



**University of  
Leicester**

**Archaeological Services**

**An Archaeological Standing Building Survey of  
an Air Raid Shelter within the Grounds of  
Wyggeston and Queen Elizabeth I College,  
Victoria Park Road, Leicester (NGR SK 595 027)**

**Gerwyn Richards**



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Leicester  
(NGR SK 595 027)**

**Gerwyn Richards**

**For: CgMs Consulting Ltd**

Approved by:

Signed:



Date: 13.09.2011

Name: Patrick Clay

**University of Leicester**

Archaeological Services

University Rd., Leicester, LE1 7RH

Tel: (0116) 252 2848 Fax: (0116) 2522614

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***Summary***

*University of Leicester Archaeological Services were commissioned by CgMs Consulting Ltd to undertake an archaeological standing building survey (to English Heritage Level 2) of a former air raid shelter within the grounds of Wyggeston & Queen Elizabeth I College, Victoria Park Road, Leicester. Planning permission has been granted to re-develop the site as a health centre. The proposed re-development will require the demolition of the air raid shelter.*

*Civil defence provision and air raid shelter construction began in earnest in Leicester in the early months of 1940, and it is likely that this shelter was constructed at this time. The shelter is a common type known as a trench shelter; such shelters were built throughout Britain during the early years of the war. Early examples were timber lined with minimal overhead cover; this is a concrete lined, completely enclosed type.*

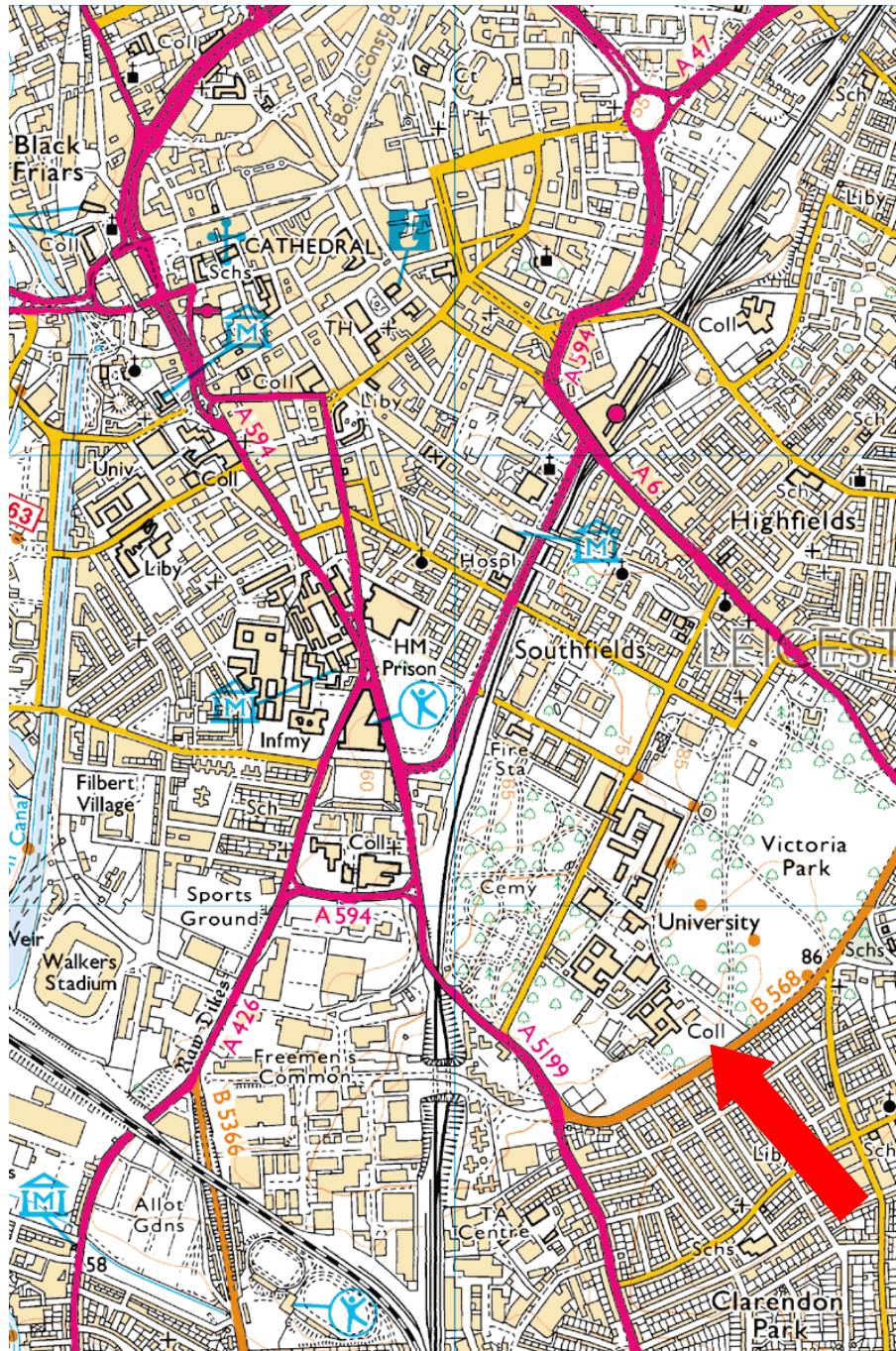
*Unusually, the shelter is laid out in a simple grid design. Such designs were not common as they offered very little protection from a blast wave as a result of a direct hit and as a result the design was abandoned early on in the war. It is unclear whether this shelter is one of these early designs or has been truncated since the war*

