

FORMER CEGB CONTROL CENTRE,  
BECCA HALL, ABERFORD,  
WEST YORKSHIRE

BUILDING RECORDING



Ed Dennison Archaeological Services Ltd  
18 Springdale Way  
Beverley  
East Yorkshire  
HU17 8NU

FORMER CEGB CONTROL CENTRE,  
BECCA HALL, ABERFORD,  
WEST YORKSHIRE

BUILDING RECORDING

Report no: 2012/436.R01  
Version: Final  
Date: October 2012  
Author: Shaun Richardson & Ed Dennison

Ed Dennison Archaeological Services Ltd  
18 Springdale Way  
Beverley  
East Yorkshire  
HU17 8NU

On behalf of

T Fawcett & Sons Ltd  
The Maltings  
Eastfield Lane  
Castleford  
West Yorkshire WF10 4LE



**BUILDING RECORDING,  
FORMER CEGB CONTROL CENTRE,  
BECCA HALL, ABERFORD,  
WEST YORKSHIRE**

**CONTENTS**

EXECUTIVE SUMMARY

1	INTRODUCTION.....	1
2	HISTORICAL BACKGROUND.....	5
3	ARCHITECTURAL DESCRIPTION.....	12
4	DISCUSSION AND CONCLUSIONS.....	26
5	BIBLIOGRAPHY.....	29
6	ACKNOWLEDGEMENTS.....	31

APPENDICES

1	Photographic record
2	Room Record Sheets
3	Listed Building description
4	WYAAS specification

## LIST OF FIGURES

- Figure 1: General Location
- Figure 2: Recorded Buildings
- Figure 3: Historic maps - 1894 & 1958
- Figure 4: Ordnance Survey maps 1965-93
- Figure 5: Photographs
- Figure 6: Photographs of Mimic Board
- Figure 7: Removed Section of Mimic Board
- Figure 8: Plan of Outbuildings
- Figure 9: Basement Plan
- Figure 10: Ground floor Plan
- Figure 11: First and Second Floor Plans

## LIST OF PLATES

- Plate 1: Becca Hall and Control Centre complex, looking S (photo 7/1).
- Plate 2: Becca Hall and Control Centre complex, looking S (photo 7/3).
- Plate 3: Control Centre complex, E elevation, looking SW (photo 7/4).
- Plate 4: Fire hydrant pond, looking NE (photo 9/6).
- Plate 5: Radio mast, looking N (photo 9/4).
- Plate 6: Radio mast building, looking N (photo 8/5).
- Plate 7: Interior of radio building, looking W (photo 9/10).
- Plate 8: Pump house, looking NW (photo 8/6).
- Plate 9: Interior of pump house, well, looking W (photo 9/11).
- Plate 10: Interior of pump house, looking W (photo 9/12).
- Plate 11: Courtyard buildings (B to G), looking NW (photo 8/18).
- Plate 12: Courtyard buildings (H to J), looking SE (photo 8/17).
- Plate 13: Control Centre complex, S end of E elevation, looking S (photo 7/6).
- Plate 14: Control Centre complex, uppermost N external elevation of stair tower at S end of E elevation, looking E (photo 9/5).
- Plate 15: Control Centre complex, S end of E elevation, looking SW (photo 7/8).
- Plate 16: Control Centre complex, S end of E elevation, window detail, looking S (photo 7/9).
- Plate 17: Control Centre complex, S end of E elevation, looking S (photo 7/5).
- Plate 18: Control Centre complex, central part of E elevation, looking W (photo 7/10).
- Plate 19: Control Centre complex, central part and N end of E elevation, looking W (photo 7/11).
- Plate 20: Control Centre complex, brickwork detail in central part of E elevation, looking SW (photo 7/14).
- Plate 21: Control Centre complex, N end of E elevation, looking W (photo 7/12).
- Plate 22: Control Centre complex, N end of E elevation, looking SW (photo 7/15).
- Plate 23: Control Centre complex, NE corner, looking S (photo 7/16).
- Plate 24: Control Centre complex, E end of N elevation, looking SE (photo 7/17).
- Plate 25: Control Centre complex, N elevation, looking S (photo 7/18).
- Plate 26: Control Centre complex, E end of N elevation, looking SE (photo 8/1).
- Plate 27: Control Centre complex, W end of N elevation, looking S (photo 8/3).
- Plate 28: Control Centre complex, security fence and entrance to N of N elevation, looking SE (photo 8/4).
- Plate 29: Control Centre complex, N end of W elevation, looking NE (photo 8/7).
- Plate 30: Control Centre complex, N end of W elevation, looking N (photo 8/10).
- Plate 31: Control Centre complex, central part and N end of W elevation, looking SE (photo 8/9).
- Plate 32: Control Centre complex, central part of W elevation, looking N (photo 8/11).
- Plate 33: Control Centre complex, central part of W elevation, looking N (photo 8/12).
- Plate 34: Control Centre complex, central and S parts of W elevation, looking N (photo 8/13).

Plate 35: Stairway B1, looking NW (photo 9/3).  
 Plate 36: Stairway B1, covered openings in S wall, looking SE (photo 9/2).  
 Plate 37: Control Centre complex, S end of W elevation, looking NE (photo 8/15).  
 Plate 38: Control Centre complex, S end of W elevation, looking N (photo 8/16).  
 Plate 39: Former East Coast District Control Room (GF1), detail of window in W wall, looking NW (photo 4/13).  
 Plate 40: Boiler House (B2), looking N (photo 6/6).  
 Plate 41: Generator Room (B5), looking S (photo 5/18).  
 Plate 42: Former Apparatus Room 1 (B10), looking SW (photo 6/2).  
 Plate 43: Former Apparatus Room 1 (B11), looking SW (photo 6/4).  
 Plate 44: Former Apparatus Room 1 (B10), looking N (photo 6/1).  
 Plate 45: Staircase B12, looking SW (photo 5/17).  
 Plate 46: Staircase B12, looking NE (photo 6/5).  
 Plate 47: Staircase GF6, detail of doorway to N wall, looking NW (photo 4/9).  
 Plate 48: Staircase GF6, detail of ceiling trap, looking NW (photo 4/7).  
 Plate 49: Former East Coast District Control Room (GF1), looking N (photo 4/15).  
 Plate 50: Former East Coast District Control Room (GF1), looking SW (photo 4/12).  
 Plate 51: Corridor GF8, looking NW (photo 4/10).  
 Plate 52: Air Conditioning Plant Room (GF9), looking SW (photo 4/16).  
 Plate 53: Air Conditioning and Security Room (GF7), looking NW (photo 4/11).  
 Plate 54: Apparatus Room 6 (GF13), looking NE (photo 5/16).  
 Plate 55: Apparatus Room 4 (GF16), looking E (photo 4/18).  
 Plate 56: Apparatus Room 4 (GF16), looking S (photo 4/17).  
 Plate 57: EMS/FSA Plant Room (GF15), looking SE (photo 5/1).  
 Plate 58: EBU Plant Room (GF21), looking NW (photo 5/3).  
 Plate 59: Apparatus Room 5 (GF22), looking SW (photo 5/4).  
 Plate 60: UPS Battery Room (GF17), looking SE (photo 9/9).  
 Plate 61: Essential Switchroom 1 (GF20), looking E (photo 5/15).  
 Plate 62: Business Support (GF25), looking SE (photo 5/12).  
 Plate 63: Essential Switchroom 2 (GF24), looking SW (photo 5/14).  
 Plate 64: Apparatus Room 2A (GF30), looking E (photo 5/5).  
 Plate 65: Halon Gas Store (GF29), looking SE (photo 5/11).  
 Plate 66: Apparatus Room 2C? (GF27), looking SE (photo 5/10).  
 Plate 67: Apparatus Room 2B (GF31), looking E (photo 5/6).  
 Plate 68: Apparatus Room 2B (GF31), looking NE (photo 5/8).  
 Plate 69: Staircase 1F4, detail of balustrade, looking NW (photo 4/4).  
 Plate 70: Staircase 1F4, detail of balustrade to landing, looking E (photo 4/6).  
 Plate 71: Staircase 1F4, windows to E wall, looking NE (photo 4/2).  
 Plate 72: Staircase 1F4, upper part W wall, looking SW (photo 4/5).  
 Plate 73: Room 1F1, looking S (photo 3/17).  
 Plate 74: Corridor 1F6, blocked window at S end of W wall, looking S (photo 3/18).  
 Plate 75: Corridor 1F6, looking SE (photo 3/15).  
 Plate 76: Corridor 1F19, looking NE (photo 2/16).  
 Plate 77: Meeting room? (1F13), looking W (photo 3/16).  
 Plate 78: Room 1F11, looking SW (photo 2/5).  
 Plate 79: Control room (1F15), doorway from corridor 1F19 at NE corner showing swipe card, looking SE (photo 1/17).  
 Plate 80: Circulation space (1F9), showing hangers, looking SE (photo 2/4).  
 Plate 81: Circulation space (1F9), showing fittings, looking W (photo 2/3).  
 Plate 82: Viewing gallery (1F4), looking SW (photo 2/1).  
 Plate 83: Control room (1F15), N end of mimic board and control desks, looking N (photo 1/12).  
 Plate 84: Control room (1F15), control desks, looking E (photo 1/13).  
 Plate 85: Control room (1F15), control desks, looking S (photo 1/15).  
 Plate 86: Control room (1F15), control panels to NE corner, looking NE (photo 1/16).

Plate 87: Control room (1F15), alarm to NE corner, looking NE (photo 1/18).  
Plate 88: Control room (1F15), general view of mimic board, looking NE (photo 1/1).  
Plate 89: Control room (1F15), general view of mimic board, looking SW (photo 1/11).  
Plate 90: Control room (1F15), S end of mimic board, looking SW (photo 1/4).  
Plate 91: Control room (1F15), S end of mimic board, looking W (photo 1/5).  
Plate 92: Control room (1F15), central area of mimic board, looking W (photo 1/6).  
Plate 93: Control room (1F15), central area of mimic board, looking NW (photo 1/7).  
Plate 94: Control room (1F15), E end of mimic board, looking NW (photo 1/9).  
Plate 95: Control room (1F15), E end of mimic board, showing removed section, looking NW (photo 1/10).  
Plate 96: Control room (1F15), detail of S end of mimic board, looking SW (photo 2/7).  
Plate 97: Control room (1F15), space to rear of mimic board, looking NW (photo 2/6).  
Plate 98: Triangular office (1F16), looking NE (photo 2/10).  
Plate 99: Control room (1F15), control panels on W side, looking S (photo 2/9).  
Plate 100: Control room (1F15), control panels on N side, looking NE (photo 2/11).  
Plate 101: Corridor 1F17 and Mess Room (1F18), looking SE (photo 3/13).  
Plate 102: Staircase 1F23, looking SW (photo 2/18).  
Plate 103: Room 1F24, looking NW (photo 3/1).  
Plate 104: Asset Management suite (1F21), looking N (photo 2/12).  
Plate 105: Asset management suite (1F21), looking E (photo 2/13).  
Plate 106: Cable loft area C below Asset Management (1F21), looking N (photo 9/8).  
Plate 107: Corridor 1F19, fire alarm panels, looking NW (photo 2/17).  
Plate 108: Interim Control Room (1F25), doorway from corridor 1F19, looking W (photo 3/3).  
Plate 109: Interim Control Room (1F25), curve of former structure to W side, looking SW (photo 3/10).  
Plate 110: Interim Control Room (1F25), looking W (photo 3/6).  
Plate 111: Interim Control Room (1F25), looking S (photo 3/7).  
Plate 112: Interim Control Room (1F25), concrete frame and girders to S wall, looking SE (photo 3/12).  
Plate 113: Interim Control Room (1F25), looking N (photo 3/5).  
Plate 114: Interim Control Room (1F25), concrete frame and girders to N wall, looking N (photo 3/11).  
Plate 115: Interim Control Room (1F25), looking E (photo 3/4).  
Plate 116: Interim Control Room (1F25), control panels to SW corner, looking SW (photo 3/9).  
Plate 117: Room 2F1, looking NE (photo 2/15).

## EXECUTIVE SUMMARY

*In August 2012, Ed Dennison Archaeological Services Ltd (EDAS) were commissioned by Bartle and Son Ltd, through On Site Archaeology and on behalf of their clients T Fawcett and Sons Ltd, to undertake a programme of building recording at the former Central Electricity Generating Board (CEGB) control centre at Becca Hall, Aberford, near Leeds, West Yorkshire (NGR SE 41876 38770). The project, which involved a drawn and photographic survey of the complex together with some historical research, was required in advance of its demolition as part of plans to convert the adjacent Becca Hall back to domestic residential accommodation. The survey was made a condition of full planning permission and was funded by T Fawcett and Sons Ltd.*

*There is sufficient surviving anecdotal and structural evidence to support previous suggestions that the earliest phase of the complex (the southern part) was built soon after the acquisition of the site by the CEGB in 1958, and it represents a control centre constructed to be resistant to the effects of a contemporary atomic or hydrogen weapon dropped on Leeds. Whether or not it also formed some kind of officially designated 'Emergency Control Centre', which could function on more than a regional basis, cannot, as yet, be confirmed. The building was clearly not constructed robustly-enough to survive direct blasts from even conventional weapons, but it lies just outside of the effective destructive range of a contemporary one megaton weapon if used on the Leeds. Protection from fall-out was therefore the primary concern at Becca Hall.*

*In its initial form, the earliest phase of the control centre was formed by a free-standing concrete-framed building, linked to Becca Hall at ground and first floor levels. It had relatively thick walls, while externally, the windows to the east elevation were relatively small, and of a form that might have been protected by the steel or lead-lined shutters which are suggested to have once been fitted to them. This is in marked contrast to the large ground floor window to the west elevation, which would seem to contradict a protected function for the building, unless it too was shielded in some way. The earliest building was originally of two storeys, with a basement beneath. The current survey has found no evidence to support suggestions that the earliest control room was located within the basement and, although it could be argued that the disposition of the smaller rooms around the entrance bears some resemblance to the decontamination areas of small Cold War bunkers, there is again no convincing evidence for such procedures being in place at Becca Hall. The ground floor of the earliest phase of the control centre was originally taller, and formed by a single space, and this may represent the location of the original control centre. The first floor was also apparently formed by a single space originally, sparsely fenestrated, and with provision made in the internal staircase to haul heavy items of equipment up to this level. A fire hydrant pond to the immediate north-east of the earliest phase building is likely to be contemporary with it, and it was certainly present by 1965.*

*Map evidence demonstrates that the earliest phase of the control centre remained unchanged externally until at least 1965, and probably until at least 1968. The bulk of the existing control centre (the central and northern parts) appears to have been constructed in the mid 1970s to the designs of the architects, Hodges and Haxworth. There was clearly subsequent alteration and development; for example, the southern area of the central part is referred to on surviving paperwork within the building as the 'Infill Block' and, although similar in detailing to the bulk of the central part, it is evidently later.*

*The control centre formed one of eight regional control centres operated by the CEGB, predicting demand across the region, supervising power stations to either increase or reduce production (or to cease production altogether), and remotely operating some sub-stations. By the mid 1970s, the complex housed three separate control rooms. The East Coast District Control Room was located in the former ground floor of the earliest phase with Apparatus Room 1, serving the control room, housed in the basement beneath. The West Yorkshire District Control Room was housed in the north-east corner room of the first floor, while the Area Control Room was located in the central part of the control centre, in the same area as the existing*

