



University of  
**Leicester**

---

**Archaeological Services**

**A Level 2 Historic-Building  
Survey of the  
Airfield Control Tower,  
MIRA, Higham on the Hill,  
Leicestershire.**

**NGR: SP 37125 96130**

Andrew Hyam



ULAS Report No. 2012-195  
©2012

**A Level 2 Historic-Building Survey of the  
Airfield Control Tower,  
MIRA, Higham on the Hill,  
Leicestershire**

**NGR: SP 37125 96130**

**Andrew Hyam**

**For: MIRA Ltd**

Approved by

**Signed:**



**Date:** 26.11.2012..

**Name:** R.J. Buckley...

**University of Leicester**

Archaeological Services

University Rd., Leicester, LE1 7RH

Tel: (0116) 2522848 Fax: (0116) 2522614

**ULAS Report Number 2012-195**

**©2012**

**Accession number: X.A115.2012**

## CONTENTS

Summary .....	1
Introduction .....	1
Background .....	3
Objectives .....	5
Methodology .....	5
Results .....	6
Outside .....	8
Inside .....	12
Discussion .....	18
Archive .....	18
Publication .....	18
Acknowledgements .....	18
Bibliography .....	18
Appendix 1 Digital Photographs .....	20

## FIGURES

Figure 1. MIRA location .....	2
Figure 2. Building location .....	3
Figure 3. RAF Nuneaton 1945 .....	4
Figure 4. Elevations .....	7
Figure 5. Floor plans .....	8
Figure 6. East facing elevation .....	9
Figure 7. South facing elevation .....	10
Figure 8. West facing elevation .....	11
Figure 9. North facing elevation .....	11
Figure 10. Ground floor corridor .....	13
Figure 11. Flag cupboard .....	14
Figure 12. Met office .....	14
Figure 13. Driver's room .....	15
Figure 14. First floor office and stairs .....	16
Figure 15. Former signals office .....	16
Figure 16. Control room .....	17
Figure 17. Visual control room .....	17

## **A Level 2 Historic-Building Survey of the former Airfield Control Tower, MIRA, Higham on the Hill, Leicestershire.**

**NGR: SP 37125 96130**

**Andrew Hyam**

### **Summary**

*A Level 2 historic-building survey was carried out by the University of Leicester Archaeological Services (ULAS) at the former RAF Nuneaton (Lindley) airfield, MIRA, Higham on the Hill Leicestershire on the 25th October 2012. The survey studied the former watch office building which until recently was used as the control tower for the MIRA test track.*

*The watch office lies at the heart of the former airfield and is based on a standard Second World War design used on bomber or operational training unit (OTU) satellite airfields. The RAF base had a short operational life between 1943 and 1945 before being taken over by the Motor Industry Research Association in 1946.*

### **Introduction**

In accordance with NPPF (Section 12 Enhancing and Conserving the Historic Environment) this document forms the report for an historic buildings survey to Level 2 of the former control tower at MIRA Ltd, Higham on the Hill, Leicestershire, NGR: SP 37125 96130. The building, constructed in 1942, has until recently been used as the control tower for the MIRA test track but has now been superseded by a new purpose-built structure nearby. The building is presently unused and faces the possibility of demolition. Although there is no statutory requirement for a building survey MIRA has commissioned this report in order to create a permanent archive.

The survey followed the guidelines laid out in *RCHME Recording Historic Buildings – a Descriptive Specification* (this document has since been superseded by English Heritage guidance – *Understanding Historic Buildings: A guide to good recording practice*, 2006). The project was completed in accordance with the Institute for Archaeologists (IfA) *Code of Conduct* (rev. 2010) and adhered to their *Standard and Guidance for Archaeological Investigation and Recording of Standing buildings or Structures* (Rev. 2008).

The fieldwork was carried out by, and the report prepared by, A R Hyam of University of Leicester Archaeological Services (ULAS) Historic Buildings Team, on behalf of the client, MIRA Limited.

The MIRA site lies within the parish of Higham on the Hill, in the District of Hinckley and Bosworth, Leicestershire, approximately 3 km to the north of Nuneaton, 4km north-west of Hinckley and 8km south-east of Atherstone (Fig. 1). It is demarcated by the A5 (Roman Watling Street) to the south; which is also the border between Leicestershire and Warwickshire. The dismantled Ashby and Nuneaton Joint

Railway runs to the south-east of the site, and to the north-west and north-east lie fields and local roads. The total area for the MIRA site, including the test track is around 310 hectares which is similar to the area covered by the former RAF base. The control tower lies within the heart of the MIRA site and to the west of the original A-lay-out of the runways (Fig. 2).