*The archive will be held by Leicester City Museums, under the museums accession number A11.2011.*

**1. Introduction**

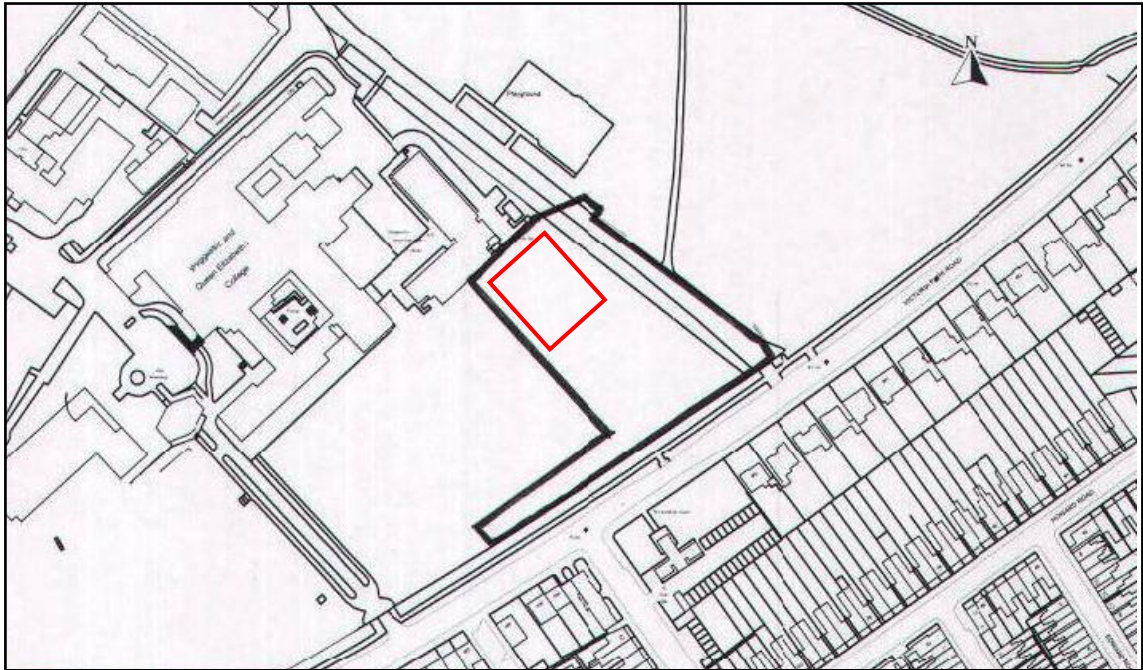
University of Leicester Archaeological Services were commissioned by CgMS Consulting Ltd on behalf of Assura to undertake an archaeological standing building survey of a former air raid shelter within the grounds of Wyggeston and Queen Elizabeth I College, Victoria Park Road, Leicester (SK 595 027; *Figures 1 & 2*), formally Wyggeston Boys School. Planning permission has been granted to demolish the structure in advance of the proposed redevelopment of the site as a health centre. The air raid shelter dates from World War II and as a result, the City Archaeologist, as advisor to planning committees, Leicester City Council has recommended that a historic building recording programme be undertaken prior to the demolition, to English Heritage Level 2 as defined in *Understanding Historic Buildings: A guide to good recording practice* (English Heritage 2006).

The project was completed in accordance with the Institute for Archaeologists (IfA) *Code of Conduct* and adhered to their *Standard and Guidance for Archaeological Investigation and Recording of Standing buildings or Structures (2008)*. In addition, Leicester City Council's *Guidelines and Procedures for Archaeological Work in Leicester* was followed.



**Figure 1.** Site location

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**Figure 2**

Proposed development area in detail (site boundary in black, approximate location of shelter in red).  
(Not to Scale).

By the end of the First World War, with Zeppelin raids reaching all parts of the United Kingdom, it became apparent that the English Channel was no longer the shield it once was and large-scale bombing of cities would be a real threat in any future conflict. All too graphic proof of this was seen in during the Spanish Civil War (1936-1939) with both Nazi and Italian air forces bombing Government controlled towns and cities. Barcelona was one of the most badly affected cities and in response the Anti-Aircraft Passive Defence Department was formed in the city to provide air raid protection for the civilian population. This department was to become the model on which civilian air raid protection was based throughout Europe.

A number of British engineers and scientists, including J.B.S Haldane and Cyril Helsby (on a trip sponsored by the Labour Party) visited Spain to study the effects of bombing on cities to study bomb damage on residential buildings. Helsby took a number of detailed plans of surface shelters and shallow, semi-sunken shelters. Upon their return to the United Kingdom it became apparent how unprepared the country was to face the sustained bombing Barcelona had endured. Helsby's research was generally well received and was even presented to the Institution of Structural Engineers and the term 'Barcelona-minded' coined. Unfortunately, the report, along with other reports by distinguished engineers was rejected by the Government of the day in favour of the official Hailey Report, the crux of which was that the provision widespread civilian air raid protection might create a shelter mentality, which would interrupt the essential war effort. As a result, Britain was only slightly 'Barcelona-minded'.