*Control Room. In 1983, this was moved to the former West Yorkshire District Control Room, which then became the Interim Control Room. This move was only supposed to last until the existing Control Room had been created but, although this was completed by 1986, this did not become operational until 1993 due to various software problems. The Control Room formed part of the National Grid's '5-Centre' plan, by which the number of area control rooms was reduced to four, together with a National Control Centre at Wokingham; as part of this scheme, the Manchester Control Centre merged with Leeds. In the late 1980s, the former library of Becca Hall was being used as a conference room, while the Hall also housed offices, a canteen for shift engineers and four flats for those wishing to stay overnight. Several hundred people are thought to have worked at the control centre during the late 1980s.*

*Although the later parts of the control centre dating from the mid 1970s and afterwards cannot, like the earliest phase, be considered as overtly protected structures, security was clearly important, as evidenced by the control of access into the Control Room, for example. For a period, Becca Hall was designated as a Standby National Control Centre should the National Control Centre in London need to be evacuated; another control centre at St Albans had the same designation. Surviving documentation and equipment around the building demonstrates the existence of emergency control procedures that could be put into place, but these are thought to refer largely to the evacuation, rather than the operation, of the complex. A radio mast, replacing the earlier telephone communication system, was built between 1988 and 1993.*

*The '5-Centre' plan period of the control centre's operation was relatively short-lived, as in 1997/98 all of the Area Control Centres (including Becca Hall) were decommissioned, all operations being transferred to the National Control Centre at Wokingham. The Configuration Diagram (part of the mimic board) was removed from Becca Hall's Control Room in December 2011 by the Museum of Science and Industry in Manchester for preservation, and is currently held in store there.*

# 1 INTRODUCTION

## **Reasons and Circumstances for the Project**

- 1.1 In August 2012, Ed Dennison Archaeological Services Ltd (EDAS) were commissioned by Bartle and Son Ltd, through On Site Archaeology and on behalf of their clients T Fawcett and Sons Ltd, to undertake a programme of building recording at the former Central Electricity Generating Board (CEGB) control centre at Becca Hall, Aberford, near Leeds, West Yorkshire (NGR SE 41876 38770).
- 1.2 The building recording was made a condition of full planning permission approving the demolition of the former control centre and the conversion of the adjacent Becca Hall back to domestic residential accommodation, granted by Leeds City Council on 24th August 2012 (application 12/01519/FU, condition 17). The scope of the building recording was defined by a specification prepared by the local archaeological curator, the West Yorkshire Archaeology Advisory Service (WYAAS) (see Appendix 4), and the work was funded by T Fawcett and Sons Ltd.

## **Site Location and Description**

- 1.3 The former CEGB complex forming the subject of the building recording project is set in a locally secluded location adjacent to and adjoining the north-west side of Becca Hall, c.2km to the north-west of Aberford, near Leeds, West Yorkshire (see figure 1). It stands on an area of very gently rising ground to the immediate north-west of the Hall, with extensive hard surfacing to the north-east but an area of woodland (Hick Wood) to the north (see figure 2). It can be accessed by a roughly-metalled track leading north-west from Aberford through Becca Park, although the principal access was always from the north along a surfaced road branching off the south side of the A64 Leeds to York road.
- 1.4 No part of the complex is listed, although Becca Hall itself is listed Grade II (National Heritage List for England entry number 1135648); the Listed Building address specifically says 'house only' and the description notes that the 'service wing attached at west end and modern workshop wing to north are not included' in the listing (see Appendix 3).
- 1.5 The former CEGB complex does not appear to have been the subject of any previous detailed study, although limited and sometimes contradictory references are made in some secondary sources.

## **Aims and Objectives of the Project**

- 1.6 The primary aim of the survey work was to identify and objectively record, by means of photographs, annotated measured drawings and detailed descriptive text, any significant evidence for the original and subsequent historical form and function(s) of the complex, and to place this record in the public domain by depositing it with the West Yorkshire Historic Environment Record (Registry of Deeds, Newstead Road, Wakefield, WF1 2DE). The second aim of the work was to analyse and interpret the complex, and place it, as far as possible, within its historical, technological and social contexts.

## **Survey Methodology**

- 1.7 As noted above, the scope of the building recording work was defined by a specification prepared by WYAAS, the local archaeological curators (WYAAS

2012; see Appendix 4). The specification required the complex to be the subject of a detailed photographic and descriptive record, using existing plans, with the site work being supplemented by documentary research. The resulting survey conforms to a Level 2 descriptive survey as described by English Heritage (2006, 14).

- 1.8 The on-site drawn and photographic recording was undertaken in the first two weeks of September 2012, and the fieldwork records were approved by WYAAS on 25th September 2012.

*Documentary research*

- 1.9 Attempts were made to trace archival material relating to the CEGB, and to the Becca Hall complex in particular, in a number of different locations, but it was quickly established that local/regional repositories held little or no relevant information.
- 1.10 The site is noted in a discussion on *The Institution of Engineering and Technology* website ([www.theiet.org.uk](http://www.theiet.org.uk)) dating to 2005, stating that the CEGB archive and a comprehensive collection of reports from the period were located at the former Berkeley Nuclear Laboratories in Gloucestershire. However, when Berkeley (now occupied by the Nuclear Defence Agency) was contacted by EDAS as part of the current survey, they stated that they did not hold archive material - despite a number of queries with contacts that were provided, it has not been possible to establish the whereabouts or existence of the CEGB archive.
- 1.11 The Museum of Science and Industry (MSIM) in Manchester holds the Electricity Council (EC) archive, but this does not contain any CEGB material, apart from correspondence files between the EC and CEGB; there is not believed to be any material that relates specifically to Becca Hall (Jan Hicks, Senior Archivist MSIM, *pers. comm.*). However, John Beckerson, Senior Curator at MSIM, very kindly supplied details of the part of the mimic board that had been removed from Becca Hall in December 2011 for preservation in the Museum's collections.
- 1.12 A great deal of useful information was also supplied by two former CEGB employees; Mr Ray Hall, former Human Resources and Buildings Manager, who started work at Becca Hall in 1989, and Mr John D Hughes, now of National Grid but who worked at Becca Hall from May 1975 until February 1995, initially in communications before moving onto the control aspects. Their contributions were invaluable and the existing survey would have been much the poorer without them. All surviving documentation, including that affixed to the walls, within the control centre was examined during the current survey, but was found to be of little detailed use; however, name plates attached to doors did allow for many room functions to be determined.
- 1.13 The following archives or repositories of information were consulted:
- Leeds Local Studies Library, Central Library, Leeds;
  - Registry of Deeds, Wakefield;
  - West Yorkshire Archive Service, Sheepscar (Leeds);
  - the West Yorkshire Historic Environment Record (HER);
  - Yorkshire Archaeological Society, Leeds.
- 1.14 A full list of primary and secondary sources consulted as part of the project are given in the Bibliography (Chapter 5) below.



### *Drawn record*

- 1.15 The drawn record comprised basement, ground floor, first floor and second floor plans of the control centre. A number of previous surveys of the control centre were supplied to EDAS at the commencement of their work by Bartle and Sons, but these did not include a basement plan of the area beneath the earliest phase of the complex. A new basement plan was therefore prepared using traditional hand-measurement techniques. Both this, and the existing surveys, were then enlarged to a scale of approximately 1:100 to form the basis of the drawings used in this report. It should be noted that the main purpose of these drawings is to provide a reference point for the written descriptions and the photographic record, and so they should be regarded as diagrammatic rather than forming a detailed drawn record; one or two discrepancies were noted in the original surveys (e.g. the arrangement of windows and door on the north elevation at first floor level) but, as a detailed drawn record of the complex was not required as part of the project, these were not amended. An outline plan of the buildings in the courtyard to the south-west of the control centre was also prepared at a scale of 1:200, again based on existing surveys. Final inked drawings were then produced by hand to publication standard, and are presented as reduced versions of the full sized field drawings using conventions established by English Heritage (2006, 18-37).

### *Photographic recording*

- 1.16 The black and white photographic record was achieved using a Mamiya 645 medium format camera with perspective control, while the 35mm colour record was produced using a Pentax 35mm camera with a variety of lenses. English Heritage photographic guidelines were followed (English Heritage 2006, 10-13). A total of 117 black and white shots were taken, and the negatives were printed to a size of 7" by 5", with a limited selection reproduced at 10" by 8". A total of 24 35mm colour slides were also taken. Subject to access and other safety considerations, all photographs contain a graduated scale, and artificial lighting in the form of electronic flash and flood lighting was used as necessary. All photographs have been clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and cross referenced to film/negative and plate numbers as required by the WYAAS specification. All photographic film was exposed and processed to ensure high quality definition, and processed to archival standards according to manufacturer's specifications.
- 1.17 The photographic record (see Appendix 1) includes a register detailing the location and direction of each shot, for both the black and white prints and the colour slides. The various floor plans of the complex have also been used to identify the position and direction of each shot. A complete set of good quality copies of the black and white photographs is also reproduced in Appendix 1.

### *Written record*

- 1.18 Sufficient detailed notes and observations were made in the field to allow a detailed record of the buildings forming the subject of the survey to be prepared, in the form of both free text and pro-forma Room Data sheets. Each discrete space within the control centre has been assigned a unique identifier code dependent on its floor level (e.g. B1, GF1, 1F1, 2F1 etc), and these codes are used on the accompanying figures, the Room Record sheets, and the report text.

## **Survey Products**

### *Survey report*

- 1.19 This report forms a detailed written record of the former control centre, prepared from the sources of information set out above, and analyses its form, function, history, and sequence of development, as far as is possible using the previously gathered information. The complex is also placed within its historical, industrial and technical contexts, where possible using the available documentary and secondary evidence.

### *Project archive*

- 1.20 A fully indexed project archive has been prepared, ordered and indexed according to the standards set by English Heritage (EDAS site code BHA 12). The archive comprises primary written documents, field notes, documentary material, photographic contact sheets, a copy of the report, and an index to the archive. This archive has been deposited with the Leeds (Morley) Office of the West Yorkshire Archive Service, while the photographic prints and negatives, and 35mm colour slides, have been deposited with the West Yorkshire HER.

## 2 HISTORICAL DEVELOPMENT

### Introduction

- 2.1 The historical development of the Becca Hall control centre is outlined below, drawing on the sources and repositories of information listed above in the Bibliography (Chapter 5) below.

### The Creation of the Central Electricity Generating Board

- 2.2 The origin of the Becca Hall control centre ultimately lies with the creation of the Central Electricity Generating Board (CEGB) itself. Prior to the Second World War, the electricity industry had undergone a number of re-organisations as the distribution network and the number of generating stations grew, the principal aims of which were to try to rationalise the multiplicity of electricity producers then existing.
- 2.3 The Central Electricity Board (CEB) was set up in December 1926 to build a grid of high-voltage transmission lines (principally overhead cables carried on pylons) to link the most efficient stations. A total of 140 stations were selected for connection through the grid; the stations remained in the ownership of various private and municipal producers, but CEB engineers controlled generation using the most efficient plant to achieve the lowest production costs. The organisation also exerted a strong influence over station specification. The running of the early grid required control engineers to develop a series of new skills, including forecasting likely demand in their areas, and it was monitored by a series of regional control centres, initially seven in number. The grid itself was organised likewise, operating as seven virtually independent systems. However, in 1938, these were unified to become the national grid, initially as an experiment, but being so successful that the arrangement became permanent in 1939. During the Second World War, the national control centre was based at Bankside in London, but bombing forced it to move to a disused Post Office Tube station near St Paul's Cathedral (Cochrane 1990; Chitty 2000, 16).
- 2.4 After the war, and following the nationalisation of the electricity industry through the 1947 Electricity Act, the CEB was replaced by the British Electrical Authority (BEA) in 1948. A capacity crisis during the later 1940s, due to shortages of fuel and plant was met with the construction of new stations using 30MW and 60MW sets. However, it was also realised that the carrying capacity of the original grid would need to be improved. The solution, rather than building more 132kV lines, was to construct a 'supergrid' network of 275kV lines, each able to carry six times as much power. The BEA was subsequently renamed as the Central Electricity Authority (CEA), and in 1958 a separate Electricity Council was formed to coordinate policy for the industry as a whole, with the CEA being replaced by the Central Electricity Generating Board (CEGB) at the same time (Cochrane 1990).
- 2.5 The CEGB continued the programme of development and change initiated by the BEA. Larger sets were built at power stations, and the new 275kV supergrid was well underway, but the need for new 400kV lines was already anticipated to serve the even larger planned sets of the future. The organisation of the industry was also overhauled, with construction centralised into three project groups and the 12 regional Divisions of the BEA were merged into five Regions. The assumption of the early 1950s that coal would always be the main fuel for power stations was changed from the mid-1950s with the use of oil and subsequently the development of the Magnox civil nuclear power programme, the CEGB's first nuclear power

stations at Berkeley in Gloucestershire and at Bradwell in Essex, opening in 1963. A policy was also developed of siting large coal-fire and oil-fired stations close to their fuel sources (Cochrane 1990).

- 2.6 By the mid 1960s, some sections of the 275kV supergrid had been modified for operation at 400kV, but in 1965 the first 150 mile section of new 400kV line had been completed. By the 1970s, this had increased to 1,300 miles, accompanied by further modification of the 275kV supergrid to 400kV. In 1987, the then Conservative government took the decision to privatise the electricity industry, and this was the subject of a 'White Paper' in 1988. It was envisaged that the CEB's generating responsibilities and assets would be split between two new companies, National Power and PowerGen. The grid was to be owned and operated by the National Grid Company (National Grid). The CEB therefore formally came to an end on the 31st March 1990. National Grid was floated in the stock market in 1995 and has been known as National Grid plc since 2005 (Cochrane 1990; [http://www.engineering-timelines.com/how/electricity/electricity\\_07.asp](http://www.engineering-timelines.com/how/electricity/electricity_07.asp)).

### **The Building and Development of the Becca Hall Control Centre**

- 2.7 The existing Becca Hall is a late 18th century remodelling, allegedly of two earlier buildings, undertaken by the Markham family to a design by William Lindley and enlarged again during the 19th century. The Hall was sold by the Markham family to a group of trustees in 1894, and in 1922 the estate was purchased by the Fawcett family. It was then sold to the Thompson family, and was eventually purchased by the CEB in 1958 (Gilleghan 2002, 54-55).
- 2.8 As has been outlined above, since the 1930s, engineers in grid control centres had been forecasting likely demand and selecting the most economic plant to meet requirements. The CEB had seven (sometimes given as eight) regional control centres, but it has not been possible to ascertain the location of that dealing with the Yorkshire region; a popular publication of the time simply states of the control centres that they were "*.. in eight important cities, with private telephone lines radiating to all the power stations in their area*" (Odhams Press Ltd 1948, 316)
- 2.9 Cochrane (1990) notes that, in the early days following nationalisation, the North-East Region headquarters (one of the Divisions of the BEA responsible for the day-to-day running of the grid) was based at Beckwith Knowle, on the Otley Road in Harrogate, but this performed an administrative rather than a technical function. There is however no evidence that any kind of control centre was present at Becca Hall prior to its purchase by the CEB in 1958.
- 2.10 In addition to the national control centre in London, the CEB had regional control centres at Newcastle, Manchester, Nottingham, Birmingham, St Albans, East Grinstead, Bristol and Leeds. These were manned by Control Engineers, working in shifts around the clock, who were responsible for organising a cost-effective level of electricity generation to the grid at an ample level of security. At these control centres, the engineers would continuously predict demand and request power stations to either increase or reduce production, or to cease production altogether. A 'merit order' was employed; a method used to rank each generator based on how much it cost to produce electricity, the idea being to ensure that production was always achieved at the lowest possible cost ([http://www.engineering-timelines.com/how/electricity/electricity\\_07.asp](http://www.engineering-timelines.com/how/electricity/electricity_07.asp)). Control of remote or unmanned installations such as sub-stations was affected through telephony, electromechanical systems and latterly radio control (WYAAS 2012, 2; Odhams Press Ltd 1948, 320).