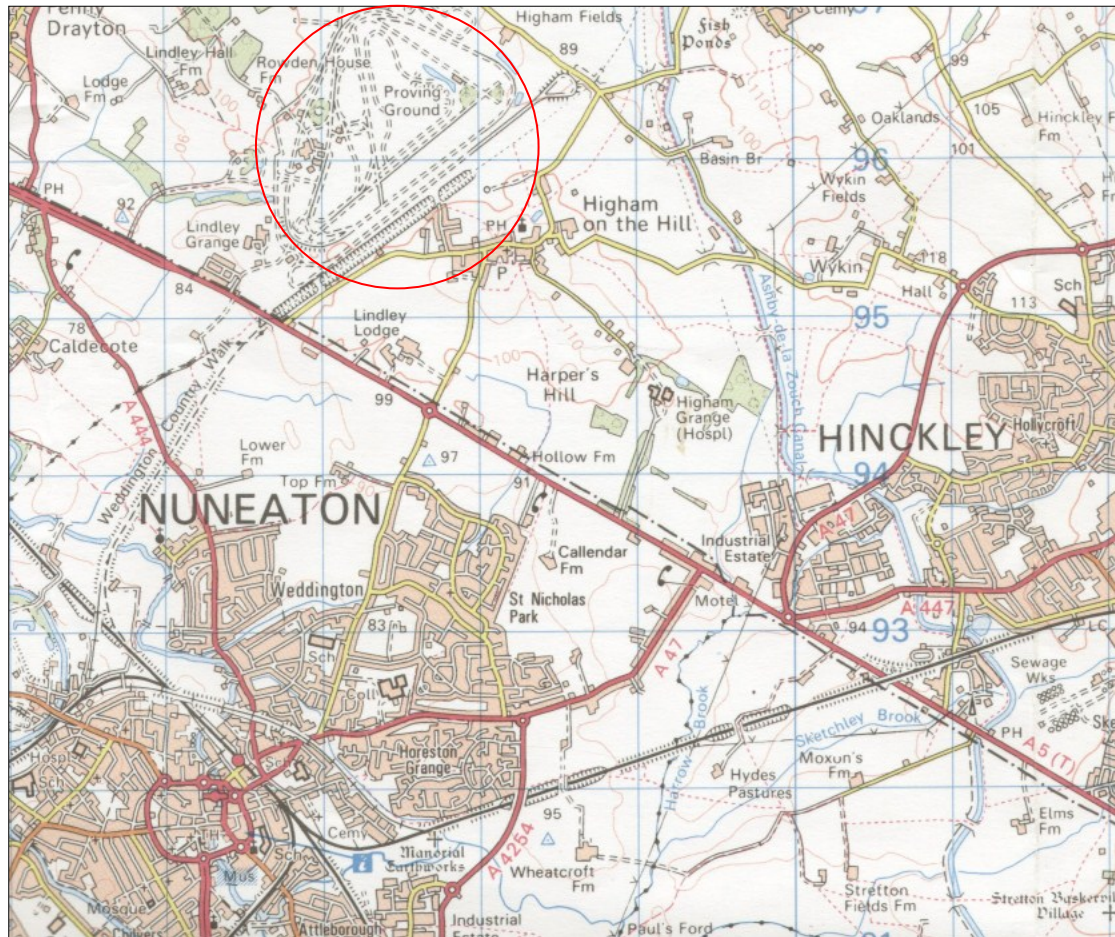


Figure 1. MIRA location

Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown Copyright 1996. All rights reserved. Licence number AL 10009495.