At the outbreak of war in September 1939 the city of Leicester began providing civilian air-raid shelters with the majority being built in the early months of 1940. It is unclear when the shelter at Wygggeston Boys School was built, however, as the shelter within

the grounds of Wyggeston Girls School (now Regent College) was built at this time, it is likely, therefore that this shelter was built at around the same time. Some cities had begun building civilian air raid shelters during Munich Crisis in August-September 1938; the Air Raid Precautions Act 1937 placed a statutory obligation on local government to provide such shelters and anti-gas precautions. It is unclear whether Leicester had begun building shelters as early as this and there is no specific mention of existing shelters in the Civil Defence Committee minutes, Leicester City Council, although in October 1939 the Committee did place an order for a “further 87” illuminated location signs, 1 for each trench shelter and 50 in reserve, so it appears that there were trench shelters in use in Leicester as early as October 1939. It is most likely that the trench shelter at Wyggeston & Queen Elizabeth I College was built in the early months of 1940. The Civil Defence Committee minutes specifically mention the Filbert Street Recreation ground trench shelter being opened in December 1940.

These trench shelters were constructed by a cut and fill method; the trenches were either hand or machine excavated and then lined with pre-cast concrete panels (*Figure 3*) and the excavated earth mounded over the top of the whole structure. There would also be earth-filled gabions or earth filled timber blast walls adjacent to the entrances. Pre-war mapping of Wyggeston Boys School does not show any evidence of a mound in the area of the air raid shelter, only playing fields, and it is possible, therefore, that the earth was imported onto site in order to construct the shelter.



**Figure 3**

Construction of the shelter at Fullhurst Community College (formerly Newarke Girls School)  
(Record office for Leicestershire, Leicester and Rutland)

By the winter of 1940 it became apparent that a number of the trench shelters throughout city were liable to flooding and lacked even basic levels of sanitation, rendering them almost uninhabitable. Questions were asked in both Houses of



Parliament (*Hansard, 15 October 1940 vol 365 cc588-9*) which led to the formation of the Horder Committee to investigate the public health issues surrounding communal shelters. At this time a number of the Munich era open shelters were replaced and upgraded to become proper, covered trench shelters. Further impetus for this change was the disaster at Kennington Park, London when a direct hit on one of these early trenches on the night of October 15th- 16th 1940 resulted in a three figure death toll (the exact figure is unknown as the shelter was in-filled and became a mass grave).

The clearest evidence of this change in Leicester was seen at Wyggeston Girls School. By November 1940 it became apparent that the shelter was liable to flooding so pumps and heaters had to be retrofitted to keep it habitable, especially during the winter months. Tenders were being received as early as June 1940 for *'the laying of stoneware & galvanised iron piping in connection with the installation of electric pumps in those trench shelters which are subject to flooding.'* The tender of Messrs. Wright & Co of Wigston of £271. 10s 10d was eventually successful, a rather large sum, which suggests the work was to be carried out in more than one shelter. An examination of the Civil Defence Committee minutes for October 1939 to August 1941 held by the Record Office for Leicester, Leicestershire and Rutland (ROLLR DE3277/36-44 & DE3667/7) suggests this was common problem experienced by a number of trench shelters. The minutes also contain a record of an injury caused to a Miss M.E Atkins who on March 1st 1940 who tripped over a 3inch hose connecting the shelter on Victoria Park with the gully for the purpose of pumping. Miss Atkins claimed £21 in loss of earnings and for the expense of electrical treatment. Given that the incident happened in broad daylight, the council were inclined to contest the claim.

On the 8th of July 1940 an additional tender was received from Messers. A.R. Smith & Son to install electric pumps in 23 trench shelters which were subject to flooding. Work was to cost £58 17s 9d.

As early as September 1940 the minutes mention structural improvements necessary to some shelters, no doubt as a result of lessons learnt from harder hit cities. As a result the shelter at the Burley's Lane omnibus station was strengthened with added baffle walls in accordance with instructions received from the Regional Technical Adviser. By 1941 a new shelter policy was being considered which was to strengthen existing school shelters to withstand parachute mines, at the time the heaviest ordnance deployed by the Luftwaffe.

No doubt as a result of security concerns specific shelters were not always identified in these minutes, only the streets on which they stood. As a result it is difficult to correctly identify specific shelter, especially so in this case where there are two separate shelters within the grounds of Wyggeston School. As the tide of war turned and bombing eased the air raid shelter was used less and less.

## 2. Aims and Methodology

The specific objectives of the standing building survey were as follows:

- To provide a written, drawn and photographic record of the buildings prior to their demolition.
- To ensure the long-term preservation of the information through deposition of the record and a summary written report with an appropriate depository.
- The site-based element of the Historic Building Recording programme involved the production of measured survey drawings and the compilation of photographic and written records.
- Desk-based research included the analysis of readily available documentary and cartographic sources.

Addressing the requirements stipulated in *Written Scheme of Investigation for Archaeological Recording. Air Raid Shelter, Victoria Park Road, Leicester* (CgMs 2011).

