneeling knee was painted with detailed grass and plants. There is also a small hole in the inscription year date. Such holes have associated cracks. Higher up the Panel, above the soldier's helmet is an elongated triangular hole and several cracks in the adjacent flashed ruby glass due to the undue stress of the failed glazing. All red glass, termed 'ruby' by stained glass artists, is 'flashed' i.e. has a thin layer of ruby glass fused on top of the base clear glass. When it breaks, the flashed layer tends to shale, leaving patches of clear glass along the crack line, as seen in the red robes here. The glass just below the division *PHOTO* 8, has a large hole and breakage. There are pressure cracks in 2 haloes and the robe of the angel above.

Glass Paint The glass paint itself is in good condition.

<u>Glazing: Lead.</u> Flat, beaded, of various appropriate widths. The leading of Panel 1a is weak, seen in the noticeable bowing *PHOTO* 6, deliberately taken with flash and at an angle to reveal that the Panel is not flat. The solder joint has broken on the lead above the large right-hand bottom hole *PHOTO* 5. The glass piece painted as leg armour is coming out of its lead, shown by the line of light to the right of the shin.

<u>Leaded Light Cement</u> This is brittle and falling out wherever a glass piece is missing through breakage.

<u>Ties Bars and Ties</u> These original tie bars are heavily rusted *PHOTO 6* and their ties are weak, or are loose or missing.



#### EAST WINDOW (left)

#### LIGHT a

PHOTO 4 18.08.2011

Subject (from bottom to top)

A Roman soldier caught dozing on guard duty at Christ's tomb is startled awake by the Resurrection and appears to be in the instinctive act of drawing his sword.

Above him a group known as 'the three Marys' – the Virgin Mary, Christ's mother; Mary Magdalene instantly recognisable by the Faithful because of her long golden hair; in the background Mary the mother of James the Apostle, witness the Resurrection. Christ's mother worships, her eyes closed and hands clasped in prayer. Mary Magdalene gazes in rapt devotion, her right hand raised in acknowledgement of her Lord. Mary in the background is overcome, her hand pressed to her face and eyes closed. The diaper pattern (explanation 3.1.2) painted on the Virgin Mary's robe is an ornate stylized lily, her emblem, appearing in paintings of the Annunciation, often held in the hand of Angel Gabriel as a representation of her purity. Mary Magdalene's cloak has a diaper pattern of a stylized pomegranate, symbol of immortality.

The city of Jerusalem is on the skyline. In the sky above, heaven opens in crimson glory and an angel appears swinging a censer billowing incense to celebrate the sacred moment.

The head and wings of the angel are intact as seen in *PHOTO 23* but obscured by the metal sheet of the protective window OUTSIDE.

The first part of the inscription along the base of this Memorial Window reads 'BORN 13<sup>th</sup> APRIL 1(81)1.'



PHOTO 5 18.08.2011 colour somewhat bleached on computer in order to reveal damage

#### LIGHT a (detail) bottom of Panel 1a

#### red arrow:

obvious glinting cracks. There are additionally a considerable number of hairline cracks observed on site and clearly visible when the photo is magnified on the computer.

#### yellow arrow:

area of missing glass due to breakage. From left to right there are 4 areas:

- 1. green glass with painted tufts of grass and leaves of plant(s);
- 2. blue glass with painted folds of a cloak;
- 3. upper and lower: green glass with painted tufts of grass and leaves of plants;
- 4. small area of inscription '1811.'

#### green arrow:

tie bar, rusted, with loose ties, see PHOTO 6. The upper bar is somewhat bent.

#### purple arrow:

because the glass piece has broken and dropped out, the lead calm has parted from its adjoining calm and hangs free.

.



#### LIGHT 1a (detail) bottom of Panel 1a PHOTO 6 18.08.2011

Flash photo deliberately taken on the slant to show that the leadwork has lost its proper rigidity so the Panel is bowing and causing pressures on the glass pieces which are consequently cracking/breaking.

#### green arrow:

bottom tie bar heavily rusted, with its ties stretched and loose, therefore not holding the Panel in position securely.

#### purple arrow:

cement used to seal the Panel into the stone sill has been spread too thickly and clumsily so it obscures the lettering of the inscription. This cement against the painted details is not good for the glass paint.

**NB** The protective outer window of wired glass is seen through the areas of broken and missing glass.



#### LIGHT 1a (detail) bottom of Panel 1a PHOTO 6 18.08.2011

Flash photo deliberately taken on the slant to show that the leadwork has lost its proper rigidity so the Panel is bowing and causing pressures on the glass pieces which are consequently cracking/breaking.

#### green arrow:

bottom tie bar heavily rusted, with its ties stretched and loose, therefore not holding the Panel in position securely.

#### purple arrow:

cement used to seal the Panel into the stone sill has been spread too thickly and clumsily so it obscures the lettering of the inscription. This cement against the painted details is not good for the glass paint.

**NB** The protective outer window of wired glass is seen through the areas of broken and missing glass.



PHOTO 7 18.08.2011 colour somewhat bleached on the computer in order to reveal damage

#### LIGHT a (detail) Panel 1a upper

#### red arrow:

obvious glinting cracks. There are additionally hairline cracks observed on site and visible when the photo is magnified on the computer. A particularly cracked area is in the upper left-hand area: a plant and to its right the white cloak diapered with silver stain of Mary Magdalene, recognizable by her long golden hair. The 2 cracks across her scarlet robe are conspicuous because of the shaling of the ruby layer of 'flashed' glass used for this garment.

#### yellow arrow:

area of missing glass due to breakage. From left to right there are 2 areas:

- 1. diapered white cloak: a triangular piece missing, but part of it appears to be jammed behind the Panel and its protective outer window; a small area at the bottom of the cloak;
- 2. long triangular shape missing in the rose-hued cloak of the Virgin Mary, painted with half-tone; green arrow: tie bar, rusted.

**NB** the wide dark line across the top of this Panel is the shadow of the metal frame of the protective OUTSIDE window.



PHOTO 8 18.08.2011

LIGHT a 1a upper/2a

**NB** for the cusp of this Light, backed with a metal plate as part of the protective OUTSIDE window, see *PHOTO 23* 

#### DIVISION

red arrow:

cracks, in particular, clusters in 2 of the haloes. The glass in this photograph is less damaged than the parts below.

yellow arrow:

area of broken and missing glass: blue glass indicating sky.

green arrow:

rusted tie bars. The middle green arrows indicated the division between the 2 Panels that comprise this Light.