- 2.11 It appears that the CEGB undertook substantial works at Becca Hall soon after its purchase, as the earliest surviving part of the control centre complex is of late 1950s appearance (see Chapter 3 below). A building in approximately the same location is shown on the 1958 Ordnance Survey 1:10560 map (see figure 3 bottom), although it is unlikely to be the surviving structure for two reasons. Firstly, given that the site had only been purchased in 1958, the CEGB might have commenced building in the same year but would probably have completed the structure only in 1959 or perhaps even 1960. Secondly, an 1894 sale plan for the Becca Hall estate (see figure 3 top) shows that by the late 19th century the Hall, like many other such houses, had developed a rear service wing to the west end in approximately the same position as the earliest phase of the control centre, and it is more likely to be this, rather than the centre, that is shown in 1958.
- 2.12 In the immediate post-Second World War period, and in the light of the developing Cold War, control and operation of the national grid as an essential service in times of military threat was clearly a prime concern. For example, at Durley Park at Keynsham near Bristol, Durley Park House was acquired by the BEA in 1951 to serve as an Emergency Control Centre, and in 1957 it became the Main Area Control Centre, subsequently being taken over by the CEGB (Hughes 1997).
- 2.13 With regard to Becca Hall, it has been suggested that *“the Central Electricity Generating Board maintained a central war room at Becker (sic) Hall, near Leeds, and a related series of secondary war rooms. In addition to engineers, scientific intelligence officers were attached to these facilities, so that information received from local radiological officers could be acted upon”* (Cocroft & Thomas 2004, 227). Unfortunately, the source of this information is not given, but it is possible that reference is being made to just the earliest phase of the control centre, rather than the entire complex. A similar interpretation could also explain the following: *“The National Grid national emergency control centre is housed in a bunker-like building at Becca Hall, near Leeds. Although the building is not fully hardened, the control room is within a reinforced semi-basement and windows in the ground floor are fitted with steel, sliding blast-shutters. Becca Hall also housed the north-eastern region peacetime control centre. Its emergency standby control is at Rothwell Haigh and consists of a long, squat concrete bunker built in the early 1950s and very much like a pair of typical Civil Defence control bunkers of the period joined end to end”* (McCamley 2009, 243).
- 2.14 As will be set out in detail in Chapter 3 below, the earliest phase of the control centre could be thought to possess a reinforced semi-basement, although at the time of the EDAS survey there was no evidence for either the presence of a control room or sliding blast-shutters; McCamley’s 2009 description appears to separate out this part of the building from the ‘peacetime control centre’, housed in the central and northern parts of the complex. Again, unfortunately, no references for the source of this information are given.
- 2.15 However, both the 2003 and 2009 descriptions are partly supported by anecdotal evidence gathered in the late 1980s from those working at Becca Hall, suggesting that the earliest phase of the control centre was constructed to be resistant to the effects of an atomic or hydrogen bomb dropped on Leeds, i.e. for protection from fall-out rather than from a direct blast, and that as weapons increased in power, the building became redundant because it would not have withstood a direct blast. There were apparently once lead-lined shutters or blinds fitted to all the windows, but these had long since disappeared by 1989 (Ray Hall, *pers. comm.*).

- 2.16 The Rothwell Haigh installation referred to above, also near Leeds, was alleged to have been built in 1953 as an alternative emergency control centre to the 'peacetime' one at Becca Hall, and it takes the form of a substantial concrete bunker suggested to be 30m long by 8m wide. It stands alongside the GPO/BT 'PR2' repeater station, and was one of a number of emergency control centres built between 1950 and 1955, presumably by the BEA or CEA, to duplicate regional control centres. The National Control Centre was in the Midlands (suggested to be at Drakelow power station, near Burton on Trent, Staffordshire), with eight regional centres including two in Scotland for the Scottish Generating Board (SGB) (Campbell 1982; McCamley 2009, 242; [http://www.subbrit.org.uk/rsg/sites/r/rothwell\\_haigh\\_grid/index.html](http://www.subbrit.org.uk/rsg/sites/r/rothwell_haigh_grid/index.html)). None of the secondary sources consulted for this report clearly explain the relationship between Rothwell Haigh and Becca Hall; if the former was built in 1953, then this was five years before Becca Hall was even purchased by the CEGB, and so it cannot have been constructed as an 'alternative' to it.
- 2.17 The earliest phase of the control centre is first depicted in detail on the Ordnance Survey 1965 1:2500 map (see figure 4a). Interestingly, its visual and physical impact on the immediate area appears to have been relatively limited. It would not have been clearly visible from the southern and eastern approaches to the Hall because of the rising ground here, the house standing on the south-eastern edge of a plateau; from the north, it was shielded by extensive woodland. Comparison with the late 19th century sale plan shows that many of the earlier access tracks and roads around the Hall had been retained, while the stable complex to the north was untouched. The eastern part of the rear service wing had been wholly demolished, but the western part was still apparently partly standing, as was the small courtyard arrangement of buildings to the south-west. The control centre was rectangular in plan, aligned north-east/south-west, with a projection to the east side and a narrow link to the Hall at the south-east corner. A short distance to the north-east, a relatively large diameter circular pond had been built since 1958. The overall form of the complex remained little changed by the time the later Ordnance Survey 1968 1:10560 map was published.
- 2.18 During the later 1960s, the CEGB control system underwent further development, with the introduction of digital computers. The two-tier national/regional control system was to be replaced with a three-tier one (national/regional/district) (Pulsford 1967, 1139-1148). It is believed that, as part of this change, staff were transferred from the Northern Control Room at Pity Me in County Durham to Becca Hall during the late 1960s (John Hughes, *pers. comm.*).

### **The Later Development of the Control Centre**

- 2.19 Becca Hall is described as 'CEGB Becca Hall Atomic & Computer Centre' in a 1973 list of projects by the consulting engineers F J Samuely and Partners Ltd ([http://www.samuely.co.uk/job\\_numbers/1/j\\_1519.htm](http://www.samuely.co.uk/job_numbers/1/j_1519.htm); information from West Yorkshire HER). It is not certain what this title denotes, particularly the atomic element, but again, it may stem from a vaguely-understood idea relating to the initial capabilities of the earliest phase of the control centre in relation to atomic attack. One might also infer from the description that work was planned or taking place in 1973. The name of the project architects on the list is given as 'Hodges & Haxworthy' but this is an error, and it should be Hodges and Haxworth. The latter firm were evidently active in the Leeds area during the mid 1970s, as the Royal Institute of British Architects (RIBA) online catalogue also has a reference to the Pennine Warehouse, near Stourton, constructed by them for the Steel Corporation

Tubes Division by them ([http://riba.sirsidynix.net.uk/uhtbin/cgisirsi/DSEngVgdWK/MAIN\\_CAT/63820038/123](http://riba.sirsidynix.net.uk/uhtbin/cgisirsi/DSEngVgdWK/MAIN_CAT/63820038/123)).

- 2.20 The bulk of the central and northern parts of the control centre would certainly fit a mid to later 1970s date, and this appears to be confirmed by oral evidence. In the mid 1970s, there were three control rooms at Becca Hall, in line with the three-tier control system noted above, overseeing distribution within the North-East England area, broadly covering Sheffield to the Scottish Border. The Becca Hall complex formed an Area Control Centre (ACC), and contained an Area Control Room, with two District Control Rooms (East Coast and West Yorkshire). The District Control Rooms were responsible for the 132kV transmission system and generation, and they were staffed by a Loading Engineer and up to two Switching Engineers; the Loading Engineer dealt with power stations, whilst the Switching engineers were responsible for the taking out of circuits. The Area Control Room was staffed by a Senior Engineer, two or three Switching Engineers, a second Loading Engineer and a Costing Engineer, the latter responsible for putting together costing information from power stations to produce the merit order. In the Area Control Room, the Switching Engineers were responsible for the 275kV and 400kV distribution systems. In addition to work that was done in the different control rooms, the Becca Hall ACC was also responsible for the security of the area system, and along with the ACC at Manchester, liaised with Scottish Power. Although it is incorrect to describe Becca Hall as an 'Emergency Control Centre' during this period, at one time it was designated as a 'Standby National Control Centre' should the National Control Centre in London need to be evacuated; the ACC at St Albans had the same designation (John Hughes, *pers. comm.*).
- 2.21 At Becca Hall, the former East Coast District Control Room was located on the ground floor of the earliest part of the control centre at the southern end (rooms GF1 to GF5). In the mid 1970s, the basement area beneath (rooms B1 to B11) was known as Apparatus Room 1, serving the control room above, and it contained telephony equipment, metering equipment, a workshop and a small diesel generator; the telephony system used was a Strowger design (John Hughes, *pers. comm.*). This was an electro-mechanical system, developed in the late 19th century by Almon Brown Strowger but which, with many modifications, formed a mainstay of telecommunications into the 1990s. Some surviving paperwork within Becca Hall makes reference to the 'PABX room' (unlocated by the current survey), which stands for 'Private Automatic Branch Exchange', an automatic Strowger-type exchange designed for internal use within a building (<http://www.seg.co.uk/telecomm/automat1.htm>). The East Coast District Control Room was closed on 5th July 1980, with control of the 132kV system transferred to the Northern Electric or the Area Control Room at Becca Hall (see below); after this date, the basement below was converted to offices (John Hughes, *pers. comm.*).
- 2.22 The West Yorkshire District Control Room was located on the first floor, at the north-east corner of the later, expanded, control centre (room 1F25). Although the Area Control Room in the central part of the building (where the Control Room (1F15) was situated at the time of the existing survey) was active in the mid 1970s, it was moved into the former West Yorkshire Control Room (1F25) noted above in 1983, where after the latter became the Interim Control Room. The Area Control Room was then rebuilt between 1983 and 1986, as part of the National Grid's '5-Centre' plan, by which the number of area control rooms was reduced to four, together with a national control centre at Wokingham. As part of this scheme, the Manchester Area Control Centre merged with Leeds (Smith *et al* 1991, 204-209; Ray Hall, *pers. comm.*; John Hughes, *pers. comm.*). However, although the existing control room (1F15), in the central part of the first floor, was completed in

the 1980s, it did not become operational until May 1993, due to failure of the in-house software; the Interim Control Centre (room 1F25) therefore continued to fulfil its temporary function until the later date. When it did become operational, the control room (1F15) operated 24 hours a day, seven days a week, on a shift system, the shifts running between 0830 to 1500, 1500 to 2230 and 2230 to 0830 (John Hughes, *pers. comm.*); a number of photographs have been kindly supplied by John Hughes, showing the control room in operation during the 1990s (see figures 5 and 6).

- 2.23 Changes to the control rooms at Becca Hall were obviously accompanied by changes to the computer and telecommunication systems that were employed. Some of the first computers that were installed (an Argos 700 system) were housed in the north-west corner (room 1F21) of the first floor. In the early 1980s, the Telecommand system came into being. Prior to this, most sub-station plant had been operated by a sub-station attendant on instruction from the control or switching engineer at a control centre. However, with the arrival of the G174 Ferranti-based computer system in the late 1970s, it was possible to operate the switchgear remotely from the control centre, and so sub-station attendants were gradually phased out. The G174 computer system also allowed the graphical displays used at control centres to be upgraded, removing former switching diagrams and replacing loading diagrams with configuration diagrams (John Hughes, *pers. comm.*).
- 2.24 The structural changes to the complex in the later 1970s to the mid 1980s are difficult to track in detail, as there is unfortunately a gap in the detailed map coverage until the publication of the 1988 Ordnance Survey 1:2500 map (see figure 4b), but there was clearly subsequent alteration and development. For example, the southern section of the central part of the control centre is referred to on surviving paperwork within the building as the 'Infill Block' and, although similar in detailing to the bulk of the central part, is evidently later; it is believed to have been built during the mid 1980s, and to have initially have been used as offices (John Hughes, *pers. comm.*).
- 2.25 By 1988, the control centre had expanded to occupy its existing footprint, with an accompanying massive impact on the immediate area. The stable yard to the north had been completely demolished, and the access arrangements around the complex modified in accordance with its enlarged size, including the provision of substantial surrounding hardstanding. The circular pond to the north-east remained, and an enlarged courtyard was present to the south-west, although comparison with earlier plans suggests that some buildings dating from the 19th century had been incorporated into this. The northern end of the control centre complex had a fence erected around it. In the late 1980s, the former library of the Hall was being used as a conference room, while the Hall also housed offices (including a director's office), a canteen for shift engineers, and four flats for those wishing to stay overnight. Several hundred people are thought to have worked at the control centre during the late 1980s (Gilleghan 1985, 16; Ray Hall, *pers. comm.*). Although it is sometimes suggested that the pumped storage station at Dinorwig in Snowdonia (Wales) was also controlled from Becca Hall (Ray Hall, *pers. comm.*), this is believed to be erroneous, Dinorwig being controlled first from Manchester and then from the National Control Centre (John Hughes, *pers. comm.*).
- 2.26 Few external changes had taken place at the Becca Hall control centre by the time the 1993 Ordnance Survey 1:2500 map was published (see figure 4c). The fence noted above had been extended south along the eastern side of the complex, and



the radio mast, with another smaller structure a short distance to the west, had been erected. Nevertheless, as set out above, there had been substantial changes in terms of internal organisation. However, the scheme that had resulted in this internal re-organisation was short-lived, as in 1997-98 all of the Area Control Centres (including Becca Hall) were decommissioned, all operations being run from the National Control Centre at Wokingham. The Becca Hall Control Centre is reported not to have been occupied since 1997. The Configuration Diagram (see figure 7) was removed from the Control Room (room 1F15) at Becca Hall in December 2011 by the Museum of Science and Industry in Manchester, for preservation, and it is currently held in store there.

### 3 ARCHITECTURAL DESCRIPTION

#### Introduction

- 3.1 The control centre complex is described below in a logical sequence. The plan form, structure and architectural detailing of each part of the complex is described first, followed by the external elevations and a circulation description of the interior, from the lowest to the uppermost floor level; the description is a summarised version of the information on the Room Record sheets (Appendix 2). When considering the descriptions, reference should be made to the floor plans (figures 9, 10 and 11).
- 3.2 As previously noted, Appendix 1 comprises the photographic record, namely a catalogue of all the photographs taken, figures which depict the various photographic location points, and copies of the black and white photographs. These photographs are referred to in the following description as plates.
- 3.3 The control centre complex is set on a general north-west/south-east alignment but, for ease of description, its long axis is considered to be aligned north-south. Where possible, specific architectural terms used in the text are as defined by Curl (1977). Many of the rooms still retained their name or identifier plates, in addition to various abbreviations; these abbreviations include UPS (Uninterruptible Power Supply), EBU (Emergency Back Up), and EMS (Energy Management System (Computer System)). Finally, each discrete space has been assigned a unique identifier code dependent on floor level e.g. **(B1)**, **(GF1)**, **(1F1)**, **(2F1)** etc, and these codes are used on the accompanying figures, the Room Record sheets, and the following text.