*Orientation:* This building survey covers a single subterranean concrete and earth structure. The exact shape of the earth mound is difficult to ascertain due to vegetation cover at the time to the survey. The structure is aligned approximately north-west to south-east, but for ease of reference this has been simplified to north-south in the following report. The structure follows the alignment of the boundary of Wyggeston & Queen Elizabeth I College and Victoria Park to the north-east. The principal elevation of the structure is facing Welford Road to the south-west. Where the terms 'left', 'right', 'front' and 'back' etc. are used in the report, this is in relation to this principal elevation.

The site visit was undertaken by Gerwyn Richards on August 16th 2011. As far as is known, the structure itself has not previously been subject to a programme of historic building recording.

## 3. Description of the Structure

The air-raid shelter consists of an approximately rectangular earthen mound, the eastern and southern faces being sloped, between approximately 20 to 30 degrees. The western end is level with the adjacent ground which appears to have been built up. The northern face was inaccessible due to dense vegetation cover; the top of the mound is largely level, but again dense vegetation cover prevented a more detailed examination (*Figure 18*). There is only one visible entrance, which is located on the southern face; it has been partially in-filled with earth and a modern breeze block-built wall (*Figure 17*).

Access is via the entrance on the southern face; internally the structure consists of four main trenches, in a rectangular plan and two shorter blocked trenches off the western trench. It is unclear whether these trenches indicate whether the shelter originally continued further to the west or are blocked entrances. The trenches are approximately 1.42 metres (4 foot 8 inches) wide, constructed of prefabricated steel re-enforced concrete panels, 385mm (1 foot 3¼ inches) wide, with 100mm x 100mm (4 inch square)

concrete ribs/braces on the ground. Unlike other trench shelters, this example is a relatively simple rectangular or “closed grid” design (*Figure 6*), sometimes known as a ladder design. It is unclear whether what remains is the full extent of the shelter, or merely the truncated remains.

Towards the top of the individual panels there is pre-cast *seating* in which the kerb lifter or slab lifter sat to manoeuvre the panel either on site or during manufacture. These concrete panels were produced in abundance during World War II, most commonly by Stant Precast Concrete Ltd. However, it is virtually impossible to tell if these panels were manufactured by Stant or by another manufacturer using the same pattern. Localised patches of spalling could be seen in the concrete ribs.

A single emergency exit is located at the junction of the northern and western trenches. Originally there would have also been a wooden escape ladder although there is no remaining evidence of this. In a number of locations trickles of a bitumen-looking substance were present between the joints in the ceiling panels, suggesting the top of these panels had been coated in an attempt at water-proofing.

There was no evidence that the floor was originally laid with concrete slabs, the surface being clay between the concrete ribs. The very limited remains of one or two hand operated fans, which originally provided ventilation for the shelter were observed, but had largely disintegrated or had been damaged beyond recognition.

There were a number of items of graffiti preserved on the walls of the shelter, mostly concentrated near the entrance in the southern face, but there were also isolated examples in the other trenches, nearly all being pencil drawn. Three examples (*Figures 14, 15, & 16*), a caricature of Adolf Hitler and an aeroplane bearing the German Cross and a swastika almost certainly date from World War II. Other graffiti includes sexually crude poems and drawings and in one example, an instruction to visit “Mabel” at an address in Leicester. The graffiti perhaps confirms that school boys throughout the ages are mainly interested in sex and war!

#### **4. Discussion**

The air raid shelter is a good example of the type of trench shelter constructed throughout Britain in the early part of World War II. It is of limited architectural significance but of some social and historical interest. The shelters were all built to a standardised design with standard materials; there are a number of these shelters still surviving within Leicester, including another within the grounds of Wyggeston & Queen Elizabeth College, to the south of the proposed development area while other examples are at Regents College (formally Wyggeston Girls School on Lancaster Road; Richards 2010), Fullhurst Community College in Braunstone Town (formerly the Newarke Girls School) and a recently discovered example within the grounds of Braunstone Hall, also used as a school during World War II.

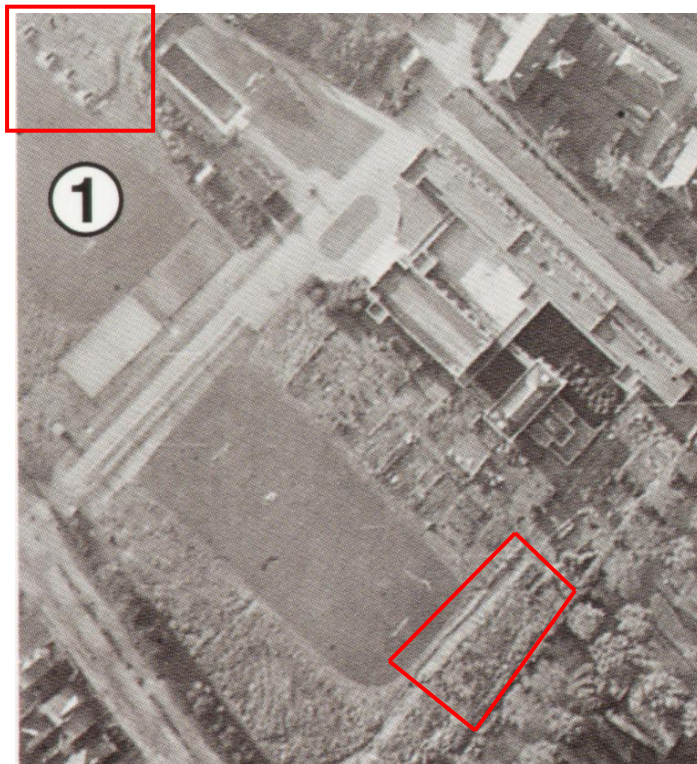
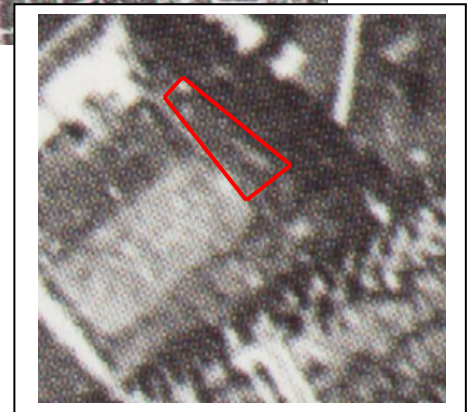
The most significant aspect of this shelter however is its simple design. It was known, even before the outbreak of war that trench shelters built along a simple grid or ladder design were vulnerable to direct hits. The straight trenches allowed the blast wave to