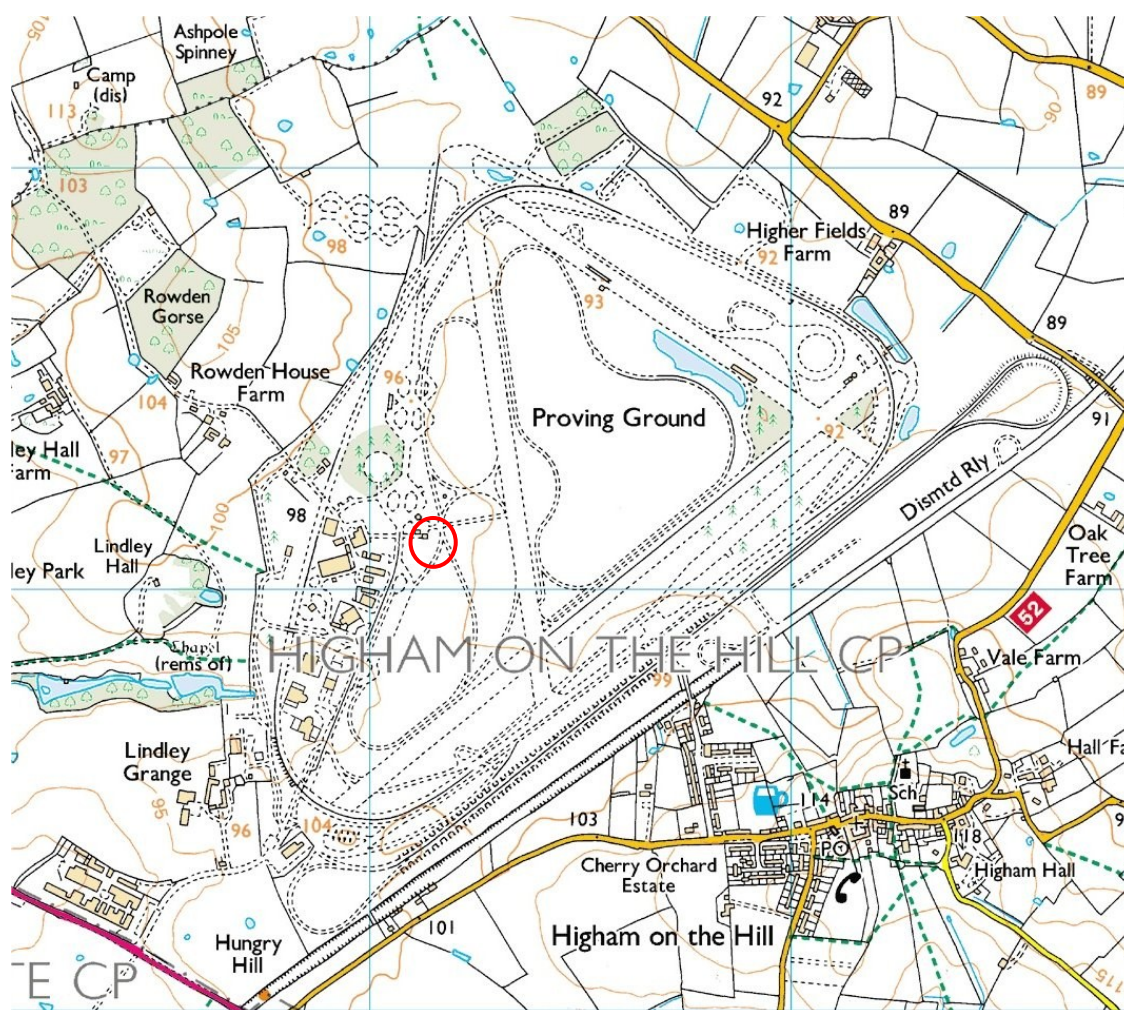


Figure 2. Building location

Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown Copyright 1996. All rights reserved. Licence number AL 10009495.

## Background

The land at Higham on the Hill was first surveyed as a potential airfield by the Air Ministry in 1940, with groundworks commencing in the spring of 1941. The airfield did not become operational until the 7th of February 1943, a period of approximately 18 months, which included a 6 month delay while negotiations were carried out with the Bishop of Leicester to remove the top 60 feet of the spire of St Margaret's Church at Stoke Golding which had been deemed to constitute a potential danger to aircraft operations. The stones were numbered and stored and the tower rebuilt in 1947 (Bonser 2001, Brown et al 1995, Francis 2010).

The station was opened in February 1943 within 93 Group, Bomber Command, as a satellite airfield for RAF Bramcote located to the south of Nuneaton. For a very short period No. 18 (Polish) OTU squadron used the airfield flying Wellington bombers. However, as early as April 1943, the station was transferred to 44 Group, RAF Transport Command, again as a satellite to Bramcote where 105 Operational Training Unit (OTU) was based and aircraft began to arrive at the end of June. In June 1945 the station was once again transferred, this time coming under the control of 4 Group,

Transport Command and began to re-equip with DC3 Dakotas. In August, the same year 105 OTU was re-titled 1381 Transport Conversion Unit ((T)CU), Dakota aircraft wholly replaced Wellingtons and training continued, but on a much reduced scale. By the autumn of 1945 it was clear that the station would close and on November 21st, 1381 (T)CU was scheduled to transfer to Desborough, Northamptonshire. The airfield was then effectively mothballed under Care and Maintenance. An aerial photograph of the airfield at this date has been retained by MIRA (Fig. 3)

During 1946, negotiations between the Air Ministry and the Motor Industry Research Association (MIRA) began regarding acquiring a former airfield to use as a proving ground. A shortlist of 15 was drawn up and RAF Nuneaton was chosen. The first recorded use of the test site was in October 1948.

The use of the site by MIRA has led to extensive re-development, but has also preserved a number of the original wartime buildings, including the airfield watch tower. The tower was built in 1942 to a standard Air Ministry design for watch towers used on bomber or operational training unit (OUT) satellite airfields. This type of watch tower was built to a 1941 Air Ministry design 12779/41 which had large windows facing out onto the runways. A later 1943 design (343/43) followed the same overall shape and layout of the earlier design but had smaller windows for improved blast protection and light seepage. The Air Ministry plans are particularly useful as they indicate what each room is used for.