**NB** because the Window has been holed in many places, the glass inevitably picked up dirt generally over its surface until protected by exterior glazing. This is particularly noticeable in streaks and deposits on Mary Magdalene's face.

#### 5. CONDITION ANALYSIS

#### 5.2 EAST WINDOW LIGHT b (centre)

Size: 2ft 1in wide (measured) x 8ft 6ins high (estimated)

Summary of Problems as indicated in PHOTOS 10, 11, 12, 13, 14, 15, 16, 17: 18.08.2011

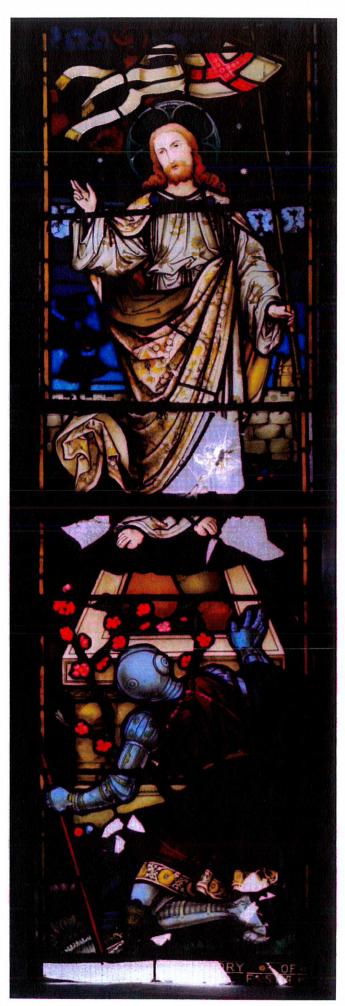
General Comments The Light is made up of only 2 Panels, as indicated on Figure 2 but its structure is unlike Lights a and c: its 2 Panels are more even in size. 1a runs from the inscription up as far as the skyline and traverses the lower part of Christ's robe, thus the division of the 2 Panels interrupts the figure to a certain extent. The designer is trusting that our eyes go automatically to Christ's face and hand raised in blessing, and discount the thick line of division leads and parallel tie bar further down the figure. Above Christ's banner of victory is an angel holding a crown above triumphant Christ, making up the rest of the Light including the cusps of the windowhead. These are obscured by the metal sheet of the protective window OUTSIDE, but the glass is intact PHOTO 25. The window has suffered more vandalism than Light a, evident in the large number of holes in the glass presumably before the protective OUTSIDE window was installed. The glazing which consists of all the leaded and soldered pieces of glass made rigid and watertight by the application of leaded light cement brushed under the leaf of each lead, has been gradually failing over time. This is an inevitable process because, as a general rule, lead being a malleable material eventually loses its tensile strength along with its leaded light cement that gradually begins to disintegrate, become friable and fall out. The structural weakness of the glazing grid is worsened by the slow loosening of the copper ties applied to the Panel at regular intervals along the line of the tie (fixing) bar and tied to it. The Light has many cracks (indicated by red arrows) caused by stress because of the failure of the glazing and the ties.

Glass The lower part of Panel 1a has suffered damage: areas with painted grass details; the soldier's painted and stained decorated tunic border; his foot armour; and below that a large part of the inscription is missing (but not lost, see PHOTO 9 bottom paragraph). It appears that before the protective window OUTSIDE was put in place, pieces of glass were vandalized, probably by throwing stones, leaving gaping holes. All these holes have associated cracks, indicated by the red arrows. Higher up the Panel, the soldier's flashed ruby glass tunic is noticeably cracked due to the undue stress of the failed glazing. All red glass, termed 'ruby' by stained glass artists, is 'flashed' i.e. has a thin layer of ruby glass fused on top of the base clear glass. When it breaks, the flashed layer tends to shale, leaving patches of clear glass along the crack line, as seen in the red tunic here. Christ Resurrected stands on blue clouds: to left and right these have been smashed and consequently areas are missing. The glass in Panel 1b just under the division showing Christ's robe below his draped cloak, (originally decorated with a sunflower motif in paint and stain as can be seen on the upper robe and sleeves) is completely missing PHOTOS 14/15 except that tiny fragments seem to be still adhering to the inner face of the OUTSIDE protective window. Unfortunately, this OUTSIDE window has received a fierce impact -- enough to make a hole in it with cracks radiating from it PHOTO 15 turquoise arrow. The lead along the glass defining the cloak has come away PHOTOS 14/15 purple arrows. There are pressure cracks and a hole in the heavily decorated cloak. Christ's face has a diagonal crack; 2 more in the hair by the shoulder. His halo is also cracked. These cracks are caused by failure of the glazing grid.

Glass Paint The glass paint itself is in good condition.

<u>Lead</u> The leading of Panel 1b has been weakened by the holes in the glass and allied cracking. The lead calm is hanging loose from its glass in Christ's cloak above the feet.

<u>Leaded Light Cement</u> This is brittle and falling out wherever a glass piece is missing through breakage. <u>Ties Bars and Ties</u> These original tie bars are heavily rusted *PHOTO 11* and their ties are weak, or are loose or missing, therefore not doing their job of holding the Panels securely in position. The tie bar in Panel 2b level with Christ's shoulders is sloping way out of position *PHOTO 17* causing stress on the glazing and consequent cracking of adjacent glass pieces.



#### EAST WINDOW (centre)

#### LIGHT b

PHOTO 9 18.08.2011

Subject (from bottom to top)

A Roman soldier on guard duty, awoken by the sudden apparition of the Risen Christ above the opened tomb, raises his right hand in acknowledgement of the momentous event. The blossoming apple tree branch at the foot of the tomb symbolises the new life Christ's sacrifice has won for humanity, the apple of the Garden of Eden redeemed.

Christ appears in dazzling white robes, afloat on clouds. His right hand makes the gesture of benediction, showing the nail wound in the palm. His left hand holds the banner of victory, emblazoned with a red cross. His robe is decorated in paint and stain with sunflower motifs, symbol of enlightenment. His cloak is magnificently adorned with a rich diaper pattern (explanation 3.1.2) in paint and stain of stylised pomegranates, symbolising everlasting life.

Above the city of Jerusalem the sky is rolled back to display the crimson of the heavenly realm lit with spectacular stars.