travel, unimpeded through the shelter causing huge damage, as a result trench shelters were built in a complex design of right angle turns and dead ends to minimise the blast wave. The shelters at Regents College (Richards 2010) and Braunstone Hall (Finn, pers. comm.) both follow this pattern; the interiors of the shelter at Fullhurst Community College and the second shelter at Wyggeston & Queen Elizabeth College have not been investigated; aerial photographs suggest they are of the more complex design. It is unclear, therefore why the recorded shelter followed this simpler design; it is possible that the shelter has been truncated and originally continued further to the west via the blocked trenches off the western trench and is part of a more complex design, or the shelter was built to the earlier grid design pattern and may, therefore pre-date these other shelters.

Aerial photographs from both before and after the war (*Figures 4 & 5*), unfortunately do not clarify the issue. A pre-war Luftwaffe photograph (*Figure 4*) shows a change in vegetation within the proposed development area suggesting some sort of activity there; however, the photograph is not clear enough to establish whether the shelter had been built. By 1945 (*Figure 5*) the shelter is clearly visible, but appears to be less well preserved than the shelter to the south, which perhaps suggests that the recorded shelter was used less, or abandoned earlier than the southern shelter. The 1945 photograph also shows an entrance on the north-western side of the shelter, which is no longer visible, suggesting it has been at least partially truncated. As there is also no clear evidence of the existing entrance on the southern face, it is difficult to ascertain the extent of this truncation.



**Figure 4** Luftwaffe Photograph (June 8th 1939). Shows a change in vegetation within the proposed development area suggesting pre war activity.



**Figure 5** RAF Photograph (1945). Shows the proposed development area looking neglected, while the air raid shelter in the top left looks in better condition.

## 5. Bibliography & Sources

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## 6. Archive & Publication

The site archive consists of

- 1 A2 permagraph sheet containing plans, a profile & site notes
- DVD containing 48 digital images
- 3 A4 contact sheets
- 48 Black & White negatives and contact prints
- 2 A4 photo record sheets
- Unbound copy of this report (ULAS Report Number 2011-140)

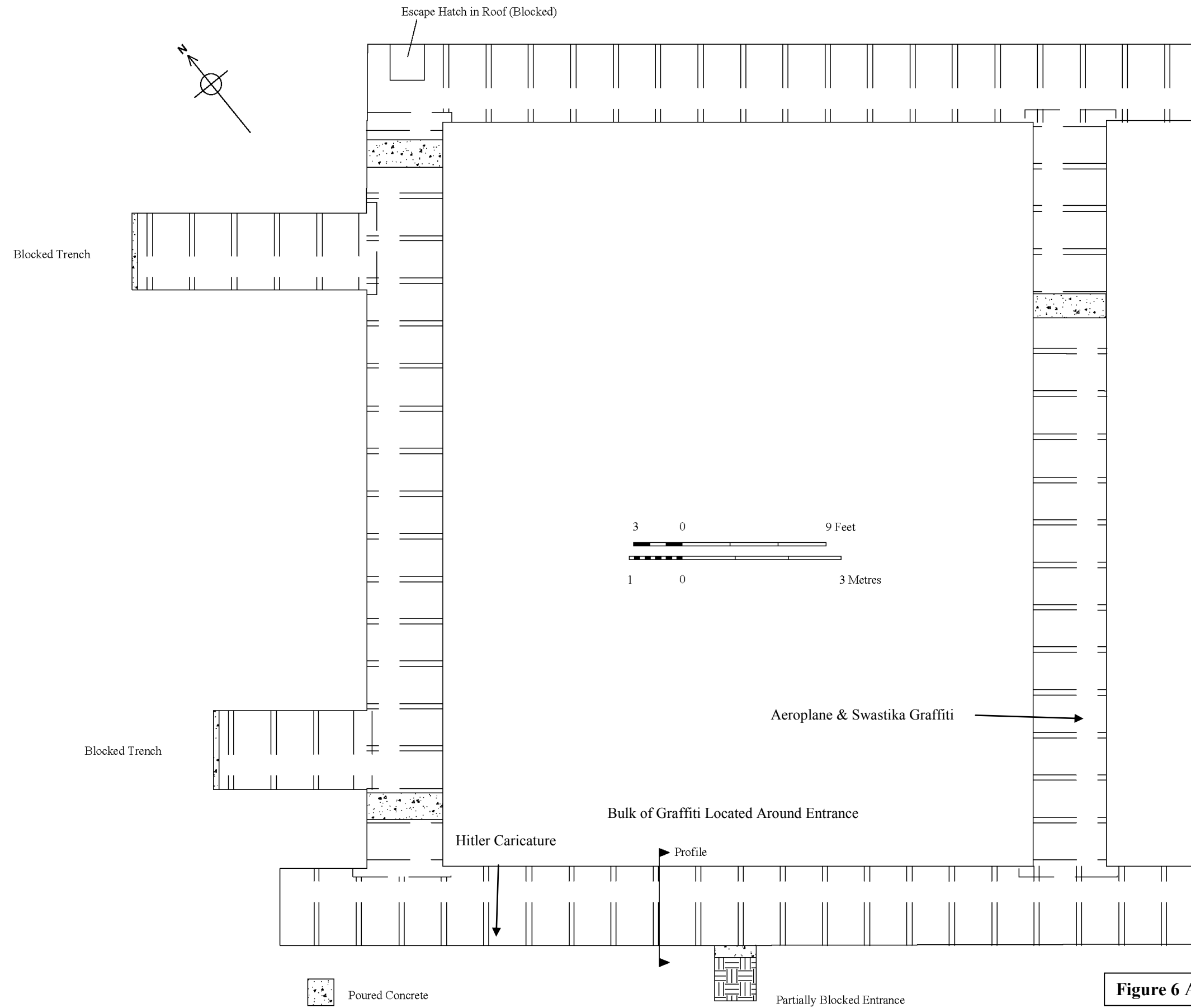
The archive will be held at Leicester City Museums under the Accession Number A11.2011.