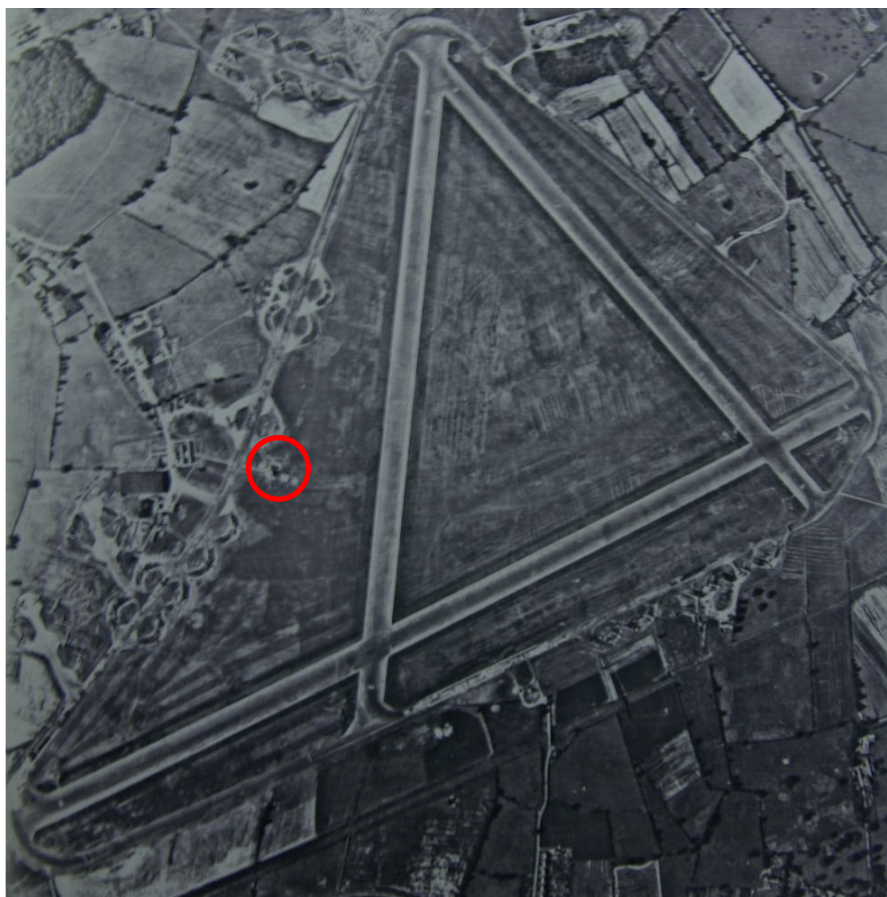


Figure 3. RAF Nuneaton 1945  
Watch tower highlighted

## Objectives

The objectives of the historic building survey were:

- To record by photography the building with specific attention given to those elements proposed for demolition, conversion and/or alteration. This work to be undertaken to a standard that will allow the future interpretation of the building within the context for which it was originally designed and which subsequently evolved.
- To produce an archive and report of the results.

## Methodology

Black and white 35mm photographs and digital colour photographs were taken throughout the survey. Notes and sketches were also made and scale drawings supplied by MIRA Limited were used and modified to suit the purposes of this survey. The specific levels of detail used in the survey followed the guidelines laid down in the RCHME (1996) and English Heritage (2006) specification, which were:

### 1. The Written Account:

- The precise location of the building, by name or street number, civil parish, town, etc, and National Grid reference and details of listing or scheduling.
- The date when the record was made, and the name(s) of the recorder(s).
- A statement describing the building's plan, form, function, age and development sequence. The names of architects, builders, patrons and owners should be given if known.
- An account of the building's overall form (structure, materials, layout) and its successive phases of development, together with the evidence supporting this analysis.
- An account of past and present uses of the building and its parts, with the evidence for these interpretations. An analysis of any circulation pattern or decorative, iconographic or liturgical scheme.

### 2. Drawn Record:

- Shall comprise plans (to scale or full dimensioned) of all main floors as existing. Small buildings of well-known types, or buildings with a repetitive structure (e.g. many industrial buildings) may be planned on one floor only, but a note or a sketch plan should be made to show the arrangement of other floors. Plans should show the form and location of any structural features of historic significance (e.g. blocked doors and windows; former fireplace openings; masonry joints; changes in internal levels).
- As a minimum, in all cases, the drawn record will include a sketch plan roughly dimensioned (when no more thorough drawn record is required). Such a plan may not always include structural details (e.g. timber framing).
- In each of the above cases, use may be made of available plans (i.e. those prepared as part of a planning application). In all cases these shall be checked by the historic building specialist and supplemented or amended where necessary.



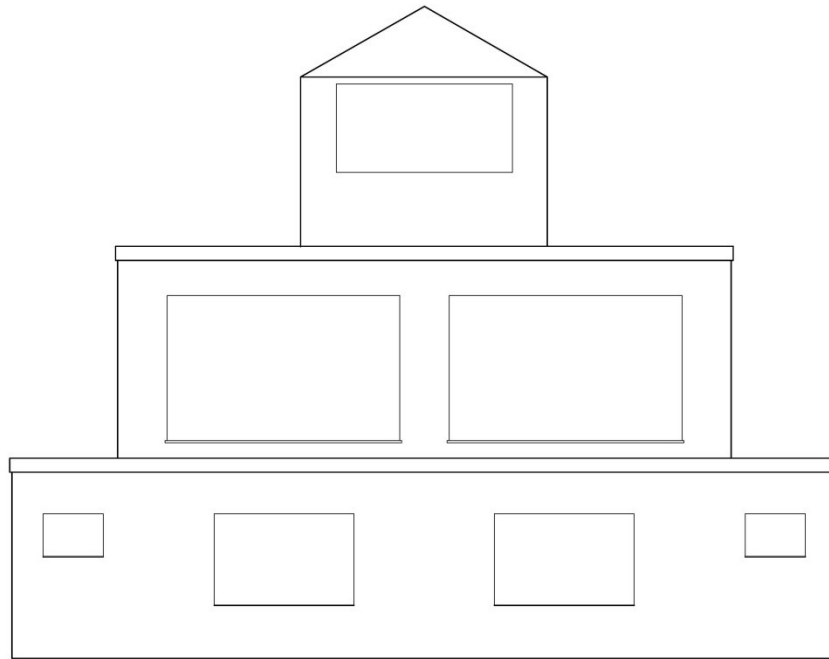
3. Photographic Record:

- General view of views of the exterior of the building.
- The overall appearance of principal rooms and circulation areas.
- Detailed coverage of the building's external appearance. In the case of a building designed by an architect, or intended to be seen from a certain point of view, it is important to have regard to the builder's intentions and to record the effect of the design or of the building's placing.

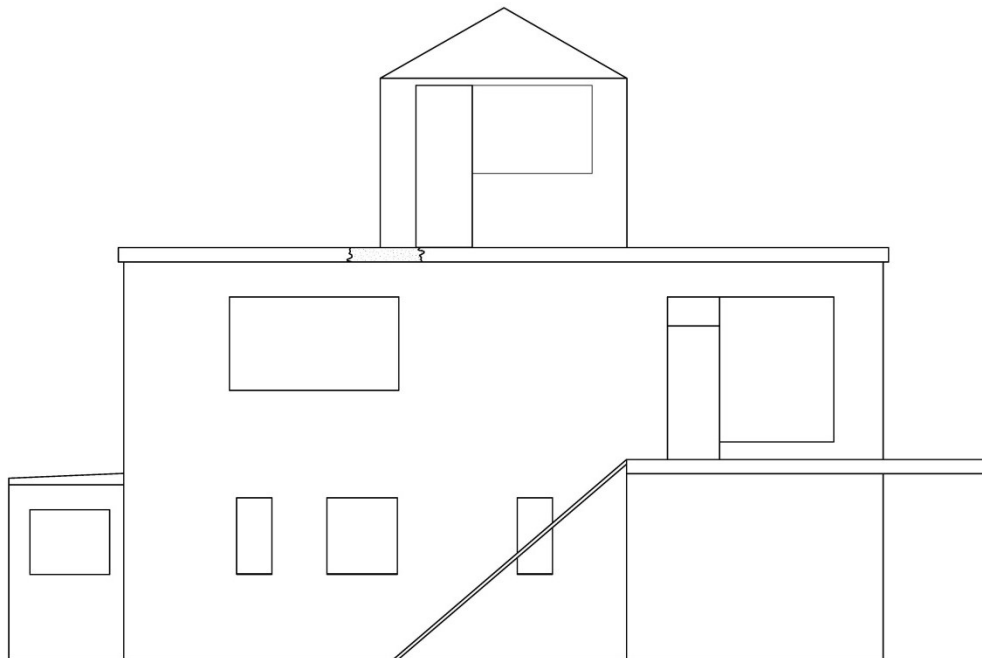
All work followed the Institute for Archaeologists (IfA) Code of Conduct and adhered to their *Standard and Guidance for Archaeological Investigation and Recording of Standing buildings or Structures*.

## **Results**

The watch tower is a cement rendered brick-built structure consisting of a ground and first-floor with a flat roof supporting a small wood and glass visual control room. The building is roughly rectangular in plan with its main elevation facing towards the east onto the former runway (Figs. 4 and 5). A balcony at first floor level wraps around the eastern side and part of the north and south sides. The layout follows the general floorplan laid down by the Air Ministry in their watch tower specification 12779/41 which was superseded by 343/43. There is however one noticeable difference with this building in that the ground floor at the eastern end extends out beneath the concrete balcony which is not normally seen on this type of watch tower.



East facing elevation



South facing elevation

Figure 4. Elevations  
Note: for clarity railings and window frames are not shown  
Modified from drawings supplied by MIRA