The windowhead is obscured by the metal sheet of the protective window OUTSIDE but the stained glass still exists, see *PHOTO 25*. It depicts an angel kneeling facing forward with a crown held above the Risen Christ, victor over death.

The inscription along the bottom of this Memorial Window has lost most of its glass, but on the Friends of Newtown Cemetery website it says that these pieces of broken glass have been kept and give the name of the deceased as HENRY GODWIN F.S.A. (Fellow of the Society of Antiquaries, Burlington House, London) details 3.1.4.

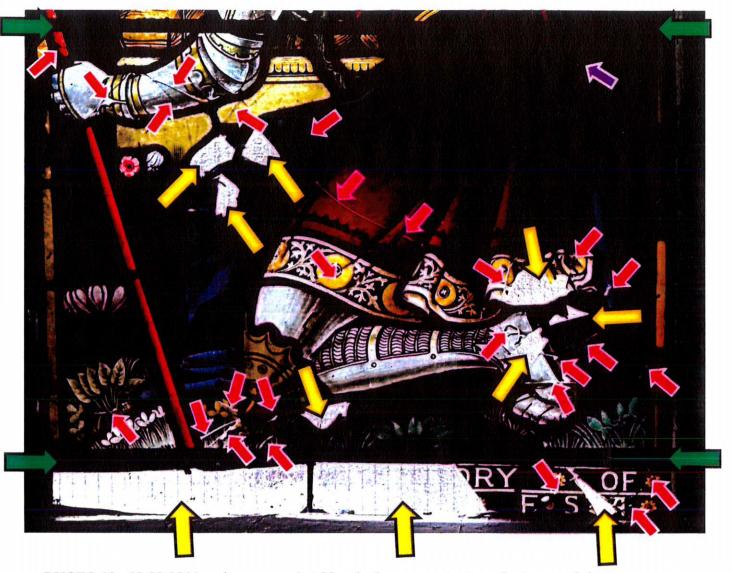


PHOTO 10 18.08.2011 colour somewhat bleached on computer in order to reveal damage

#### LIGHT b (detail) bottom of Panel 1b

#### red arrow:

obvious glinting cracks. There are additionally widespread hairline cracks observed on site and visible when the photo is magnified on the computer. The crack across the soldier's scarlet robe is conspicuous because along the line there is some loss of the ruby layer of 'flashed' glass used for this garment.

#### yellow arrow:

area of missing glass due to breakage. From left to right there are 5 areas:

- 1. there are 3 connected areas of blue glass with painted folds of the soldier's cloak;
- 2. part of the white border of the tunic decorated with painted and stained motifs;
- 3. green glass with painted tufts of grass;
- 4. area grey-blue glass painted detail of armour-plated left foot; connected area of right foot;
- 5. large area of inscription, deduced to be '(IN LOVING MEM)ORY OF (HENRY GODWIN ) F.S.(A.).'

#### green arrow:

tie bar, rusted.

<u>purple arrow</u>: glint of light showing because the lead has come away from the glass.

NB the protective outer window of wired glass is seen through the areas of broken and missing glass.



<u>LIGHT b</u> (detail) bottom of Panel 1b *PHOTO 11 18.08.2011* Flash photo taken on the slant to show state of tie bars and sill

#### green arrow:

heavily rusted tie bar with ties stretched and loose, therefore not holding the Panel securely in position.

#### red arrow:

glinting cracks

#### yellow arrow:

missing glass inscription showing the wired glass of the protective OUTSIDE window.

**NB** the base of the Panel abutting the sill in a bad state, the lead lifting on the left. Plaster sealant clumsily against the glass towards the right under remaining part of inscription 'ORY.' Patches of mortar repair in right-hand corner.



PHOTO 12 18.08.2011 colour somewhat bleached on computer in order to reveal damage

#### LIGHT b (detail) middle part of Panel 1b

#### red arrow:

many obvious glinting cracks. There are additionally hairline cracks observed on site and visible when the photo is magnified on the computer. The cracks across the soldier's scarlet robe are conspicuous because there is shaling of the (ruby) layer of 'flashed' glass used for this garment. There is shaling along the crack in the amber glass indicating the open tomb above the soldier's right hand.

#### yellow arrow:

hole in red (ruby) flashed glass.

#### green arrow:

tie bars, rusted. The upper one appears sloping to the right.

#### purple arrow:

glints of light showing because the lead has come away from the glass.

#### orange arrow:

deposits on glass.

**NB** the only obvious repair, below hole: cluster of 3 mending leads traverse this piece, for details see *PHOTO 13*.



<u>LIGHT b</u> (detail) middle part of Panel 1b *PHOTO 13 18.08.2011* Flash PHOTO taken to show condition of tie bars

#### green arrow:

heavily rusted tie bar with ties stretched and loose, therefore not holding the Panel securely in position. These loose ties are festooned with cobwebs.

#### red arrow:

cracks in the red (ruby) flashed glass: the top thin layer of red glass it has shaled revealing the clear glass below.

#### purple arrow:

cluster of 3 mending leads. We believe they are 'face leads' applied in situ.

**NB** this *PHOTO* shows how dirty the entire surface of the glass is.



PHOTO 14 18.08.2011 colour somewhat bleached on computer in order to reveal damage

#### LIGHT b (detail) upper part of Panel 1b

#### red arrow:

obvious glinting cracks. There are additionally hairline cracks observed on site and visible when the photo is magnified on the computer.

#### yellow arrow:

area of missing glass due to breakage. From left to right there are 3 areas:

- 1. left: area of grey glass painted to represent clouds; right: 2 connecting areas of grey glass clouds;
- 2. large area of white glass: Christ's robe decorated with a diaper pattern of a painted and stained sunflower motif.