A version of the summary (above) will be submitted to the editor of the local journal *Transactions of Leicestershire Archaeological and Historical Society* for inclusion in the next edition.

Gerwyn Richards  
ULAS  
University of Leicester  
University Road  
Leicester LE1 7RH

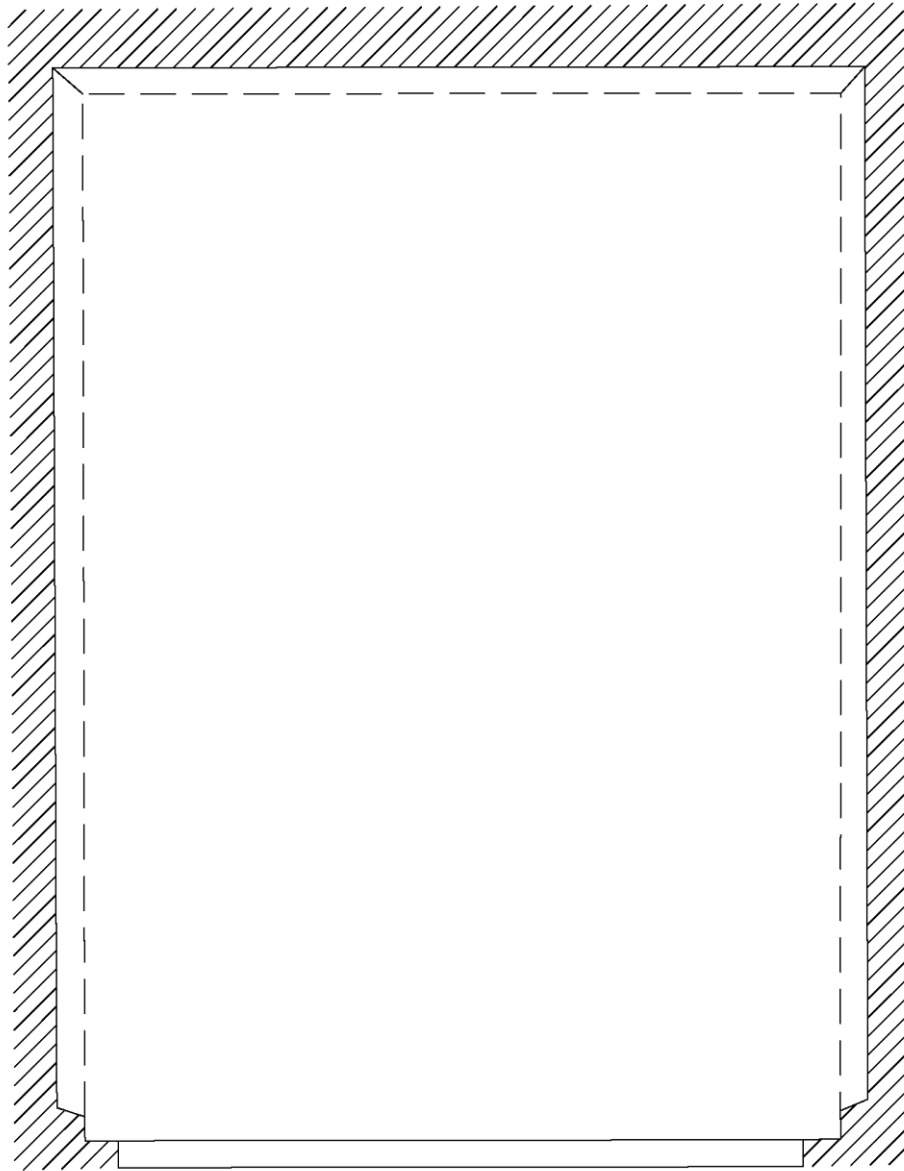
Tel:0116 252 2848  
Fax: 0116 252 2614  
Email: gr42@le.ac.uk