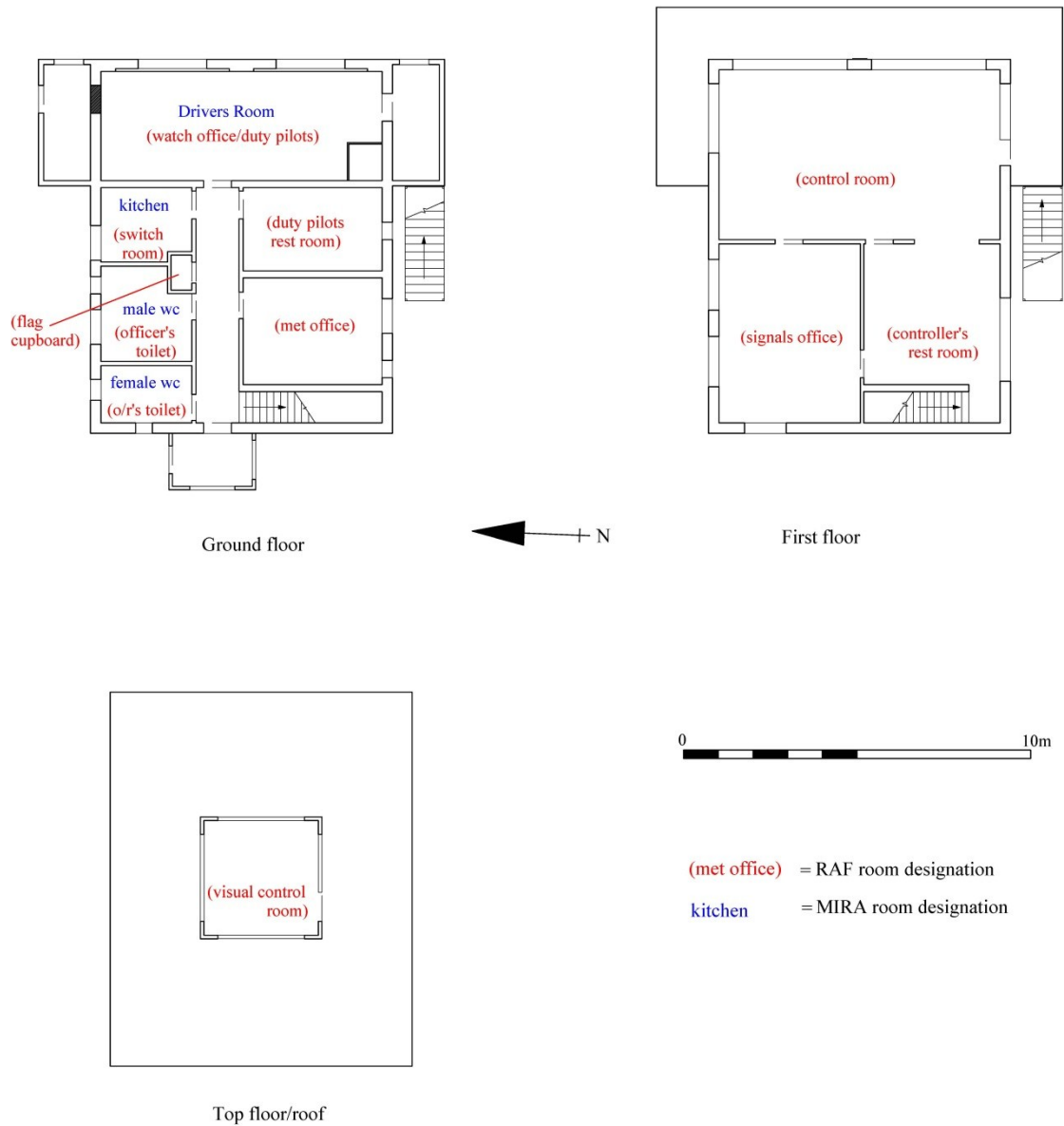


Figure 5. Floor plans  
Modified from plans supplied by MIRA

### Outside

#### East-facing elevation

This is the main elevation of the building facing out onto the airfield runways (Fig. 6). At ground floor level it has matching pairs of both large and small windows which seem to match those specified in both the 1941 and 1943 designs. All windows on this elevation, and all elevations have tiled sills suggesting that they are all contemporary. The two central, larger, windows light the larger middle room whilst the outer, smaller, windows light two small flanking rooms. It is these two rooms which are not

normally present on such a watch tower although there is no clear evidence of them being later additions.

The first floor windows are large metal-framed windows which are again of the earlier 1941 design rather than the smaller 1943 design. A metal ladder has been attached to the wall in between the two windows. This ladder is not part of the original design and replaces the original metal stairs on the south elevation which ran from the balcony up to the roof. On top of the flat roof is a modern timber and glass room which has replaced the original visual control room which was taken down and rebuilt at Duxford Airfield and which is now part of the Imperial War Museum.



Figure 6. East facing elevation  
Looking west

#### South-facing elevation

The ground floor has a number of small metal-framed windows set at irregular intervals but which match the general design of those seen on the east-facing elevation (Fig. 7). The first-floor window at the eastern corner incorporates a metal-framed doorway that leads out onto the balcony. Another first floor window on the west side has been replaced by a modern uPVC window. A set of metal stairs leads up to the balcony from ground level. When first built, these would have led from the balcony up to the roof and a scar in the concrete parapet over the first floor western window bears witness to this. The stairs were relocated by MIRA to provide outside access to the balcony without having to pass through the building.



Figure 7. South facing elevation  
Looking north. 1m scale

#### West-facing elevation

A modern breeze-block porch has been built to protect the only doorway into the building, this is not an original feature (Fig. 8). Only two wooden-framed windows are seen at first floor level with the southern one being slightly lower down to light the internal stairway.

#### North-facing elevation

The arrangement of windows matches the internal room divisions but, in general, follows the pattern seen on the other elevations (Fig. 9). A door leads into the boiler house formed by the small room under the balcony.



Figure 8. West facing elevation  
Looking east



Figure 9. North-facing elevation  
Looking south. 1m scale

### *Inside*

Apart from the general loss of fixtures and fittings the building does not appear to have been altered significantly since being constructed.