#### turquoise arrow:

wired glass of protective OUTSIDE window damaged by strong impact: hole and allied cracks. green arrow:

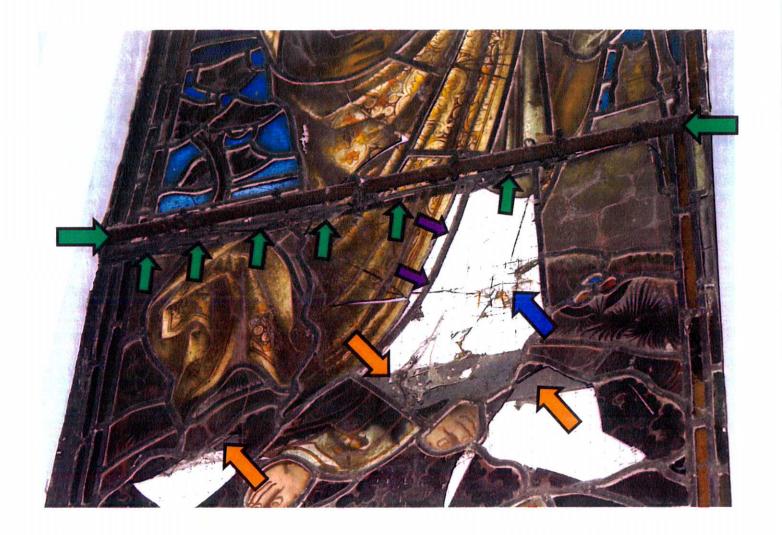
tie bar, rusted and slightly sloping to the right. Behind this bar is the leaded division between 2a and 2b. For a better view see *PHOTO 15*.

#### purple arrow:

a strip of lead calm has come away from its glass piece.

#### NB

- 1. The protective OUTSIDE window of wired glass is seen through the areas of broken and missing glass.
- 2. The metal framework of the OUTSIDE window creates a wide band of horizontal shadow across the centre of this photo.



<u>LIGHT b</u> (detail) upper part of Panel 1b PHOTO 15 18.08.2011 Flash PHOTO taken to show condition of tie bar and division just below it

#### green arrow, large:

heavily rusted tie bar with ties stretched and loose, therefore not holding the Panel securely in position. The ties are festooned with cobwebs.

#### green arrow: small:

the 2 leads of the division between panels 2a and 2b are mangled and out of position, stretching the ties beyond their limit.

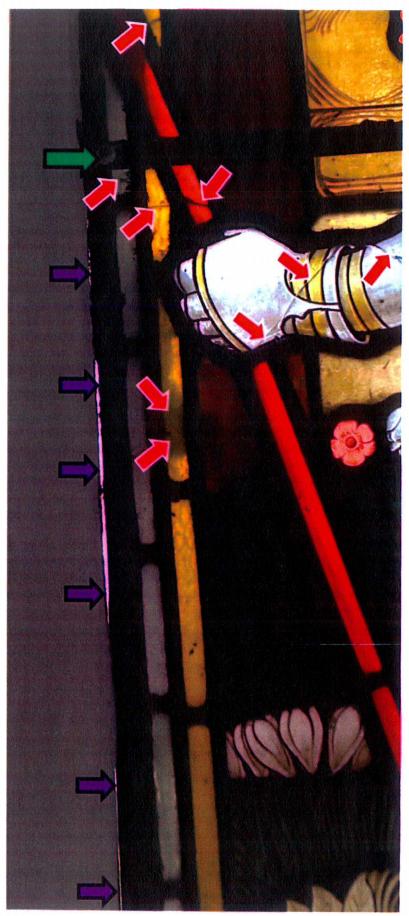
#### turquoise arrow:

wired glass of protective OUTSIDE window damaged by strong impact: hole and allied cracks. It seems that tiny remnants of the missing glass from Christ's robe (description under *PHOTO 14*) are adhering to the area around the impact hole.

#### orange arrow:

metal division bar of the protective wired glass window OUTSIDE.

**NB** this *PHOTO* shows how dirty the entire surface of the glass is.



# LIGHT 1b (detail) bottom left of Panel 1b *PHOTO 16 18.08.2011*

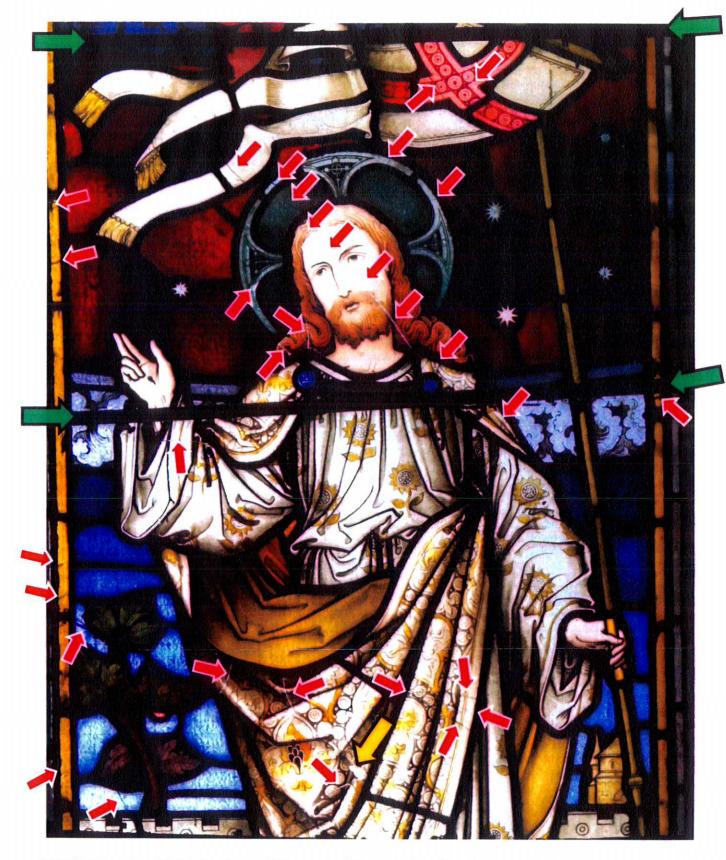
Flash photo deliberately taken on the slant to show that the leadwork has lost its proper rigidity so the Panel is bowing and causing pressures on the glass pieces which are consequently cracking.

red arrow: cracks

green arrow: tie bar heavily rusted.

#### purple arrow:

light showing because the lead frame of the Panel has come away from the stone mullion.



LIGHT b (detail) Main Part of 2b excluding windowhead cusp PHOTO 17 18.08.2011

<u>red arrow</u>: obvious cracks in glass. Additionally there are some hairline cracks visible when photo is magnified on the computer.

<u>yellow arrow</u>: hole in white glass, painted and stained with complex diaper pattern.

green arrow: tie bars. The lower one is badly out of position: sloping to the left causing stress on the glass above. The one above the pennant appears slightly sloping left.