#### Setting and Surroundings

- 3.4 An understanding of the landscape context of the control centre is an important part of its interpretation, and so a brief description of the setting is given below, followed by more detailed descriptions of surrounding structures.
- 3.5 The control centre is set in a locally isolated and secluded location and, as has been noted above in Chapter 2 above, if the complex did originate as some sort of emergency control/planning centre for the CEGB at the end of the 1950s, then these factors would have been important considerations in the choice of Becca Hall. The earliest phase of the control centre had a relatively limited visual and physical impact on its immediate environment (see figure 4a). The impact of the subsequent extensions is far greater but, for a building of substantial size, it still remains surprisingly hidden in the wider landscape, in part due to the surrounding belts and areas of woodland.
- 3.6 The control centre is situated on an area of very gently rising ground to the immediate north-west of the Hall (plates 1, 2 and 3); the gentle rise required the very north end to be slightly terraced into the slope, resulting in a ground floor that is somewhat lower than the surrounding external ground surface. There is extensive hard surfacing to the north-east and south-west of the control centre, for both parking and access by emergency vehicles; a small yard also exists to the south-west, with entrances at the northern end and in the south-west corner. The main access to the control centre during its operating lifetime was always from the A64 Leeds to York road to the north, along a route which had originated as an estate track but which was subsequently much improved and widened.

- 3.7 A number of related structures survive in the vicinity of the control centre (see figure 2). To the north-east, there is a circular pond, built as a hydrant pond to provide water for fire engines and pumps (plate 4). The pond is shown on the 1965 Ordnance Survey 1:2500 map (see figure 4a), and therefore forms an early part of the CEGB works on site; it is presumably contemporary with the earliest phase of the control centre. The pond is c.10m in diameter and is concrete-lined, surrounded by railings. To the north of the pond, and a substantial area of hard-standing to the north-east of the control centre, lies the radio mast (plate 5). The 30m high mast was erected between 1988 and 1993 (see figure 4), and replaced a previous communications system based on telephony; according to paperwork remaining in the control centre dating to 1995, the mast formed part of a Motorola UHF radio communications system. The mast is of three-legged tubular construction, and formerly carried aerials comprising four folded dipoles with c.0.70m diameter dishes. The base of the mast is surrounded by a metal security fence, of the same design as that around the northern end of the control centre. At the foot of the radio mast is the Microwave Radio Building, a plain rectangular single storey building of blockwork faced with stone, and with a pitched tiled roof (plate 6). A doorway at the west end of the south elevation gives access to the interior; internal notices indicate that access to the building was obtained through the Engineering Section. The interior of the building (plate 7) is plain, with most of the equipment having been removed after 1997. Metal cabinets labelled 'MICROWAVE EQUIPMENT SUPPLIES DISTRIBUTION BOARD' and 'DOMESTIC SUPPLIES DISTRIBUTION BOARD' are fixed to the wall, whilst curving metal tracking is suspended from the ceiling; the tracking is aligned on a series of small square openings in the north wall.
- 3.8 A short distance to the west of the radio building, there is another smaller structure, the Pump House. This is also of a single storey, built of hammer-dressed coursed squared sandstone set with a cement mortar, with a pitched slated roof. There is an external hose attachment to the east gable (plate 8), two window openings fitted with four-pane wooden casements to the north elevation, and a doorway in the east gable. At a glance, the building might be thought to be a remnant of the stable complex that stood here, and a small building is shown in this approximate position in 1965, although nothing appears again before 1993; it may equally be a modern building reconstituted from earlier materials. The interior houses a well (plates 9 and 10), from which water was pumped into the hydrant pond to the east of the control centre (Ray Hall, *pers. comm.*).
- 3.9 To the immediate south-west of the control centre, there is an enclosed yard with secure entrances at the north end and the south-west corner. There are also ranges of buildings located along the south and western sides of the courtyard (see figure 8). A courtyard with associated building ranges covered the southern end of this area in the late 19th century (see figure 3 top), and comparison with 20th century Ordnance Survey maps demonstrates that elements survived into the mid to late 1960s (see figure 4).
- 3.10 Commencing at the north-western end of the western range, a rectangular detached single storey brick building with a flat roof was formerly the Fitters' Workshop (Building **A** on figure 8). To the south, there are two conjoined buildings of similar form, one (**B** and **C**) comprising a Fuel Tank and the No. 1 Diesel House, and the other (**D**) the No. 2 Diesel House (plate 11). All of these buildings were present by 1988. The detached southernmost part of the western range is rectangular in plan, of a single storey with a shallow single-pitch roof and comprises three cells, all forming either garages or stores, and all having garage doors in their east elevations. The larger, northern cell (**E**) is built of coursed

squared sandstone, but the central and southern cells (**F** and **G**) are of sneaked masonry. They stand in the same position as, and are on the same orientation as, a three-cell structure shown here in the late 19th century, and so are likely to incorporate at least part of these earlier buildings. The gateway at the south-west corner is provided with security gates and cameras.

- 3.11 Described from west to east, the southern range (plate 12) comprises a store (**H**), another garage (**I**) and a kitchen and showers (**J**) (see figure 8). All parts of the range are of a single storey, with single pitch roofs, and are built of coursed squared sandstone; all were present by 1988. The stone used for the store (**H**) is of noticeably better quality than the other parts - this is because it was taken from the chimney stacks of the Hall, which were dismantled to build it (Ray Hall, *pers. comm.*).

### Plan Form, Structure and Materials

- 3.12 The control centre has a complex sub-rectangular plan form, with maximum external dimensions of c.58.90m north-south by 36.80m east-west, although for the purposes of description it can be broken down into a number of constituent elements. The earliest phase of the building, at the southern end, is rectangular in plan, the main body measuring c.16.80m east-west by 13.40m north-south, and with a projecting stair tower to the east side. The central part of the control centre, housing the existing Control Room (**1F15**), measures c.30.20m north-south by 24.00m east-west, whilst the northern part has external dimensions of c.19.50m north-south by 36.80m east-west. The earliest phase of the building is of two storeys with a basement. The other parts are of two storeys without basements, but are somewhat higher overall than the earliest phase; internally, the first floor spaces are all much higher than the ground floor ones, and this is reflected in the external elevations. A small area of the north-west part rises to three storeys.
- 3.13 All of the main parts of the control centre have either flat or very shallowly pitched roofs, apparently comprising concrete slabs, and all have reinforced concrete frames of post and beam construction with panels of brick infill. The panels of the earliest phase are built of machine-made reddish-brown bricks (average dimensions 230mm by 110mm by 70mm) laid in a stretcher bond and set with a lime mortar. The walls of the earliest phase are much thicker than those of the other parts, being up to 0.80m in width. The panels of the central part of the control centre, housing the existing Control Room (**1F15**), are built of machine-made brown bricks (average dimensions 215mm by 100mm by 65mm), again laid in a stretcher bond. The bricks used to build the most recent parts of the complex, for example the corridor and Mess Room (**1F17** and **1F18**) are of very similar dimensions but much lighter in colour.
- 3.14 Internally, the walls of the basement of the earliest phase are largely of cast concrete, with original internal floors formed by concrete slabs. Within the central and northern parts of the control centre, both blockwork and brickwork is visible to exposed internal walls, but the majority are lined with board panels with a smooth finish. The largest first floor spaces have 'cable lofts' beneath them, essentially voids between the floor and the ceilings of the ground floor below, c.1m in height, and crossed by lattice girders of composite angle-steel construction. Little in the way of decoration or architectural detailing now survives within the control centre, although there are a few surviving remnants in the earliest phase, while the Control Room (**1F15**) and associated space were given slightly more elaborate finishes when compared to other spaces on the same level.

## External Elevations

- 3.15 The external elevations of the control centre are described below, commencing with what can be seen of the south elevation and then moving around the exterior in an anti-clockwise direction.

### *The south elevation*

- 3.16 Infill building, undertaken between 1998 and 1993, has served to obscure the original relationship of the earliest phase of the control centre to Becca Hall. The 1965 Ordnance Survey map (see figure 4a), and the wall widths within the earliest phase, demonstrate that there was a link between the two buildings, at both ground and first floors levels, but this is now hidden by later additions. The original south elevation of the earliest phase is similarly hidden by the same additions, although it can just be glimpsed from the courtyard to the south-west. Here, there are two surviving window openings to the first floor (within **1F1**), possibly later insertions. Each window has a flat concrete lintel, with a slightly projecting concrete sill.

### *The east elevation*

- 3.17 The principal feature of the earliest phase's east elevation is a projecting stair-tower (plate 13). This stair-tower rises above the flat roof of the main body of the building behind; the reason for this is not entirely clear, but it may have been to facilitate the use of the staircase as a lifting well for heavy equipment (see circulation description below). The north and south elevations of the stair-tower are both given a decorative treatment in the form of a diapered pattern of blue bricks, forming an interlocking diamond grid pattern; at the centre each diamond, there is a single projecting stretcher, also blue (plate 14). The visible part of the south elevation is completely blank, whereas the north elevation is pierced by a single window opening at a high level, towards the west end of the wall.
- 3.18 The east elevation of the stair-tower is faced with concrete panels, possibly a later addition, and has three pairs of window openings at ground, internal landing and first floor levels (plate 15). Each pair of window openings has a slightly projecting concrete surround, and is separated by a thick central partition (plate 16). The face of the partition is slightly recessed from the surround, and this may have been done to allow for the sliding steel-shutters or lead-coated blinds/shutters referred to by others, although such protection might have been expected to be mounted internally rather than externally. There is no clear evidence for the former presence of such; a narrow groove to the underside of the lintel probably served the more prosaic function of stopping rain running into the window opening, as there is no corresponding groove in the sill to house a sliding feature. The sides of each window opening incorporate shallowly recessed panels, and they are fitted with a single pane of glass held in a fixed steel casement. The steel frame is flush with the internal wall face, and therefore deeply recessed from the external wall face. The steel frame has a wooden frame set against its exterior side. Threaded bolts project eastwards from the centre of the east and west sides of the wooden frame, but it is unclear what was fixed to them.
- 3.19 Apart from the stair-tower, the remainder of the earliest phase's east elevation is now obscured by later additions. Internal evidence demonstrates that there was once a pair of similar first floor window openings to the immediate north of the protruding stair-tower, perhaps replicated on the ground floor. The north elevation of the earliest phase is similarly obscured, but again internal evidence suggests a

larger first-floor window opening to the east end of the north wall. At the west end of the north wall, an original sub-square flue or chimney-like projection rises the full height of the building from the Oil Fired Boiler Room (**B2**) in the basement.

- 3.20 Returning to the main east elevation of the control centre, the protruding stair-turret is butted by a two storey panel of diapered brickwork, bearing the same pattern as the north and south elevations of the stair-turret, but built of very different greyish-brown bricks (plate 17) (see also figure 5 top). The diaper pattern is truncated to the upper-most part, which has been altered or raised at some point. The wall is different to the east elevation of the central part of the complex, including the short east return which meets it, and this, together with the effort that has been made to match the early diapered brickwork pattern, suggests that it might be an early addition to the earliest phase.
- 3.21 The east elevation of the central part of the control centre (plates 18 and 19) clearly expresses the internal volumes and plan of the building, stepping backwards as it rises above the ground and first floor circulation corridors to the Control Room (**1F15**). The ground and first floor corridors are each of five bays, each bay containing a single small window opening. The window openings are fitted with metal-framed top-hung casements, which open outwards, and each is set within a narrow recessed vertical concrete panel with a dull red fine aggregate surface (plate 20). Between the window openings, apart from at both outer ends, alternate stretchers project from the wall face to form a chequer-board pattern. To the north of the northernmost window, air-conditioning vents are provided with substantial concrete cowls, a distinctive feature of the central and northern parts of the control complex. Above the ground floor windows, a band of horizontal recessed concrete panels with dark grey aggregate surfaces runs the whole length of the elevation. Above these, the external elevation of the first floor corridor is very similar to that of the ground floor, with projecting concrete hopper heads to the down-pipes which mimic the air-conditioning vent cowls, again distinctive features of this part of the building. The elevation then steps backwards, and the external face of the Control Room (**1F15**) rises above. This has a horizontal band of recessed panels, flank by cowed vents and with concrete panels above similar to those on the east elevation of the earliest phase's stair turret. To the south, the plainer brickwork of the 'Infill Block' section of the control centre can be seen.
- 3.22 The horizontal band of concrete panels with the aggregate finish returns around the south and east faces of the projecting northern end of the east elevation, which is formed by the Interim Control Room (**1F25**) and associated apparatus rooms (**GF30** and **GF31**) (plates 21, 22 and 23). This is very plain, the flat expanse of brickwork broken only by narrow recessed vertical channels and concrete drain hoppers. The security fencing to the front of the ground floor was extended along this elevation between 1988 and 1993.

#### *The north elevation*

- 3.23 The east end of the north elevation also forms part of the Interim Control Room (**1F25**), and is built in much the same manner as the north end of the east elevation (plates 24, 25 and 16). The horizontal band of concrete panels with the aggregate finish continues across the east end of the north elevation, but has several windows below it to this face, lighting Apparatus Room 2B (**GF31**) to the ground floor. Above the horizontal band, the first floor brickwork is again broken by narrow vertical recessed channels, but also a relatively long window. This window is an original feature, but the off-centre doorway is a later insertion, leading to a fire escape (incorrectly detailed on the original survey drawings). There are also two

concrete cowls forming air-conditioning vents at either end of the elevation, as there are on the south elevation of this block. The west elevation is very similar to the east elevation.

- 3.24 The central space between the east and west ends of the north elevation is now cluttered with fire escapes and other later additions. The west end of the north elevation forms part of the office space in this part of the control centre. It has a very, plain, functional appearance (plate 27), and is clearly a different phase to the central and north parts of the control centre; it had been built by 1988, at least to ground/first floor level. The ground floor was once open, carrying the upper floors on concrete posts, but has subsequently been infilled. There is a pair of centrally placed window openings to the first and second floors (incorrectly detailed on the original survey drawings), each fitted with modern glazing units. A fire escape obscures much of the east elevation, but to the rear (south) of this there is a tall brick projection surmounted by a square concrete tank or box; this appears to be connected with the air-conditioning system, or might alternatively house a water tank. The security fencing noted to the east elevation continues along the full length of the north elevation. It incorporates a turnstile fitted with a swipe-card security system (plate 28).