#### Ground floor

An off-centre corridor heads from east to west through the building with rooms and stairs leading off to north and south (Fig. 10). Linoleum floor tiles are likely to be original as is the plastered wall up to dado height with painted brick above. On the north side of the corridor are two sets of toilets which have now been modernised and tiled but were originally used as officers and other ranks toilets. Beyond the toilets a small room is currently used as a kitchen but was originally the switch room although there is no evidence to indicate this. A small cupboard with wooden doors has been built into the north wall of the corridor (Fig. 11). This was used during its RAF period for storage of signal flags. On the south side of the corridor are the stairs to the first floor and two large open rooms. There is no evidence of their former use either in RAF or MIRA days but, according to the Air Ministry plans, were built to be used as the meteorology office and duty pilot's rest room (Fig. 12). A large room runs across the east side of the ground floor at a right angle to the corridor. This has recently been used as the driver's room but was first used as the duty pilot's office and watch office (Fig. 13). A modern telephone booth is built into the south-west corner of this room. A blocked doorway once led into the boiler room to the north and an open doorway leads into a small plywood-panelled room to the south.



Figure 10. Ground floor corridor  
Looking west. 1m scale



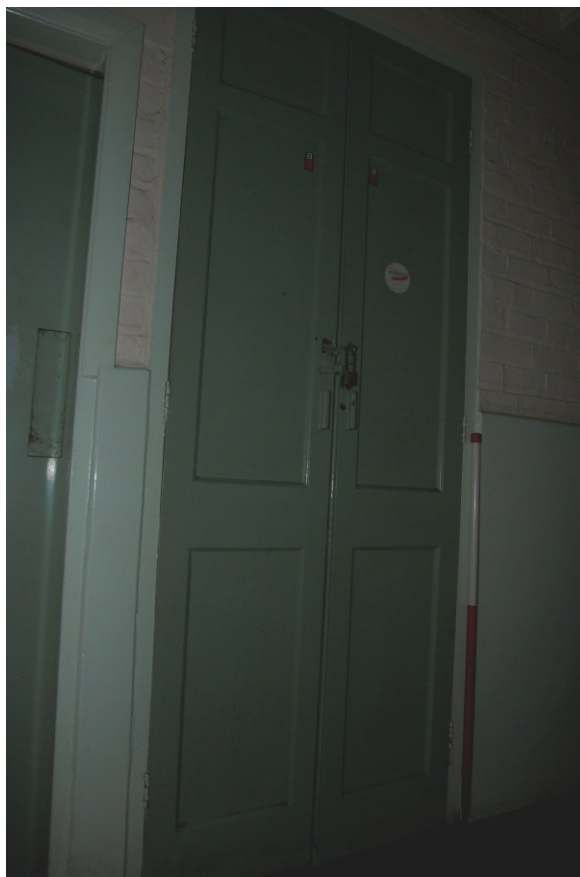


Figure 11. Flag cupboard  
Looking north-east. 1m scale



Figure 12. Met office  
Looking south-west. 1m scale



Figure 13. Driver's room  
Looking south-east

#### First floor

The stairs are enclosed by a wood and glass partition at first floor level which leads into the control/radio room and desk. This was originally designated as the controller's rest room and led into the signals office, to the north, and the airfield control room, to the east (Figs 14, 15 and 16). The roughly cast concrete ceiling and roof beams are clearly visible in these rooms. The main room on the eastern side looks out across the airfield. It has large metal window frames with brass fittings including off-centre pivots which allow the windows to open without obstructing the balcony.



Figure 14. First floor office and stairs  
Looking north-west



Figure 15. Former signals office  
Looking north-west



Figure 16. Control room

Looking south-east

Rooftop visual control room

As noted earlier, this room is quite modern and does not form part of the original construction. It is a timber and glass construction with large windows facing out on all directions (Fig. 17).



Figure 17. Visual control room.  
Looking north-east

## **Discussion**

Despite lacking any of the original fixtures and fittings from its RAF days, the former watch tower has been well maintained and as such is a good example of its type. It does however appear to be something of a hybrid as it exhibits characteristics of both the 1941 and 1943 designs. It is possible that because building was started in early 1942 the 1941 plans were used and only some of the 1943 innovations were added during construction. The smaller windows may even be an experiment which were later incorporated into the 1943 specification. It is clear that the larger windows would be much more useful in offering extended views across the airfield and of aircraft movements. The obvious wartime drawback to this is however the danger from flying glass during bombing.

The two small flanking rooms either side of the eastern front room are not obviously later additions but do not normally appear on this type of watch tower. They are clearly of Air Ministry design as they have the same frames and sills as the other ground floor windows. The visual control room currently in position is a modern addition although the original does survive intact and is used for its intended purpose at RAF Duxford.

## **Archive**

The archive consists of:

This report,

Contact sheet of 44 digital photographs,

Contact sheet of 36 35mm black and white photographs and negatives,

2 Photographic record sheets, combined black and white and digital,

2 290mm x 320mm drawing sheets,

CD of this report and the digital photographs.

## **Publication**

A summary of the work will be submitted for publication in the *Transactions of the Leicestershire Archaeological and Historical Society* in due course. A record of the project will also be submitted to the OASIS project. OASIS is an online index to archaeological grey literature.