#### 5. CONDITION ANALYSIS

#### 5.3 EAST WINDOW LIGHT c (right)

Size: 2ft 1in wide (measured) x 7ft 9ins high (estimated)

Summary of Problems as indicated in PHOTOS 19, 20, 21, 22: 18.08.2011

General Comments The Light is made up of only 2 Panels, same format as Light a. As indicated on Figure 2: 1c runs from the inscription up as far as the haloes of St Peter and St John; 2c, a censing angel (the design of 2a, but 'handed' i.e. reversed), makes up the rest of the Light including the cusps of the windowhead. These are obscured by the metal sheet of the protective window OUTSIDE, but the glass is intact *PHOTO 24*. The window has suffered vandalism evident in the holes widespread in the glass presumably before the protective OUTSIDE window was installed. When the glazing has received so many impacts and losses of glass pieces its function of holding all the glass together in an effective grid is compromised. The structural weakness of the glazing grid is worsened by the slow loosening of the copper ties applied to the Panel at regular intervals along the line of the tie (fixing) bar and tied to it. The Light has many cracks (indicated by red arrows) caused by stress because of the failure of the glazing and the ties. Panel 1a is particularly subject to pressure cracks because it is so tall.

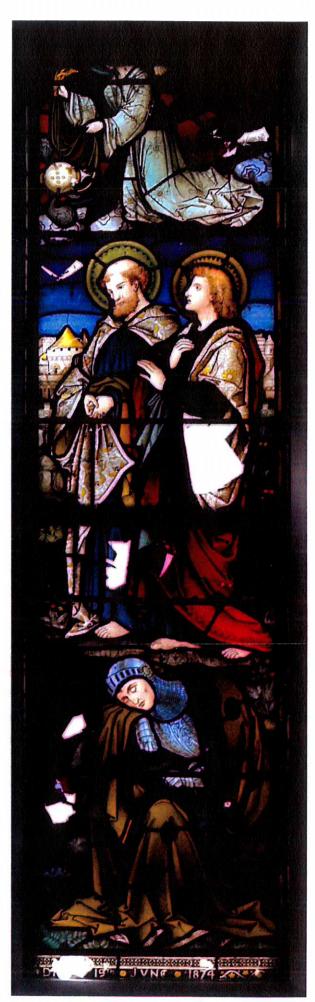
Glass The lower part of Panel 1a especially the areas to the left of the sleeping soldier, has suffered damage: there are holes in the background; 3 holes, 1 large and 2 small, in the inscription. It appears that before the protective window OUTSIDE was put in place, pieces of glass were vandalized, probably by throwing stones, leaving the gaping holes. There is also a small sharply defined hole in the voluminous cloak which might be from an air rifle. All holes inevitably have associated cracks. Higher up the Panel, in St John's red cloak are noticeable cracks and a missing piece. All red glass, termed 'ruby' by stained glass artists, is 'flashed' i.e. has a thin layer of ruby glass fused on top of the base clear glass. When it breaks, the flashed layer tends to shale, leaving patches of clear glass along the crack line, as seen in the red cloak here. The blue glass to the left *PHOTOS 20/21* has a large hole and jagged breakage. There is a very large piece of St John's robe, painted and stained with a diaper pattern flower (marigold?) and leaf motif, missing. Numerous pressure cracks due to failed glazing are seen in all up the left side of the Panel and 2 broken pieces of sky *PHOTO 22*. Above, the area of the angel, also shows breakage, holes and various cracks.

Glass Paint The glass paint itself is in good condition.

<u>Lead</u> The leading of both Panels is weak, showing failed glazing due in part to impacts and loss of glass pieces putting an undue strain on the rest of the glass.

<u>Leaded Light Cement</u> This is brittle and falling out wherever a glass piece is missing through breakage.

<u>Ties Bars and Ties</u> These original tie bars are heavily rusted *PHOTO 21* and their ties are weak, or are loose or missing. Therefore the tie bar is not fulfilling its function of supporting the panels in position.



#### EAST WINDOW (right)

#### LIGHT c

PHOTO 18 18.08.2011

Subject (from bottom to top)

This Roman soldier on guard duty at Christ's tomb has been overcome by tiredness and unlike his fellows remains seated and asleep.

Above him are 2 more witnesses to Christ's Resurrection. St John the Apostle is traditionally depicted as a young man with golden hair: he gazes in awe, his hand half raised as if he is still too amazed to do more. His robe has a simple pattern of a stylised marigold. His bearded older companion is St Peter, later to become the first leader of Christ's Church. His head is bowed in thought, maybe with a degree of shame because when Christ was taken prisoner he got scared and denied he was a follower. The richer pattern on his cloak seems to suggest the august position he will attain.

In the background are the buildings of Jerusalem and above in heaven is the exact 'handed' design of the angel censing that is found in the windowhead of Light a. The head and wings of this angel are intact, see *PHOTO 24*, but obscured by the metal sheeting in the cusps of the protective window OUTSIDE.

The inscription in this Memorial Window ends 'DIED 19<sup>th</sup> JUNE 1874.'

## 5.3 LIGHT c (detail) bottom part of Panel 1c PHOTO 19 18.08.2011

#### red arrow:

obvious glinting cracks. There are additionally hairline cracks observed on site and visible when the photo is magnified on the computer.

#### yellow arrow:

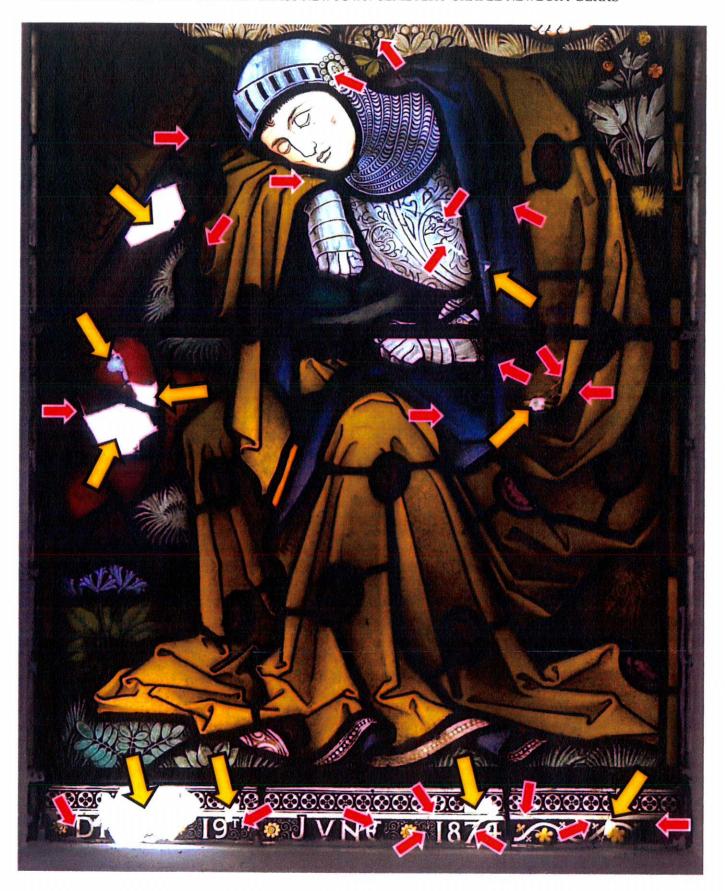
area of missing glass due to breakage. From left to right there are 5 areas:

- 1. left: area of brown glass painted to indicate the tomb lid;
- 2. right: small hole in dark blue glass of soldier's cloak lining;
- 3. a group of 3 allied areas of red (ruby) flashed glass, rich colour of earth round tomb.
- 4. hole in khaki glass of soldier's cloak.
- 5. 'tinted white' glass of inscription border at bottom of light: left, a large area, and 3 small holes along the border, decorated and inscribed with paint and stain. Inscription 'DI (ED) 19t(h) JUNE 1874'

#### green arrow:

tie bars, rusted.

**NB** The protective OUTSIDE window of wired glass is seen through the areas of broken and missing glass.



LIGHT c (detail) bottom of 1c PHOTO 19 18.08.2011 somewhat bleached to reveal damage For condition analysis see page 8 opposite.



PHOTO 20 18.08.2011 colour somewhat bleached on computer in order to reveal damage

#### LIGHT c (detail) Middle Part of Panel 1c

#### red arrow:

many obvious glinting cracks. There are additionally hairline cracks observed on site and visible when the photo is magnified on the computer. The cracks across the St John's scarlet cloak has shaling of the (ruby) layer of 'flashed' glass used for this garment. There is also shaling along the lead at the bottom of the cloak.

#### yellow arrow:

area of missing glass due to breakage. From left to right there are 4 areas:

- 1. very large area of white glass, robe decorated with a diaper pattern in paint and stain;
- 2. large hole in blue glass, painted with folds of the robe of St Peter;
- 3. triangular hole in red (ruby) flashed glass and small hole to right, cloak of St John;
- 4. small hole in white glass at bottom of robe described in 2. above green arrow:

#### tie bars, rusted.

**NB** the protective OUTSIDE window of wired glass is seen through the areas of broken and missing glass. The shadow of its division bar creates a wide dark horizontal line across this Panel.



LIGHT c (detail) Middle Part of Panel 1c PHOTO 21 18.08.2011
Flash PHOTO taken on the slant to show condition of tie bars and the surface of the glass paint

#### green arrow:

heavily rusted tie bar with ties stretched and loose, therefore not holding the Panel securely in position. The remaining ties are not evenly spaced, implying some are missing. The tie on the right has collected a lot of dirt.

#### yellow arrow:

The larger areas of missing glass showing the wired glass of the protective OUTSIDE window.

**NB** this flash *PHOTO* reveals the paint on the glass showing the quality of the glass painting: 1. down the left side is depicted a variety of wild flower, their flowerheads and leaves beautifully executed:

- 2. the tufts of grass at the bottom show deftness in depicting the individual blades.
- 3. the decorative border of the garment hem is carried out with precision by an experienced painter.

## 5.3 LIGHT c (detail) upper part of Panel 1c; lower part of 2c PHOTO 22 18.08.2011

#### red arrow:

obvious glinting cracks. There are additionally hairline cracks observed on site and visible when the photo is magnified on the computer. The cracks across the deep red sky has shaling of the (ruby) layer of 'flashed' glass.

#### yellow arrow:

area of missing glass due to breakage. From left to right there are 3 areas:

- 1. left, upper: censer: small hole
- 2. right, upper: a group of 4 allied areas of red (ruby) flashed glass in the sky;
- 3. left, lower: 2 triangular holes in dark blue glass of the sky.

#### green arrow:

tie bars, rusted. The middle bar appears wider because it has the leads of the Panel division behind it.

#### NB

- 1. The protective OUTSIDE window of wired glass is seen through the areas of broken and missing glass.
- 2. This part of the Light is exceptionally dirty. In particular, see
- i) a very dusty cobweb remnant hanging down from the censing angel's robe covering the feet;
- ii) marks on the censing angel's neck; the faces of the 2 male saints;
- iii) dirt apparently trapped on the protective OUTSIDE window, seen in the areas of missing blue glass, see yellow arrow, 3. above.

On the internet it suggests that the designer Bayne frequently included a self-portrait in his windows, a bearded man. The bearded saint in the Light represents St Peter who is traditionally depicted as a bearded man with a partly bald head with a curl above the forehead, but might also be the self-portrait.



LIGHT c (detail) Upper Part of Panel 1c PHOTO 22 18.08.2011 Condition analysis page 9

#### 5.3 continued CUSPS of WINDOWHEADS of LIGHTS a, b and c

LIGHT 2a flash PHOTO23; PHOTO 26; LIGHT 2b flash PHOTO 25; PHOTO 26;

LIGHT 2c flash PHOTO 24; PHOTO 26 all taken 18.08.2011

These Cusped Windowheads cannot be assessed fully because they are backed (therefore obscured) with metal sheeting at the top of the protective glazing.

Cusp 2a: Subject:

Upper part of censing angel: haloed head and wings.

All glass and its glazing appears intact. A few splashes of emulsion.

Cusp 2b: Subject:

Kneeling haloed and winged angel holding a crown, symbol of Christ's victory over death, looking down to Christ below.

All glass and its glazing appears intact. Some splashes and trickles of white emulsion.

Cusp 2c: Subject:

Upper part of censing angel: haloed head and wings.

All glass and its glazing appears intact. Small splashes of emulsion.

#### 5.4 TRACERY LIGHTS

PHOTOS 26/27 18.08.2011. for numbering, see FIGURE 2

#### Subject

E1: apex Light: Greek alphabet 'IHC' the sacred initials 'JESUS.'

D1; D2: Greek letter 'X' = 'CHI' and Greek letter 'P' = RHO meaning CHRIST.