*The west elevation*

- 3.25 The north end of the west elevation forms part of the office space at the north-west corner of the control centre (plate 29). It is of very similar form externally to the north-east part of the control complex housing the Interim Control Room (**1F25**) i.e. a horizontal band of concrete panels with an aggregate finish, narrow vertical recesses and concrete drain hoppers. There are three window openings fitted with modern glazing units that may be later insertions to the first floor, and a tall brick projection surmounted by a square concrete tank or box like that described to the east face of this part of the control centre. There is a security fence to the front of the ground floor, and several later single storey additions. The main connection for the power supply to the control centre was located at this corner of the building, electricity being purchased latterly from Yorkshire Electricity (Ray Hall, *pers. comm.*). The elevation returns to the east (plate 30), where it is again of very similar appearance, but with three original windows (two now blocked) to the ground floor below the band of horizontal panels.
- 3.26 Returning to the south, the west elevation has a ground floor doorway leading to a ground floor corridor (**GF23**); the doorway is fitted with the same swipe-card security system as noted above at the turnstile on the north side of the building. Moving south, the central part of the west elevation was once formed almost wholly by the west external face of the Control Room (**1F15**), detailed in the same way as the north-west part of the control centre, with narrow vertical recesses. However, at some point after 1993, a two storey addition, housing the Mess Room and corridor (**1F7** and **1F8**) at first floor level, and the Motor Generator rooms (**GF18** and **GF19**) below, was built against it, together with a lift shaft (plates 31 and 32); the first floor corridor protrudes from the elevation, carried on supports. To the south of these very recent additions, the elevation is formed by the 'Infill Block', which has similar architectural detailing (plate 33). There is an original ground floor doorway at the south end of the elevation. Above, and to the return to the east, the concrete panels of the horizontal band are replaced by slatted vents, with a single large original window above (plate 34).
- 3.27 The southern part of the west elevation is formed by the original west face of the earliest phase of the control centre. To the immediate front (west) of this is the

open stairway (**B1**) (plate 35) leading to the earliest phase's basement. The stairway has a dog-leg plan, descending from the courtyard and then turning around through 180 degrees on a small landing to descend to a small enclosed access area. The walls of the open stairway area are of brick construction throughout, with flat concrete coping surmounted by a metal (steel?) railing, of very similar design to the staircase banister to the interior of the earliest phase (see below). The stairway handrail is of similar design, but is only present between the landing and the base; the steps themselves are of concrete. On the south wall of the landing, at a low level, there are two square openings with raised concrete frames set into the brickwork (plate 36). The centre of each frame has a piece of thick (and possibly darkened) glass screwed to it, which is itself covered by a substantial metal dome held in place by metal cross-bars. The purpose of these openings and associated features is unclear; they appear to be placed above the basement generator room (**B5**) although it is not certain if they are associated with it.

- 3.28 The west face of the earliest phase has a very large window opening to the ground floor, set within a moulded surround of either concrete or cast stone (Childe 1927) (plates 37 and 38). This window is of nine lights, arranged in three rows of three. The lights of the lower and upper rows are each divided into three panels, but those of the central row into two only. The frames of the lights are of wood, but those of the panes are steel. The central row of lights are all fixed, but the central panes of the upper and low row of lights move vertically on central pivots (plate 39). Above, to the first floor, there are two very plain window openings with flat concrete lintels and slightly projecting concrete sills, fitted with modern glazing units. They lack the jambs with shallowly recessed panels noted to the windows in the former east elevation of the earliest phase, and may be later insertions. Although the elevation has been subject to some re-pointing, there is no surviving evidence for the former presence of shutters or any other protective fittings. An inserted doorway at the south end of the first floor serves a later fire escape, added between 1988 and 1993. The infill buildings between the earliest phase and the Hall itself were built during the same period.

### Circulation

*Basement* (see figure 9)

- 3.29 As has already been described above, only the earliest phase of the control centre, at its southern end, is provided with a basement; this was formerly known as Apparatus Room 1, and housed services supporting the East Coast control room on the ground floor above (John Hughes, *pers. comm.*).
- 3.30 The principal external access to this basement is down the external stairway (**B1**) from the courtyard on the south-west side of the control centre, although it could also be reached internally from a staircase (**B12**) on the east side. The external open stairway descends to a small rectangular open area. In the west wall there is a doorway giving access to a small under-stairs space, in the north wall is a doorway to the Oil-Fired Boiler House (**B2** and **B3**), and in the south wall a doorway to the basement corridor (**B4**). The Oil-Fired Boiler House (**B2**) (plate 40) is separated from an oil storage tank (**B3**) in the north-west part by a low bund brick wall; a large infilled opening in the ceiling adjacent to the oil tank was presumably used to move heavy equipment in and out. The two surviving boilers are small, probably dating to the 1980s, and clearly do not represent the original installation. The return and outflow water pipes from the boilers are linked into a projection in the south-east corner of the room, a former flue which rises the full



height of the earliest phase of the control centre and emerges through the roof. A control panel mounted on the east wall controls the heating pumps and shunt pumps; printed operating instructions make reference to the 'Old House', which may be the name latterly given to the earliest phase, rather than Becca Hall itself.

- 3.31 The basement corridor (**B4**) runs south to the generator room (**B5**) (plate 41) and then returns to the east. It then narrows, and opens out into the northern of the two main basement rooms (**B10**). The east return is flanked to the north by the male and female showers (**B6** and **B7**), and to the south by another room (**B8**) and the basement switchboard (**B9**). The two main basement areas (**B10** and **B11**), which occupy the majority of the space at this level, are largely featureless (plates 42 and 43). At the time of the EDAS survey, the floors of both rooms were under a shallow covering of water and also some silt, the remnants of a major flooding event in 2012. However, the floor of the north room (**B10**) appears to have been laid in a coloured concrete resembling terrazzo, with a walkway or pathway delineated in a different colour between the two doorways in the south wall. There is also a sliding two-part screen with metal floor and ceiling tracking in position approximately two thirds along the length from the west wall (plate 44). When fully extended, the screen would have met the concrete walkway/pathway noted above, but would not have continued as far as the south wall.
- 3.32 Within the staircase (**B12**) on the east side of the basement, the doorway leading to room B10 retains a stepped wooden architrave and a blank framed panel over, both of which may be original fittings (plate 45). The staircase has terrazzo flooring. The treads and risers of the open string stairs are also in terrazzo, while the metal (steel?) balustrade has square-section balusters and a copper-coloured handrail; all of these latter are original fittings (plate 46). Over the north-west corner of the staircase, there is a substantial rectangular opening in the ceiling. The opening is covered from above with four panels, and a similar feature can be seen to the ground floor staircase above (GF6 - see below). A lifting beam on the first floor allowed items or equipment to be raised the full height of the building through these openings within the staircase. A sump (**B13**) is positioned beneath the east end of the staircase and has a concrete floor.

*Ground floor* (see figure 10)

- 3.33 At the time of the survey, the principal external access to the ground floor was through room GF13 on the west side, the former Apparatus Room 6 (see below). However, when the control centre was in use, the principal access was always through Becca Hall itself, via the short corridor on the south side of the ground floor staircase (Ray Hall, *pers. comm.*). The staircase itself (**GF6**) is lit by a pair of window openings in the east wall, and the surviving original fittings and finishes are as described for the basement staircase B12 (see above). In addition, the doorway off the north side of the stair landing retains a wooden architrave which may also be contemporary (plate 47); the doorway itself is framed by a narrow strip of beading which is set at the same height as the adjacent intermediate staircase landing, and resembles a 1950s decorative feature. A radiator to the west wall is the only such surviving feature of 1950s appearance noted in the building. There is a covered opening above the north-west corner of the staircase as described for the basement staircase B12 (plate 48).
- 3.34 Five rooms (**GF1** to **GF5**) now occupy the former ground floor of the earliest phase of the control centre. The rooms are all later insertions into the original ground floor space, and appear to date from the 1980s (plate 49), although they are still lit by an original large window in the west wall (plate 50). In the mid 1970s, the

ground floor of this part of the control centre formed the East Coast Control Room, one of two District Control Rooms within the complex. When this was closed in 1980, the ground floor was converted to office space (John Hughes, *pers. comm.*).

- 3.35 The main circulation spaces in the central part of the ground floor are the corridors along the east (**GF8**) and north (**GF23**) sides. The east corridor (plate 51) provides access to the main air conditioning plant room (**GF9**) (plate 52), a room (**GF7**) containing radio and security equipment (plate 53), and the female toilets (**GF10**); the adjacent male toilets (**GF11**) are reached from a separate circulation space (**GF12**) with a lift, itself accessed through the Apparatus Room 6: FSA Computer Room (**GF13**) (plate 54).
- 3.36 The largest space in the central part of the ground floor is the Apparatus Room 4: EMS Computer Room (**GF16**) (plate 55). This room formerly housed the mainframe computers for the Control Room (1F15) above, arranged in two banks (Ray Hall, *pers. comm.*). At the time of the EDAS survey, the interior of the room was cluttered with debris, and the only surviving electrical equipment was the metal cabinets housing the power distribution units (PDU) placed along the north, west and south walls (plate 56). Those that retained their front panels have separate controls for a DC and AC isolators. PDU unit 'T' is positioned against the north wall, and unit 'S' against the south wall. Units 'A' to 'D' are positioned from south to north along the west wall, with storage space between them. To the immediate west of this room is the EMS/FSA Plant Room (**GF15**), a narrow corridor-like space filled with air-conditioning ducting (plate 57). At its north end, the plant room gives access to the EBU Plant Room (**GF21**) (plate 58). The Apparatus Room 5: EBU Computer Room (**GF22**) (plate 59) stands to the immediate east.
- 3.37 The west side of the central part of the ground floor is occupied by a series of spaces which can only be accessed externally comprising, from south to north, further air conditioning plant (**GF14**), the UPS Battery Room (**GF17**) (plate 60), the Essential Switchroom 1 (**GF20**) (plate 61), and Motor Generator Rooms 1 and 2 (**GF18** and **GF19**). The latter have a lift on their west side; they were designed to provide a back-up power supply for the Control Room (1F15) should the main electricity supply fail (Ray Hall, *pers. comm.*) and appear to have been built after 1993.
- 3.38 The majority of the rooms in the northern part of the ground floor are all accessed from the north corridor (**GF23**), which is also linked to the northern ground floor stairway (**GF28**). The north-west corner is largely formed by office space for Business Support (**GF25**) (plate 62), with Essential Switchroom 2 (**GF24**) to the south, and the Office Suite Air Conditioning room (**GF26**) to the north, only accessible externally. Little of interest survives in these rooms, although there are the remains of the electrical apparatus in the Essential Switchroom 2 (plate 63). The north-east corner comprises four rooms that formerly housed computers and equipment associated with the Interim Control Room (1F25) on the first floor. The two largest rooms, Apparatus Room 2A (**GF30**) and Apparatus Room 2B (**GF31**) were in very poor condition at the time of the survey. Apparatus Room 2A (plate 64) has a metal cabinet labelled 'BHSI ISOLATION PROCEDURE' and a de-humidifier located part way along the south wall. A doorway in the west wall gives access to the Halon Gas Store (**GF29**) which contains a number of wall-mounted metal cabinets relating to the control of the Halon gas fire-suppression system (plate 65). A larger room to the north (**GF27**) (plate 66), also reached from Apparatus Room 2A, may have formed Apparatus Room 2C. The dividing partition between Apparatus Room 2A and Apparatus Room 2B to the north is formed largely by a glazed screen, fitted with slightly darkened glass (plate 67). Apparatus

Room 2B (plate 68) appears once to have been very similar in terms of fittings and finishes. There is a de-humidifier positioned against the west wall and a metal cabinet labelled 'COMPUTER POWER DISTRIBUTION UNIT L' to the east wall.

*The first floor (see figure 11)*

- 3.39 As with the ground floor, at the time of the EDAS survey, the principal external access to the first floor was through room GF13 on the west side of the complex, the former Apparatus Room 6, and then up either stairways GF6 or GF28. However, when the control centre was in use, the principal access to the first floor was always through Becca Hall itself, via the short corridor on the south side of the ground floor staircase (**1F4**), within the earliest phase (Ray Hall, *pers. comm.*). The latter rises to a landing with a curved balustrade on the east side (plates 69 and 70) and is lit by four window openings in the east wall (plate 71), of the same form as described for the ground floor staircase GF6; there is a fifth, similar, window at a high level in the north wall. In addition, a lifting beam (stencilled SWL 1t) is placed over the north side of the landing, and was formerly used to lift equipment and materials through the covered openings described to the basement and ground floor staircases (plate 72). At a high level on the west wall over the landing, there are what appear to be two large infilled circular openings; however, on closer examination this was seen to be purely the result of water ingress, blistering of paintwork and mould growth.
- 3.40 Three rooms (**1F1** to **1F3**) now occupy the former first floor of the earliest phase of the control centre. These rooms are all later insertions into the original first floor space, and appear to date from the 1980s. The main space (**1F1**) is floored with carpet tiles; where these have been pulled up, earlier tiles, perhaps cork, are visible (plate 73). The two window openings in the west wall and south wall are fitted with modern fixed glazing units and are almost certainly later insertions. There was also formerly an original wide opening at the east end of the north wall, but the function of this is unclear. A single original window (now infilled) survives to the east wall (plate 74) (within corridor 1F6), and it is likely that there was once a doorway from the first floor staircase 1F4. The latter has now been infilled by the female toilet (**1F3**), with the male toilet (**1F2**) positioned to the south.
- 3.41 The main circulation spaces to the central part of the first floor are the corridors along the east side (**1F6**) (plate 75) (also giving access to room **1F5**) and north sides (**1F19**) (plate 76). Entry into the Control Room (**1F15**) or associated spaces from these corridors was strictly controlled, with all doorways fitted with a swipe-card security system; these cards were programmable, allowing entry to different areas to different people but still using the same system (Ray Hall, *pers. comm.*). A further east-west aligned corridor (**1F7**) branches off the west side of the main east corridor, giving access to a store (**1F8**), a probable meeting room (**1F13**) (plate 77) at the west end, and another room (**1F11**) to the north; the latter two rooms could only be accessed with the swipe-card system. The function of room 1F11 (plate 78) is uncertain - it has the same sound-proofing ceiling panels as are used in the Control Room (1F15), and also provides access to an internal lift, and a small and very plain subsidiary room (**1F10**).
- 3.42 The main access into the Control Room for those working within it was via a doorway at the north-east corner, from corridor 1F19, again fitted with a security swipe-card system (plate 79). However, there was an alternative access for visitors, guests and VIPs through a separate foyer (**1F9**). At the south-east corner of the foyer, there is a built-in plastic rail with plastic coat hangers attached (plate 80); the hangers cannot be removed from the rail. At the north end of the room, a

short flight of steps rise up to the Viewing Gallery (1F14). The steps are flanked by waist-high metal troughs filled with soil, once containing plants (plate 81). Given the complete lack of natural light in the room, a lamp with a cylindrical shade was positioned over each of the troughs. Almost all of the north-west side of the Viewing Gallery (**1F14**) is formed by a glazed screen with slightly darkened glass, placed at an angle across the south-east corner of the Control Room (1F15) (plate 82). A panelled detail above the screen which resembles tongue and groove boarding is carried around all the wall-tops of the room, and the ceiling is of the same sound-proofing panels as used in the Control Room (1F15).