## **Acknowledgements**

Thanks to the staff at MIRA for their assistance, in particular Ian Lawrence and Tristan Wells. The fieldwork was carried out by A Hyam and the project was managed by R Buckley.

## **Bibliography**

English Heritage 2006 *Understanding Historic Buildings. A guide to good recording practice*. London: English Heritage

Institute for Archaeologists' (IfA) *Code of Conduct*, adhering to their *Standard and Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures*.

Richards G. 2011. *An Archaeological Standing Building Survey of Two Nissen Huts and a Blast Shelter at MIRA, formerly RAF Nuneaton, Higham on the Hill, Leicestershire*. ULAS Report 2011-023

#### Websites

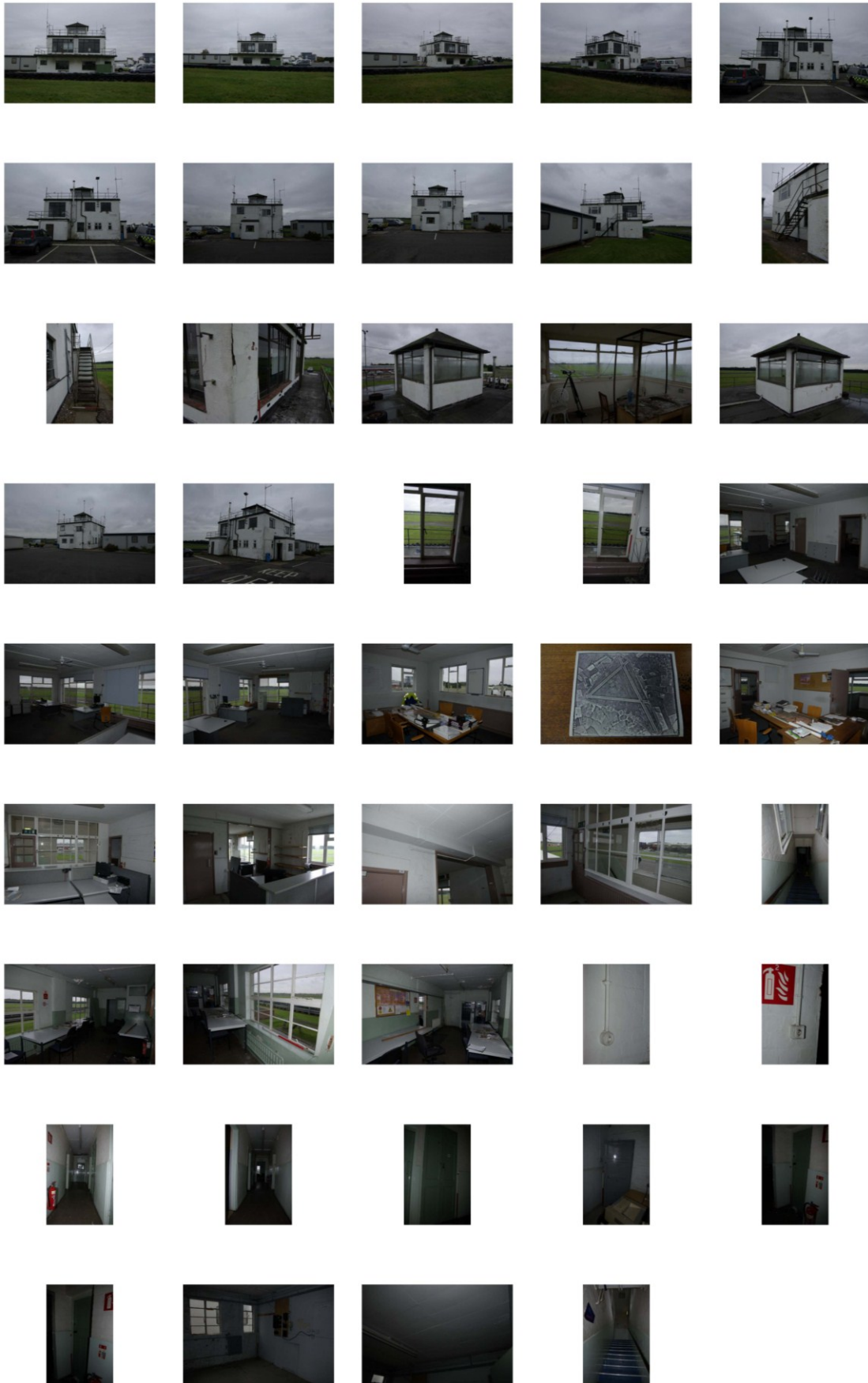
<http://www.controltowers.co.uk/Tower%20Designs.htm>

Accessed 16.11.2012. General descriptions of control tower types and airfield listings.

<http://www.metheringhamairfield.co.uk/watch-office-design.php>

Accessed 16.11.2012. Contains original Air ministry drawings of standard 1943 watchtower designs.

### Appendix 1 Digital Photographs



## ULAS 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)



INVESTOR IN PEOPLE



**THE UNIVERSITY OF THE YEAR 2008/9**