B1; B2: Greek letter 'A' and Greek letter ' $\Omega$ ' O(mega)' representing the first and last letters of the alphabet 'I am Alpha and Omega, the beginning and the end.'

red arrow:

obvious glinting cracks. The cracks across the deep red background has shaling of the (ruby) layer of 'flashed' glass.

yellow arrow:

gap between the stained glass Panel and the masonry of its aperture, light clearly showing through. purple arrow:

glass piece of curved border out of its lead.

#### 5.5 EAST WINDOW: 3 LIGHTS AND TRACERY: OUTSIDE

PHOTO 28 taken by Robert Holloway 23.11.2010

The 3 main Lights have protective glazing comprising wired glass and metal frames. These frames have metal sheeting in the cusps of the windowheads. The 3 Main Lights are divided into 2 Panels by a metal division bar.

Light a: good condition.

Light b:

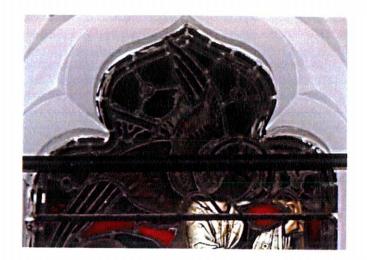
<u>yellow arrow</u>: a hole caused by a sharp impact has a radiating cracks spreading out from it *PHOTOS* 14/15 INSIDE. The whiteish shape top left of the lower Panel is the large missing piece of the actual stained glass *PHOTO* 14 <u>yellow arrow bottom right</u>, caught by the flash of the camera.

<u>Light c</u>: good condition.

Tracery: some repairs and repointing required, to be done from INSIDE, see 5.4 above.

**NB** the stonework is the responsibility of your masons.

### LIGHTS a, b and c, Cusps of Windowheads FLASH PHOTOS 18.08.2011



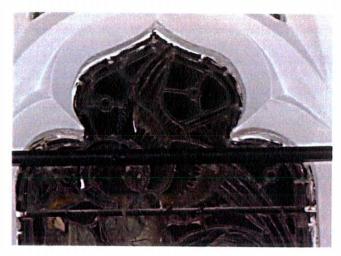




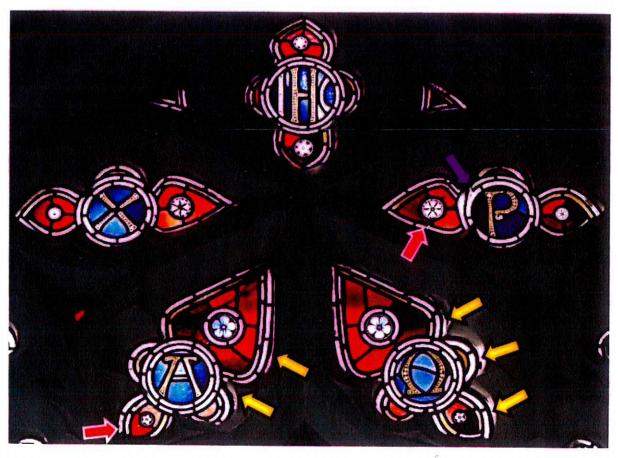
PHOTO 23 Top left: Light 2a PHOTO 24 Top right: Light 2c

PHOTO 25 left: Light 2b

The flash *PHOTOS* of the 3 windowheads, blacked out by the protective metal sheet of the OUTSIDE window (see *PHOTO 28*), show they are intact. They have been splashed with white emulsion, demanding careful cleaning.

TRACERY LIGHTS see FIGURE 2 AND CUSPS OF LIGHTS a, b and c
PHOTO 26 above 18.08.2011 overall view including obscured cusps;
PHOTO 27 below 18.08.2011: TRACERY 5 Main Lights. Condition analysis page10





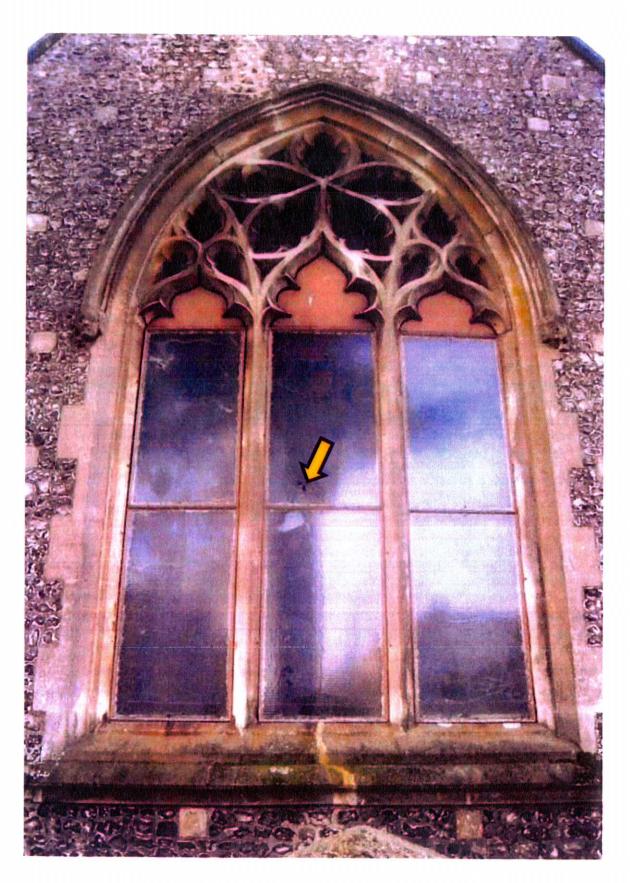


PHOTO: 23.11.2010 Robert Holloway, Chapel Studio Herts EAST WINDOW: OUTSIDE

The 3 main Lights have protective glazing comprising wired glass and metal frames. These frames have sheet metal in the window heads, filling the cusp. <u>yellow arrow</u>: hole with allied radiating cracks.