3.43 The Control Room itself (**1F15**) is the largest and by far the most impressive space within the whole complex, and it retained the highest proportion of contemporary equipment and fittings at the time of the survey (plate 83). This space housed the Area Control Room by the mid 1970s, but this was closed in 1983 and moved to the former West Yorkshire District Control Room in the northern part of the complex (see 1F25 below). The former Area Control Room was then refitted between 1983 and 1986 to become the existing Control Room but this did not become operational until 1993, as part of the National Grid's '5-Centre' plan (John Hughes, *pers. comm.*) (see figure 5 bottom); it replaced the Interim Control Room (room 1F25). The floor of the Control Room is covered with carpet tiles, below which is Cable Loft Area B; although it could not be accessed, it is almost certainly of the same form as Cable Loft Area C (see 1F21) i.e. a c.1m high space set between the ground and first floors and crossed by a grid of girders. The floor of the control room is divided into two parts. The upper, south-east part, houses a pair of U-shaped pine control desks (plates 84 and 85). At the canted edge of the upper area, there are two further pine desks which run parallel to the edge. Flanking the desks, and set between them, are low flights of steps leading down to the lower part of the room; tubular steel railings define the walkways down the steps. To the lower area, there is a pair of smaller U-or C-shaped pine desks to the north-east and a similar, single desk to the south-west. A photograph of the Control Room taken during the 1990s shows computer units standing to the front of each desk (see figure 5 bottom); the computer screens essentially duplicated what could be seen on the mimic board which dominates the Control Room. The walls of the Control Room are lined with the same board panels as noted elsewhere within the first floor, and have the same panelled detail above as noted to the Viewing Gallery 1F14. At the north-east corner of the room, there are four metal cabinets set against the east wall (plate 86). These have had their fronts removed which now stand loose; from south to north they are labelled 'SITE SECURITY SYSTEM', 'BOMB WARNING SIREN', 'MVAC MIMIC DIAGRAM' and 'DIESEL REMOTE CONTROL PANEL'. Above and to the side of these, a red light is mounted on the wall with a metal sign below stating 'WARNING - FLASHING BEACON DENOTES CONTROL ROOM FIRE BELLS SILENCED' (plate 87). The ceiling over the Control Room is of sound-proofing panels and is stepped upwards from south-east to north-west; it has a grid of spot-lights set into it, flush with the surface.

3.44 Within the Control Room, the floor to ceiling curved mimic board occupies almost the entire north-west wall (plates 88 and 89). The eastern end of the mimic board housed what was known as the Configuration Diagram, showing the electricity grid in the north of England and Wales. It had originally been intended that the board would only cover the back (north) wall of the room, but after the merger of the Manchester Control Centre with Leeds in 1993, it had to be extended across the corner of the room to include more detail (John Hughes, *pers. comm.*) (see figure 6). The mimic board is of composite construction; a steel framework to the rear holds metal grids in place, and then tens of thousands of plastic cubes are secured

by clips into the grid. The cubes have stickers on them, principally either a red or a blue line, but also sometimes lettering or numbering, and these have been used to represent the distribution network on the mimic board; some of the cubes also once housed LED lights (see figure 6 bottom). When facing the mimic board, at the very left hand upper end there was once a pair of clocks displaying 'REAL TIME' and 'SYSTEM TIME'. Below these are a group of four speakers set flush with the wall face, and below these former digital displays for 'TIME ERROR' and 'FREQUENCY'. There appear to have once been similar displays at the very right hand end of the mimic board, but these have largely been removed. The majority of the mimic board shows a system of blue and red lines, the blue lines denoting the 400kV grid and the red lines the 275kV grid (plates 90 to 95). Various named installations, including power stations, are shown but the majority of the locations shown on the board are sub-stations; unfortunately many of the names of the latter have been removed (plate 96). The LED lights of the sub-station displays would be on or off depending on whether the sub-station was in use or not (Ray Hall, *pers. comm.*). In December 2011, the right-hand panel of the mimic board (the Configuration Diagram) was removed and taken to the Museum of Science and Industry in Manchester to form part of its collections (see figure 7).

- 3.45 The area behind the mimic board is accessed principally by a doorway at the south end, although it can also be reached from within the Triangular Office (1F16; see below). The rear area is formed by a walkway, from which the wiring at the rear of the mimic board's panels can be reached. On the rear of the mimic board, there are a series of metal cabinets labelled 'AREA CONFIGURATION DIAGRAM TIE' and numbered one to fourteen (plate 97); the letter/number combination R1 to R27 appears above them. Behind the mimic board panel that was removed, the metal cabinets continue, but here they are labelled 'NATIONAL CONFIGURATION DIAGRAM TIE' and are numbered one to four; the letter/number combination N1 to N4 appears above them. There is also a metal ladder leading to an upper walkway but this was not accessed for safety reasons. It was noted from within this area that the steel trusses over the north-west corner of the Control Room are of the same design as those visible above room 1F25.
- 3.46 The Triangular Office (1F16) (plate 98) to the north-west of the Control Room is accessed from corridor 1F19 via a doorway in the north wall fitted with a security swipe-card system on the outside. There is a raised area of floor around the south-east edge of the room and it is also equipped with sound-proofing ceiling panels, stepping upwards from north-west to south-east. Doorways in the east and south walls lead through to equipment housed in an area between the room and the rear of the mimic board. Through the south door, a series of metal cabinets house AC and DC isolators (plate 99), as well as controls for the lights in the Control Room area. Through the east door, further metal cabinets house controls for heating, air-conditioning and ventilation units (plate 100); one is labelled 'H & V PANEL CPI'. On the west side of the Control Room, there is a corridor (1F17) and Mess Room (1F18) (plate 101); map evidence indicates that these were built after 1993.
- 3.47 The majority of the rooms in the northern part of the first floor are all accessed from the north corridor 1F19, which is also linked to the northern first floor stairway (1F23) (plate 102) and room 1F24 (plate 103) to the immediate east. The north-west corner of this part of the complex is largely formed by office space for Asset Management (rooms 1F20, 1F21 and 1F22) (plates 104 and 105), below which is Cable Loft Area C; as with other similar areas elsewhere, this is c.1m in height and is crossed by lattice girders of composite angle-steel construction (plate 106). Just outside the swipe card door entry into the Asset Management suite, in corridor

1F19, are a series of fire alarm panels mounted in metal cabinets on the wall (plate 107).

- 3.48 The north-east corner of the first floor comprises a single space (**1F25**), formerly the Interim Control Room. In the mid 1970s, this room formed the West Yorkshire Control Room, one of two district control rooms within the control centre. However, in 1983 it was converted into the Interim Control Room, while the former Area Control Room (1F15) was refitted. This refit was completed by 1986 but the Interim Control Room remained in use until 1993 when the existing Control Room (1F15) became operational (John Hughes, *pers. comm.*). The room is accessed from corridor 1F19 through a doorway in the south wall, fitted with a security swipe card system externally and retaining a pair of doors unlike any others surviving within the complex - each door has two glazed panels and a curved steel handle (plate 108). To the immediate west of the doorway, there is a panel of varnished corrugated woodwork, like that seen over the doorway at the south end of the west side of corridor GF8 on the ground floor. At a high level, a metal box is mounted on the woodwork, from which a bare bulb projects.
- 3.49 The interior of the Interim Control Room had been partly stripped out when the EDAS survey took place, exposing elements of the internal construction. The floor is covered with carpet tiles, but at the south-east and south-west corners, floor traps provide access to the below-floor space, which may form Cable Loft Area A; it is very similarly structured to Cable Loft Area C noted above. The carpet tiles form two broadly semi-circular areas, separated by a narrow walkway which runs north-south across the room. At the outer edge of both semi-circular areas, there is a row of small square metal plates (plate 109). These formed the bases for uprights, which once comprised part of curved mimic boards projecting from the east and west walls of the room; the steel beams which formed the horizontal element of the board have been cut back flush with the wall face, where their ends are still visible. Each board was apparently of two levels, and electrical plug sockets are set into the wall at the approximate height of where the base of the upper level would have been; one board formed a diagram of sub-station layers while the other was an overview diagram (John Hughes, *pers. comm.*).
- 3.50 The walls of the room are plastered behind where the mimic boards would have stood, but above, panels of bare brickwork are visible, comprising brown machine made bricks laid in English Bond and set with a cement mortar (plate 110 and 111). The panels of brickwork run between the uprights of the concrete frame. These are all of the same form, and rise to the concrete ceiling (plate 112), apart from in the north wall. Here, a two-light window (with a later inserted door leading to an external fire escape) is set between three uprights (plate 113). The lintel of the window is formed by a substantial horizontal concrete beam which appears to be contemporary with the uprights; c.1m above the lintel, the uprights incorporate a thickened horizontal cross-piece, essentially forming a T-shaped 'head' (plate 114). The uprights continue above this 'head' as before to ceiling level, but it could not be determined if these upper ends are of the same date i.e. if the roof has been raised at some point or not. The uprights to the north and south walls support four north-south aligned steel girders. These girders are slightly cambered, increasing in height towards the centre, and are pierced by regularly spaced hexagonal openings (plate 115). The same girders are visible over the rear north-west area of the Control Room (1F15). The only piece of electrical equipment to survive within the room is located at the south-west corner, where two metal cabinets house the controls for the Interim Control Room's heating and air-conditioning systems (plate 116).

*The second floor and roof (see figure 11)*

- 3.51 The second floor area (**2F1**) of the control centre is very small, and exists only as a single room in the north-west corner, over room 1F22 of the Asset Management suite below. It is accessed via a staircase rising from room 1F21 on the first floor. The room is lit by windows in the north and west walls, and has a doorway leading to an external fire escape to the east wall (plate 117).
- 3.52 The roof areas of the control centre are accessed via a metal staircase (**1F12**) located on the north side of corridor 1F7 on the first floor. The roof areas were not inspected in detail due to reasons of health and safety. However, the metal staircase rises to the roof of the Infill Block, where there are the remains of various piece of air conditioning plant. The roof of the central part of the control centre (that apparently built in the mid to late 1970s) is felted and relatively featureless. The roof of the earliest phase of the control centre appears to be largely leaded. To the east of centre of the roof, there is short steel upright fitting that might once have been used to tether a cable, although it is not certain if this is contemporary with the earliest phase of the control centre. A similar fitting is visible to the roof of the stair-tower to the east side of the earliest phase.

## 4 DISCUSSION AND CONCLUSIONS

- 4.1 A detailed understanding of the earliest phase of the control centre, located at its southern end, is hampered by the lack of contemporary documentation - the subsequent identification of any surviving CEGB archival material may well allow the description given below to be significantly enhanced. In addition, there seems to be some confusion in the published secondary sources caused by the fact that the control centre remained in use until 1997 i.e. confusing what remains on site now with the original function of the building, and the presence of three different control rooms within the centre during the 1970s. Finally, there appears to be little or no detailed published comparative material on other CEGB control centres, which would allow the development of the Becca Hall complex to be seen as either typical or atypical, beyond the fact that several of the other centres were also built onto large earlier houses in rural locations.
- 4.2 Nevertheless, there is sufficient surviving anecdotal and structural evidence to support previous suggestions that the earliest phase of the Becca Hall complex was built soon after the acquisition of the site by the CEGB in 1958, and it represents a control centre constructed to be resistant to the effects of a contemporary atomic or hydrogen weapon dropped on Leeds; whether or not it formed some kind of officially designated 'Emergency Control Centre', and could function on more than a regional basis, cannot, as yet, be confirmed. The building was clearly not robustly-enough constructed to survive direct blasts from even conventional weapons (compared, for example, to above-ground World War Two civilian air-raid shelters constructed in Germany - Richardson 2008), let alone nuclear ones. However, Becca Hall lies c.7m to the north-east of Leeds city centre, and the destructive radius within which a one megaton bomb (the size most likely to be used in the late 1950s and 1960s) creates a pressure of five pounds per square inch (the '5 psi circle') or greater is c.4.4 miles, although this is obviously influenced by factors such as the height of explosion, surrounding terrain and the weather (Ehrlich 1985, 172-174). It therefore seems more likely that protection from fall-out was the primary concern for the Becca Hall complex.
- 4.3 In its initial form, the earliest phase of the control centre was formed by a free-standing concrete-framed building, linked to Becca Hall at ground and first floor levels. It had relatively thick walls, while externally, the windows to the east elevation were relatively small, and of a form that might have been protected by the steel or lead-lined shutters which are suggested to have once been fitted to them. This is in marked contrast to the large ground floor window to the west elevation, which would seem to contradict a protected function for the building, unless it too was shielded in some way. The building was originally of two storeys, with a basement beneath. The basement was accessible both internally (**B12**) and externally (**B1**). It is likely that some kind of generating equipment or power source was always located in the position of the current Oil Fired Boiler House (**B2** and **B3**). The Generator Room (**B5**) may not have served this purpose originally, and this could explain why the two protected openings to the landing of the external stair appear to have opened into it; perhaps significantly, several similar features can be seen to an external wall of the aforementioned Rothwell Haigh hardened bunker near Leeds ([http://www.subbrit.org.uk/rsg/sites/r/rothwell\\_haigh\\_grid/index.htm](http://www.subbrit.org.uk/rsg/sites/r/rothwell_haigh_grid/index.htm)). The current survey has found no evidence to support McCamley's (2009, 243) suggestion that the earliest control room was located within the basement, and this could well be a confused reference to the former East Coast Control Room which was placed on the ground floor by the mid 1970s (see below). Similarly, although it could be argued that the disposition of the smaller rooms around the entrance (**B4**) bears some resemblance to the decontamination areas



of small Cold War bunkers (for example, see Thomas 2010), there is no convincing evidence for such procedures being in place at Becca Hall.

- 4.4 The window in the west elevation demonstrates that the ground floor of the earliest phase of the control centre was originally taller, and that it has been reduced in height by subsequent insertions. The ground floor was apparently formed by a single space (**GF1** to **GF5**), and it is possible that the control centre was originally located here, rather than in the basement; in form, any mimic boards that were present would presumably have resembled that illustrated at the National Control Centre in Bankside in 1950 (<http://www.btinternet.com/~fynevue/bankside/cegb2.html>). The first floor was also apparently formed by a single space originally (**1F1**), sparsely fenestrated, and with provision made in the staircase (**1F4**) to haul heavy items of equipment up to this level. Again, it is uncertain what was originally housed in this single space, but it is assumed that the centre would need extensive telephone connections, and perhaps also the 'secondary war rooms' referred to by Cocroft and Thomas (2004, 227). A fire hydrant pond to the immediate north-east of the earliest phase building is likely to be contemporary with it, and it was certainly present by 1965.
- 4.5 Map evidence demonstrates that the earliest phase of the control centre remained unchanged externally until at least 1965, and probably until at least 1968. The bulk of the existing control centre (i.e. the central and northern parts) appears to have been constructed in the mid 1970s to the designs of the architects Hodges and Haxworth. There was clearly subsequent alteration and development; for example, the southern area of the central part is referred to on surviving paperwork within the building as the 'Infill Block' and, although similar in detailing to the bulk of the central part, it is evidently of later construction. The control centre formed one of eight regional control centres operated by the CEGB, predicting demand across the region, requesting power stations to either increase or reduce production (or to cease production altogether), and remotely operating some sub-stations.
- 4.6 By the mid 1970s, the control centre housed three separate control rooms. The East Coast District Control Room was housed in the former ground floor of the earliest phase (**GF1** to **GF5**), with Apparatus Room 1, serving the control room, housed in the basement beneath. The West Yorkshire District Control Room was housed in room **1F25** on the first floor, while the Area Control Room was located in the central part of the control centre, in the same area as the existing Control Room (**1F15**). In 1983, the Area Control Room was moved to the former West Yorkshire District Control Room, which then became the Interim Control Room. This move was only supposed to last until the existing Control Room has been created, but although this was completed by 1986, software problems meant that this did not become operational until 1993. The Control Room formed part of the National Grid's '5-Centre' plan, by which the number of area control rooms was reduced to four, together with a National Control Centre at Wokingham; as part of this scheme, the Manchester Area Control Centre merged with Leeds. In the late 1980s, the former library of Becca Hall was being used as a conference room, while the Hall also housed offices, a canteen for shift engineers, and four flats for those wishing to stay overnight. Several hundred people are thought to have worked at the control centre during the late 1980s.
- 4.7 Although the more recent parts of the control centre, dating from the mid 1970s and later, cannot, like the earliest phase, be considered as overtly protected structures, security was clearly important, as evidenced by the control of access to the first floor Control Room, for example. For a period, Becca Hall was also designated as a Standby National Control Centre should the National Control

Centre in London need to be evacuated; another control centre at St Albans had the same designation. Surviving documentation and equipment around the building demonstrates the existence of Emergency Control Procedures that could be put into place, but these are thought to refer largely to the evacuation, rather than the operation, of the complex (John Hughes, *pers comm.*). A radio mast, replacing the earlier telephone communication system, was built between 1988 and 1993.