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**Figure 6** Air Raid Shelter, Floor Plan





Clay Floor

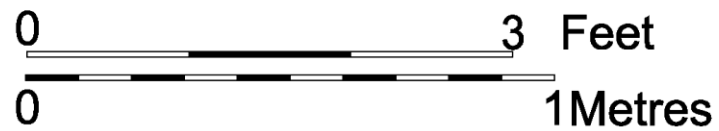


Figure 7 Profile through trench shelter.

7 Colour Plates



Figure 8 Southernmost trench (looking east).



Figure 9 Westernmost trench (looking north).



Figure 10 Northernmost trench (looking east).



Figure 11 Easternmost trench (looking south).



**Figure 12** Southernmost blocked trench.



**Figure 13** Northernmost blocked trench.



**Figure 14** Swastika graffiti in eastern trench.



**Figure 15** Aeroplane graffiti in eastern trench.



**Figure 16** Hitler caricature in southern trench.

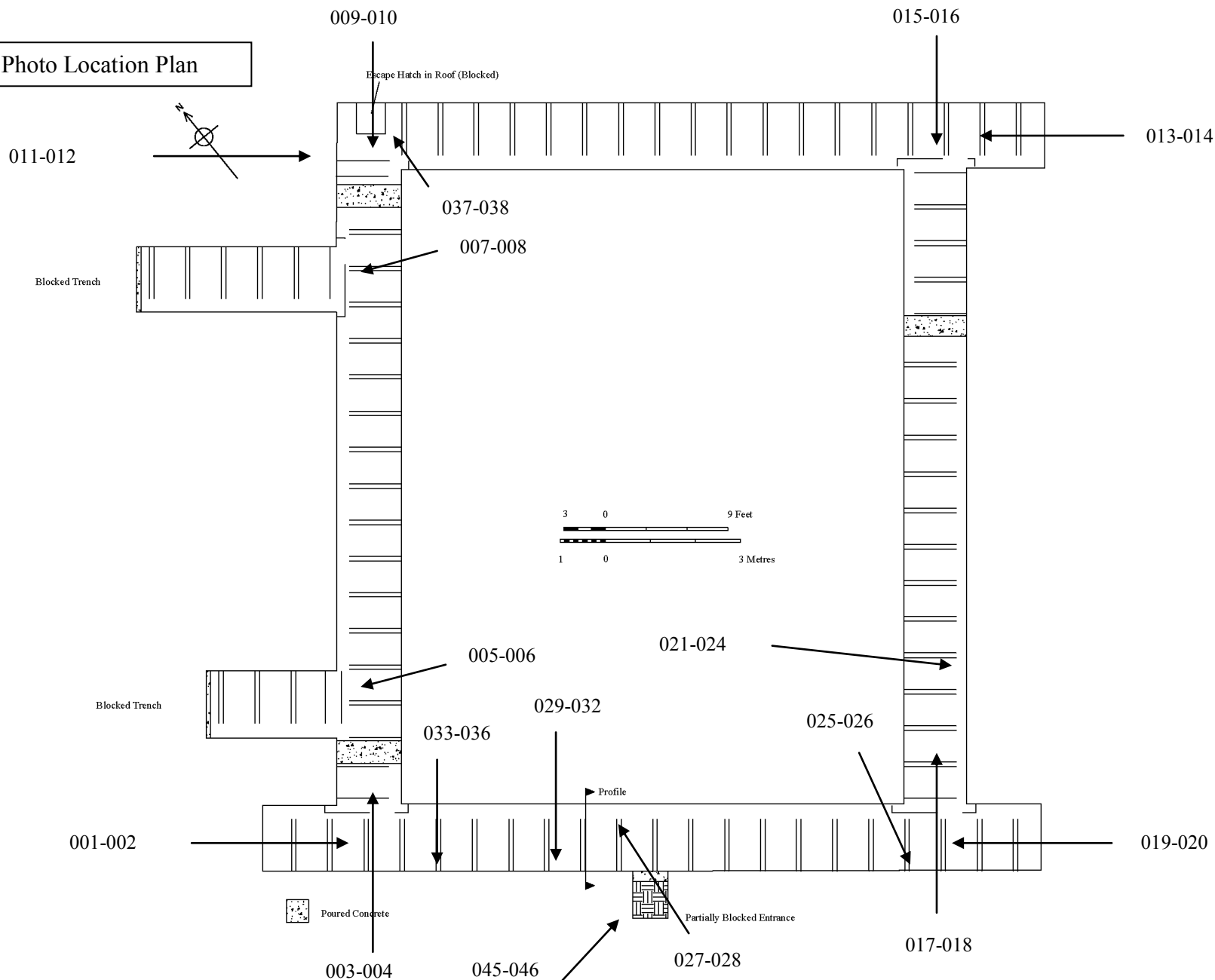


**Figure 17** Existing entrance to shelter.

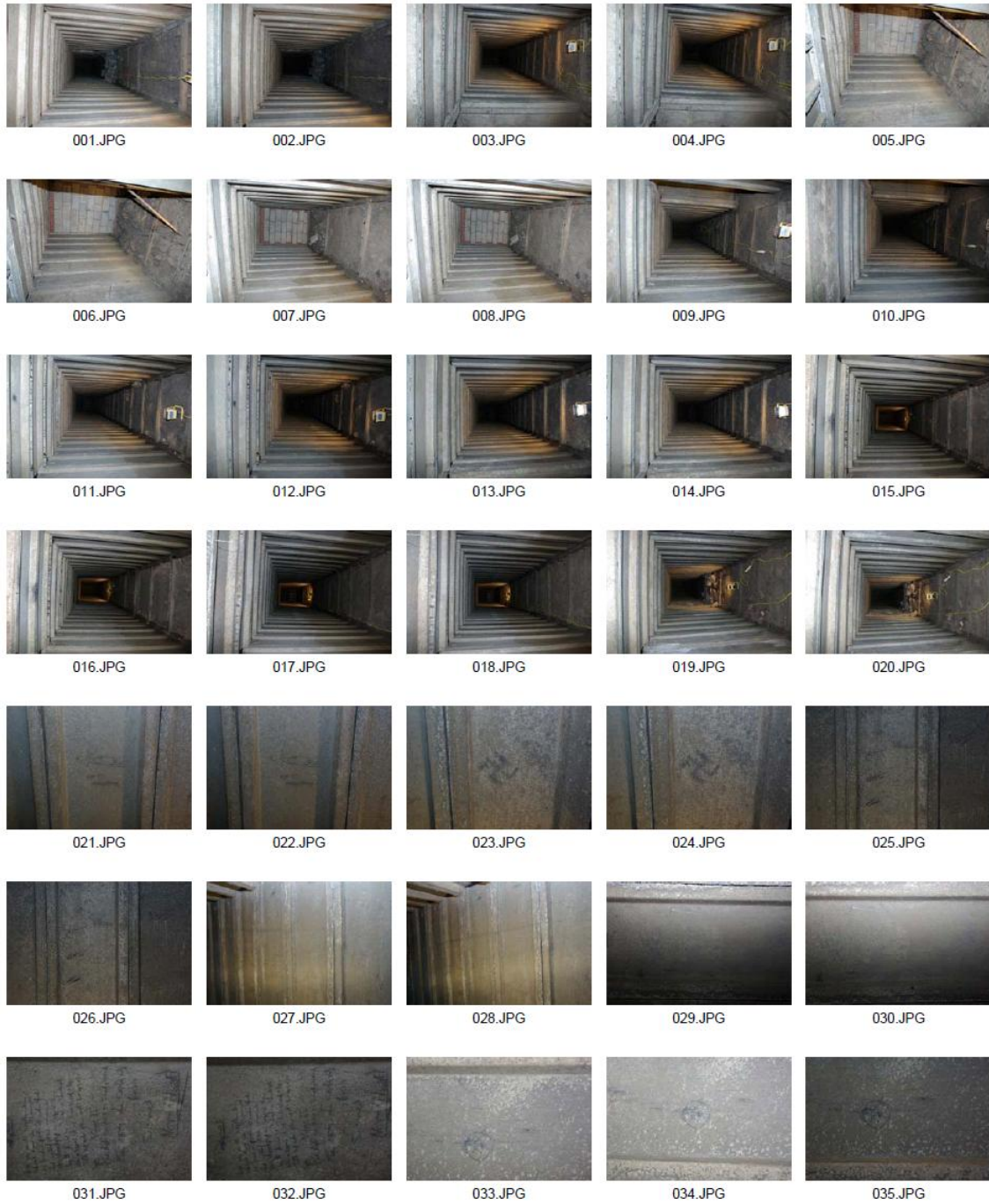


**Figure 18** Shelter from junction of Victoria Park Road & Saint Leonards Road.  
(Looking north)

**Appendix 1 Photo Location Plan**



## Appendix 2 Photographic Contact Sheets







036.JPG



037.JPG



038.JPG



039.JPG



040.JPG



041.JPG



042.JPG



043.JPG



044.JPG



045.JPG



046.JPG



047.JPG



048.JPG

### Appendix 3 OASIS Record

<b>INFORMATION REQUIRED</b>	<b>EXAMPLE</b>
Project Name	Victoria Park Air Raid Shelter
Project Type	Building Recording
Project Manager	Patrick Clay
Project Supervisor	Gerwyn Richards
Previous/Future work	Previous: None. Future: Not Known
Current Land Use	Educational Institution
Development Type	Community/Medical
Reason for Investigation	PPS5
Position in the Planning Process	Not Known
Site Co ordinates	SK 595 027
Start/end dates of field work	Aug 2011
Archive Recipient	LMARS
Height min/max	Not Known
Study Area	N/A
Finds	None

## Contact Details

Richard Buckley or Patrick Clay  
University of Leicester Archaeological  
Services (ULAS)  
University of Leicester,  
University Road,  
Leicester LE1 7RH

**T:** +44 (0)116 252 2848

**F:** +44 (0)116 252 2614

**E:** [ulas@le.ac.uk](mailto:ulas@le.ac.uk)

**w:** [www.le.ac.uk/ulas](http://www.le.ac.uk/ulas)



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