#### 6. SUMMARY OVERALL

#### 6.1 REASONS FOR DETERIORATED STATE OF EAST WINDOW

- 6.1.1 Minimal Evidence of Previous Interventions We have found scant evidence of any previous repair work, in fact only 1 obvious repair: 4.1 and *PHOTO 13* purple arrow. This could have been an in situ repair done with face leads i.e strips of lead fixed onto the front of the glass to disguise the cracks and to a certain extent seal them against weather penetration. However, the exterior protective window prevents us examining OUTSIDE to ascertain whether this is a glazed repair. We believe that the glazing is the original leading of the installation as a Memorial Window in March 1875 as published in the local newspaper: see 3.1.
- 6.1.2 <u>Vandalism limited after Installation of a Protective Window OUTSIDE</u> We have to conclude that the large number of holes identified in our Condition Analyses have been caused by vandalism after the Cemetery use declined in the 1950s. These impacts, causing holes and allied cracking accelerated the inevitable fatigue of aged glazing. The installation of a protective window of wired glass OUTSIDE this East Window has arrested the worst effects of wanton damage. There is similar wired glass with metal sheet windowheads installed in all the other windows: 2 single Lights south matched by 2 similar Lights on the north; 2-Light West Window above the only door to the Chapel, see simple sketch of Ground Plan *FIGURE 1*.
- 6.1.3 Founding of The Friends of Newtown Road Cemetery, 2009 Now that a proactive group of Friends has been established with a viable plan for community and educational use of the Cemetery both as a source of local history and as a nature reserve (see details of website 2.2.3) it is crucial to conserve and restore the window as an integral part of the Chapel. The building is used as a meeting place for the variety of events organised by the Friends. The Group has a policy of increasing links with similar Groups dedicated to safeguarding their Historic Cemeteries and exchanging ideas about how best to involve the community in order to achieve long-term preservation.

#### 7. RECOMMENDATIONS

#### 7.1 CONSERVATION AND RESTORATION

- 7.1.1 Need for Preservation of the Window The Window, now in a fragile state, with many holes, cracks and compromised glazing identified in our Condition Analyses needs to be preserved promptly. It belongs to the large corpus of a major Studio of the Victorian period, Heaton, Butler and Bayne that did not close till 1953. It has been well executed as explained in 3.3 and 3.4 and is a good example of the high standard of glass painting and glazing techniques of the period. Its category 'Memorial Window' is a valid subject of research in the context of the assessment of Victorian social customs and attitudes to religion, mourning and death.
- 7.1.2 <u>Methods to be Applied</u> The window should be treated according to the procedures of Conservation and Restoration stipulated by English Heritage and the Corpus Vitrearum Medii Aevi, an international body responsible for setting and maintaining standards in the protection of stained glass. We as members of the GB Institute of Conservation abide by the following Code of Practice.

#### 7.2 PHILOSOPHY OF REPAIRS

- 7.2.1 Stained Glass Conservation/Restoration Best Practice (some procedures not relevant in every case)
- i) Present best practice advises minimum intervention in consideration of the maintenance of the integrity of the item; and all procedures are reversible.
- ii) The aim is to retain the appearance of the item in every respect, keeping the original materials wherever possible.

#### 7.2.2 Conservation Procedure Outline:

- i) A rubbing will be made of the outline of the glass in its lead context before being carefully disassembled where necessary.
- ii) The glass surface will be examined under a microscope to assess the condition of (a) the glass (b) the painted work.
- iii) Any paint exhibiting unstable phenomena such as flaking will be treated with permitted

consolidation agent as and when considered necessary.

- iv) The glass will be carefully cleaned front and back with de-ionised water, using glass fibre brushes.
- v) Any cracks will be edge-bonded with approved resins.
- vi) Where slight chipping to the pigment has occurred along an old crack, the tiny loss will be touched up with cold colour on the front of the piece, a reversible procedure.
- vii) Unsightly mending leads will be carefully removed only where appropriate and feasible and the pieces put together again with approved resin.
- viii) When glass is missing a new piece will be cut to shape, of 'antique' mouth-blown glass of a matching colour, painted in style, including silver stain if matching requires it, initialed and dated in small but legible letters and fired for permanence
- ix) In a case where part of a painted glass piece still exists, wherever possible the original fragment will be retained and a new piece will be cut to fill the missing area as described in viii) and joined to the original piece with approved resin.
- x) Any freshly mended piece will be supported with a backing plate: a matted piece of 1.5mm glass, kiln-formed to match the contours of the original to exclude any danger of fungal growths etc being able to develop.
- xi) All backing plates will be silicon edge-bonded to the original glass, making an air-tight fit.
- xii) Where re-glazing is deemed essential, new leads will be of the same size and profile.
- xiii) The leaded light cement will be applied by hand.
- xiv) Whilst the aim is to retain original ironwork, in some cases this is neither advisable or feasible. 7.2.3 Documentation
- i) All work in the Studio is documented 'before' and 'after' with photography.
- ii) Detailed notes and standardized Conservation diagrams are made during all procedures and 2 copies of the Documentary Report made: 1 for the Client; 1 for Studio records.

#### 7.3 SPECIFIC ISSUES REGARDING THIS WINDOW

- 7.3.1 <u>Treatment of holed areas</u> The window has many holes and pieces of partly shattered glass that all call for matching glass. Reconstruction of missing areas will be carefully designed with the guidance of the remaining pieces. In particular, the characteristic diaper patterns on the robes will be carefully reproduced on the new pieces and treated as described in viii) and ix), x) and xi).
- 7.3.2 <u>Total Re-glazing of all 3 Main Lights</u> Essential as the leading is heavily fatigued, stressed and damaged in many places. New copper ties will be affixed at all appropriate places.
- 7.3.4 <u>Replacement of all fixing bars</u> These are all severely rusted, consequently beyond conservation and need replacing with non-ferrous bars of manganese bronze.

#### 7.4 PROCEDURE FOR REMOVAL OF EAST WINDOW

- 7.4.1. <u>Removal from OUTSIDE</u> As the fixing bars are on the INSIDE, the 3 Lights each consisting of 2 Panels must be removed from the OUTSIDE as this is how they were installed.
- i) The protective wired glass window OUTSIDE must be removed and discarded.
- ii) Each Main Light to be released from any remaining ties then removed to the Studio with the greatest care as the leading is in a fragile state and a considerable number of the pieces of glass are loose or badly cracked and likely to fall out.
- iii) All heavily rusted tie bars to be extracted from the stonework as carefully as possible and discarded as they are so severely rusted as to be beyond restoration. (the stonework is the responsibility of your masons and must be made good before the finished window is reinstated).
- 4. The apertures to be temporarily glazed: sealed secure and weathertight with standard translucent Polycarbonate.
- 5. Tracery: all work in situ: cleaning; D2 mended: all repointed where necessary.

#### Long-term Security of the Reinstalled Window Main Lights

We recommend MARLON 6mm Polycarbonate, secured by a series of metal fixings in the mortar joints of the stonework, thus avoiding any drilling into the actual stonework.

Additionally to hinder any impact to the polycarbonate, stainless steel wire guards to each Light.