- 4.8 The '5-Centre' plan period of the control centre's operation was relatively short-lived, as in 1997-98 all of the Area Control Centres (including Becca Hall) were decommissioned, all operations being transferred to the National Control Centre at Wokingham. The Configuration Diagram (part of the mimic board) was removed from Becca Hall's control room in December 2011 by the Museum of Science and Industry in Manchester for preservation, and is currently held in store there.

## 5 BIBLIOGRAPHY

### Primary sources

- 1894 *Particulars, plans and conditions of Sale of Becca Hall, Aberford: Chinnock, Galsworthy & Chinnock, Auctioneers* (Leeds Local History Library LF 333.33 (441))
- 1958 Ordnance Survey 1:10560 map sheet SE 43 NW Yorkshire
- 1965 Ordnance Survey 1:2500 map sheet SE4138
- 1968 Ordnance Survey 1:10560 map sheet SE 43 NW Yorkshire
- 1988 Ordnance Survey 1:2500 map sheet SE4138
- 1993 Ordnance Survey 1:2500 map sheet SE4138

### Secondary Sources

- Campbell, D 1982 *War Plan UK: The Truth about Civil Defence in Britain*
- Childe, H 1927 *Manufacture and Uses of Concrete Products and Cast Stone*
- Chitty, G 2000 *Monuments Protection Programme: Electric Power Generation Step 4 Report* (unpublished English Heritage report)
- Cochrane, R (with M Schaefer) 1990 'The CEGB Story' (available online at <http://www.aboutblyth.co.uk/html/cegbstory.html>)
- Cocroft, D & Thomas, R 2004 *Cold War: Building for Nuclear Confrontation 1946-1989*
- Curl, J 1977 *English Architecture: An Illustrated Glossary*
- Ehrlich, R 1985 *Waging Nuclear Peace: The Technology and Politics of Nuclear Weapons*
- English Heritage 2006 *Understanding Historic Buildings: A Guide to Good Recording Practice*
- Gilleghan, J 1985 'Slice of Yorkshire History: Scenes from the Country'. *Yorkshire Evening Post* (Friday Nov 1st 1985), 16
- Gilleghan, J 2002 *The Story of Aberford*
- Hughes, R 1997 'Durley Park Control Centre - The End of the Road'. *South Western Electricity Historical Society Newsletter* no. 5 April 1997 (available on-line at <http://emep.worldonline.co.uk/SWEHS/docs/news05.html#item04>)
- McCamley, N 2009 *Cold War Secret Nuclear Bunkers: The Passive Defence of the Western World during the Cold War*
- Odhams Press Ltd 1948 *How and Why it Works: How Everyday Things Work in the Home, Office, Industry and Transport*

Pulsford, H 1967 'Developments in Power-system Control'. *Proceedings of the Institution of Electrical Engineers*, vol 114 (issue 8), 1139-1148

Richardson, S 2008 'Destruction Preserved: Second World War Public Air-Raid Shelters in Hamburg'. In Rakoczy, L (ed) *The Archaeology of Destruction*, 6-28

Smith, R, Carr, B, Tabner, W & Vaughan, B 1991 'A New Centre for National Control - an Evolutionary Transition'. *Power System Monitoring and Control 1991: Third International Conference*, 204-209

Thomas, R 2010 *York Cold War Bunker: English Heritage Guidebook*

WYAAS 2012 *Specification for Historical Research Photographic Building Recording: Former CEGB Control Centre, Becca Hall, Aberford*

### **Electronic sources**

<http://www.aboutblyth.co.uk/#/Home-01-00/> - About Blyth - your local website

<http://www.btinternet.com/~fynevye/bankside/cegb2.html> - National Grid Control: a Summary of the National (Electricity) Grid Control from 1938 to 1996

[http://www.engineering-timelines.com/how/electricity/electricity\\_07.asp](http://www.engineering-timelines.com/how/electricity/electricity_07.asp) - Engineering Timelines: Exploring Electricity: a History of Public Supply in the UK

<http://riba.sirsidynix.net.uk/uhtbin/webcat> - Royal Institute of British Architects Library Catalogue

<http://www.samuely.co.uk/index.htm> - F J Samuely and Partners Ltd, Consulting Structural and Civil Engineers

<http://www.seg.co.uk/telecomm/index.htm> - The Strowger Telecomms Page

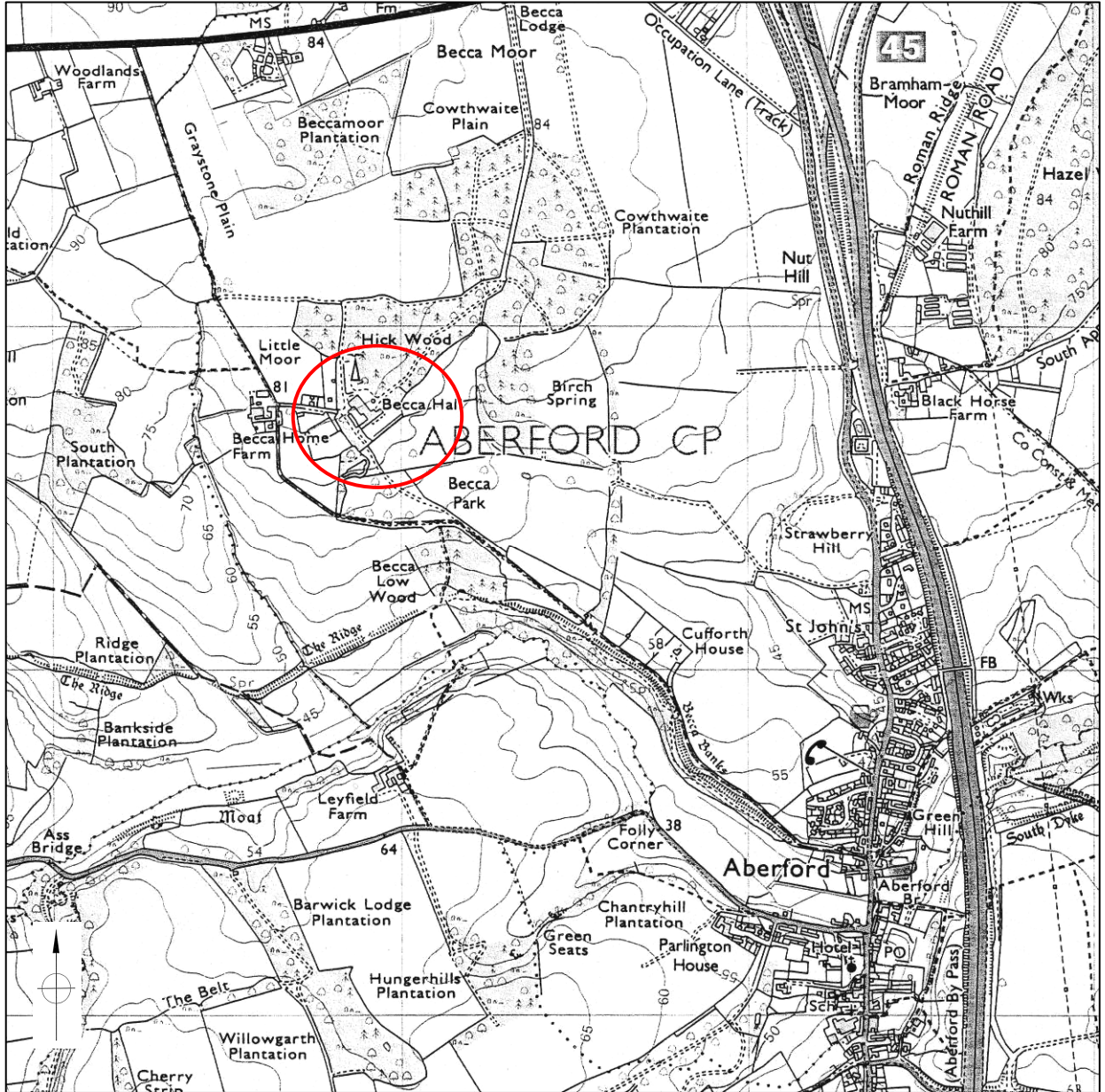
<http://www.subbrit.org.uk/> - Subterranea Britannica

<http://www.swehs.co.uk/> - South Western Electricity Historical Society website

<http://www.theiet.org.uk> - the Institution of Engineering and Technology

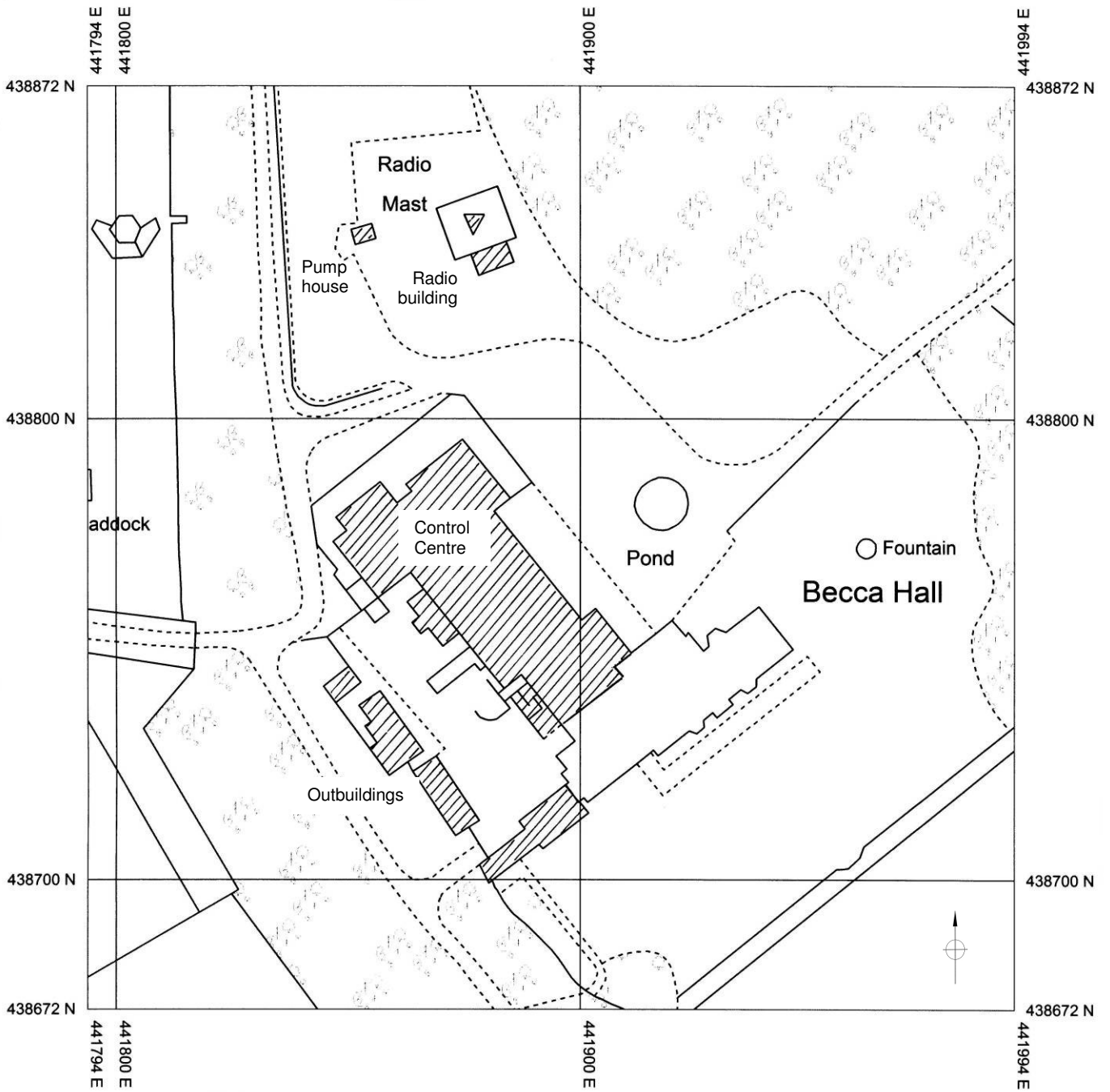
## 6 ACKNOWLEDGEMENTS

- 6.1 The building recording project at the former CEGB Control Centre at Becca Hall was commissioned by the owners, T Fawcett and Sons Ltd, through residential agents Bartle and Son Ltd. Thanks are due to Brian Bartle for his assistance in arranging access to the site and for providing survey plans, and to Nick Pearson of On Site Archaeology for facilitating the project. Thanks are also due to David Hunter of the WYAAS, for approving the fieldwork records and providing information from the West Yorkshire HER.
- 6.2 Significant debts of gratitude are due to Mr Ray Hall and Mr John D Hughes, who both formerly worked at the Control Centre. Their contributions to the project have been invaluable, particularly when trying to interpret functions of individual rooms and the operation of the centre as a whole. John Hughes also kindly provided some photographs and other material showing the centre in operation. Other thanks are due to Jan Hicks (Senior Archivist) and John Beckerson (Senior Curator) at the Museum of Science and Industry (MSIM) in Manchester, who provided details of their archives and photographs of that part of the mimic board removed from the site for preservation in their collections.
- 6.3 The on-site survey work was carried out by Shaun Richardson of EDAS, assisted by Richard Lamb. The photographs were taken by Stephen Haigh. The documentary research was carried out by Shaun Richardson, who also produced a draft report and site archive. The final report was produced by Ed Dennison, with whom the responsibility for any errors or inconsistencies remains.



Reproduced from the 1:25,000 scale map by permission of Ordnance Survey® on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2000. All rights reserved. Licence AL100013825

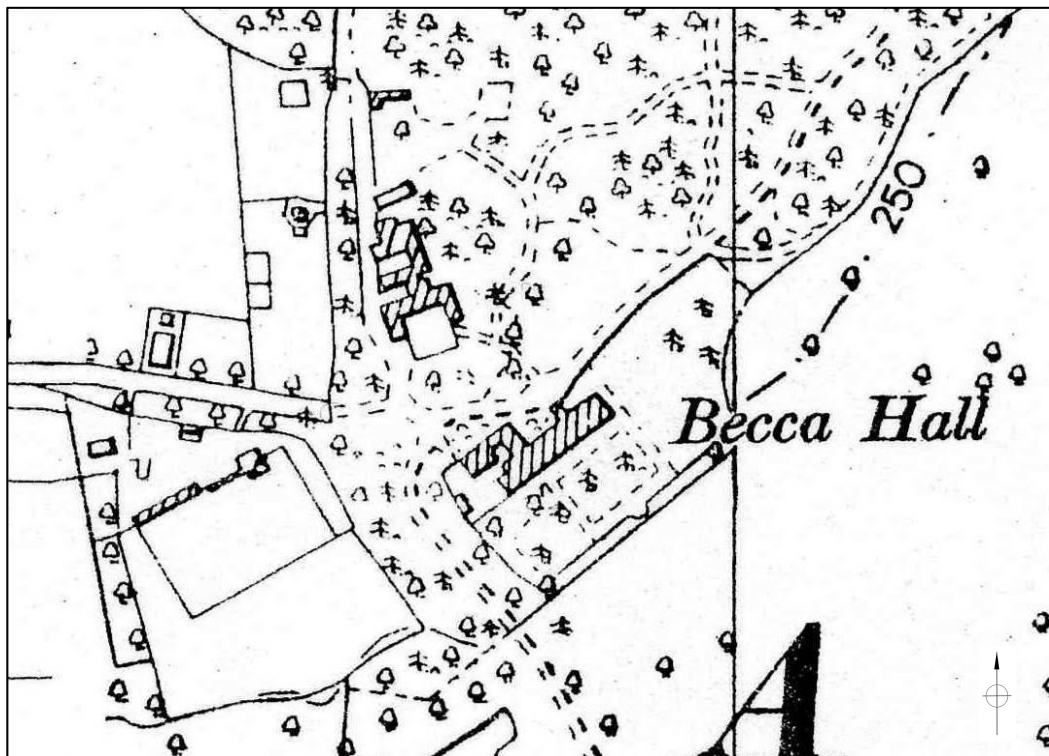
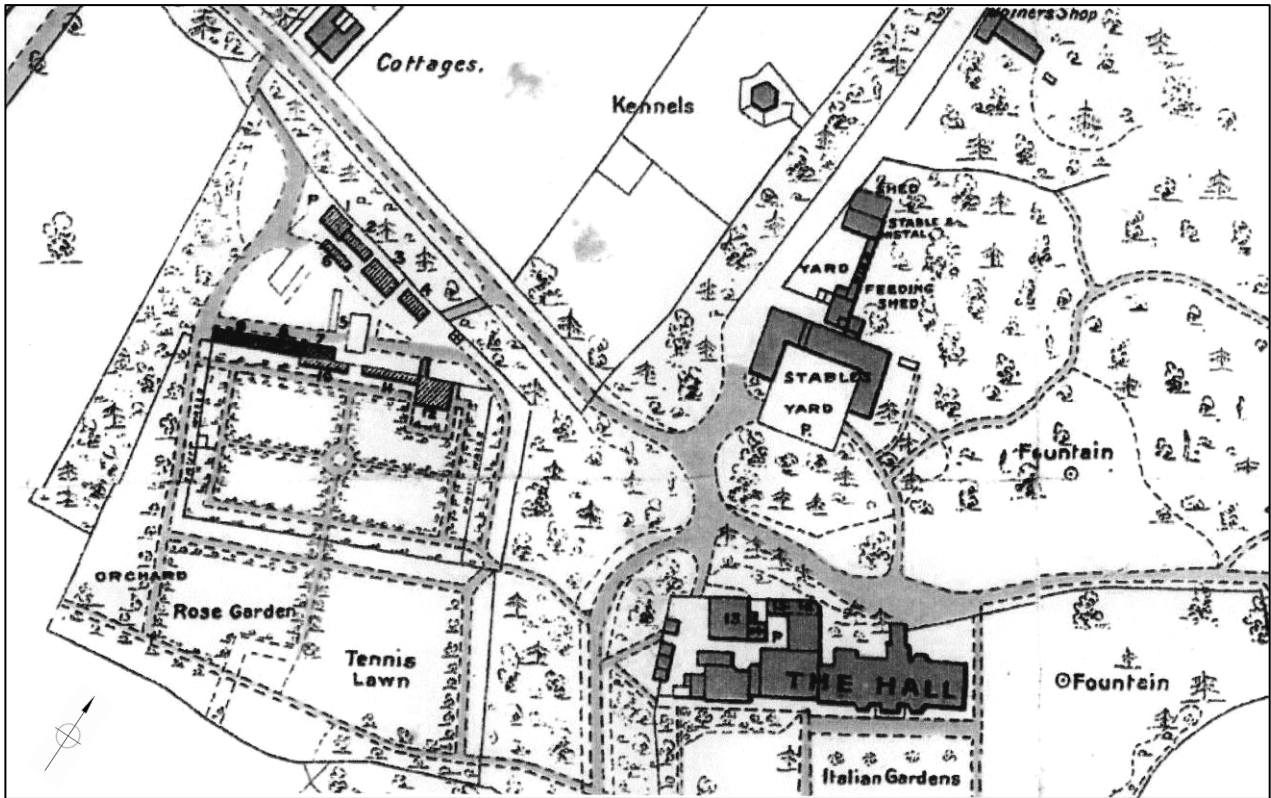
PROJECT	
CEGB CONTROL CENTRE, BECCA HALL	
TITLE	
GENERAL LOCATION	
SCALE	DATE
NTS	OCT 2012
EDAS	FIGURE
	1



Reproduced from the 1:1,250 scale map by permission of Ordnance Survey® on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright 2012. All rights reserved. Licence AL100013825

PROJECT		CEGB CONTROL CENTRE, BECCA HALL	
TITLE		RECORDED BUILDINGS	
SCALE	NTS	DATE	OCT 2012
EDAS		FIGURE	2



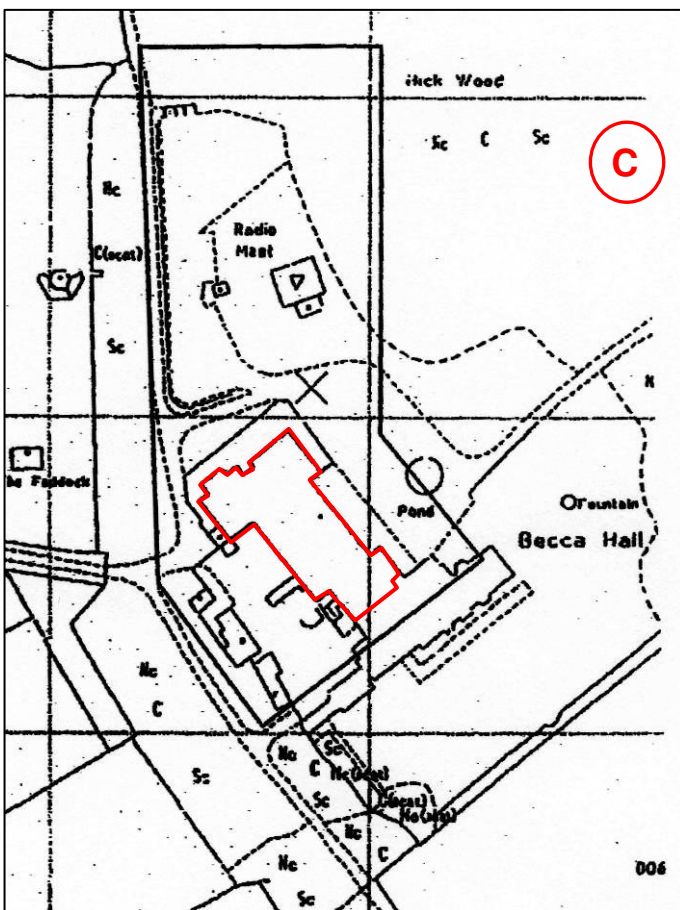
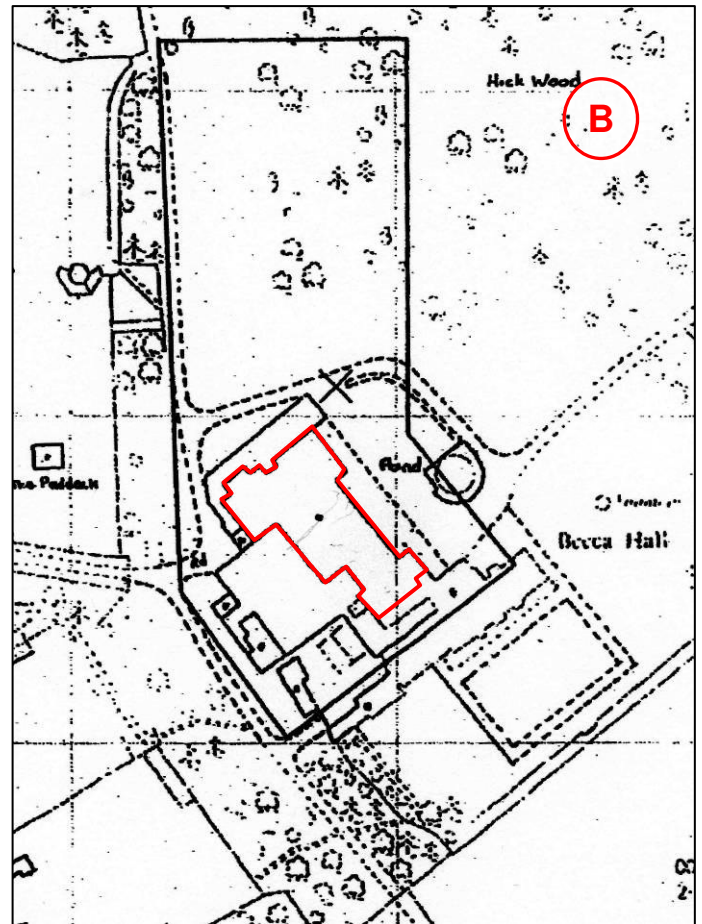
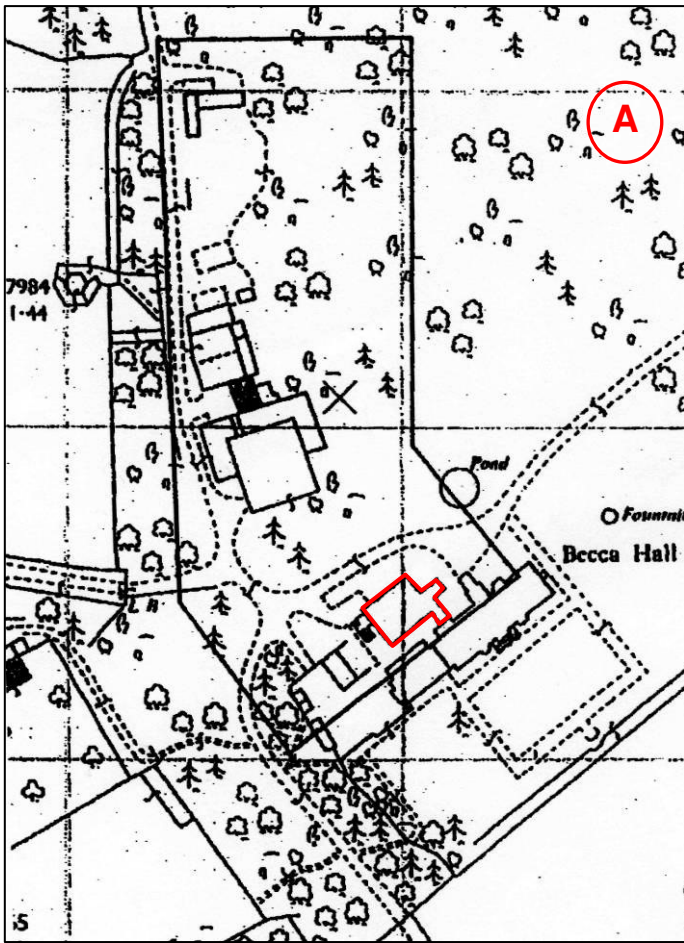


Top: 1894 Sale plan for Becca Hall (Leeds Local History Library LF 333.33 (441).

Bottom: Ordnance Survey 1958 1:10,560 map sheet SE43NW.

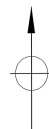
PROJECT	
CEGB CONTROL CENTRE, BECCA HALL	
TITLE	
HISTORIC MAPS - 1894 & 1958	
SCALE	DATE
NTS	OCT 2012
EDAS	FIGURE
	3





- A: Ordnance Survey 1965 1:2500 map sheet SE4138.
- B: Ordnance Survey 1988 1:2500 map sheet SE4138.
- C: Ordnance Survey 1993 1:2500 map sheet SE4138.

Control Centre outlined in red.



PROJECT CEGB CONTROL CENTRE, BECCA HALL	
TITLE ORDNANCE SURVEY MAPS 1965-93	
SCALE NTS	DATE OCT 2012
EDAS	FIGURE 4

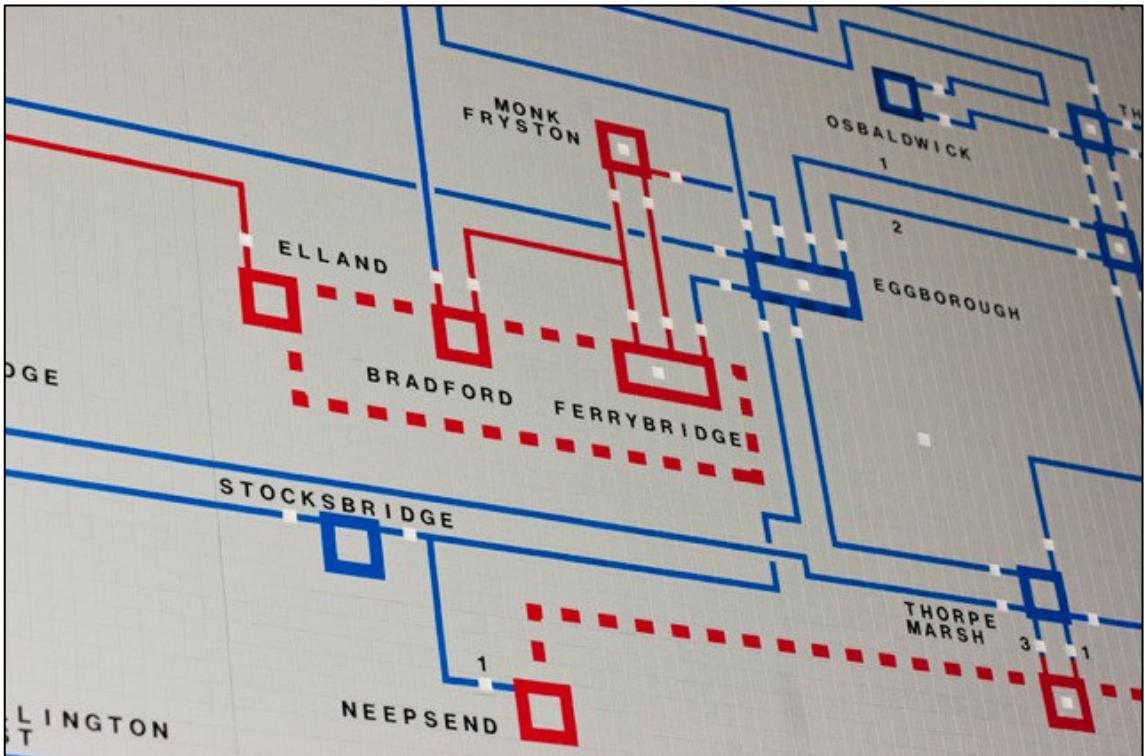
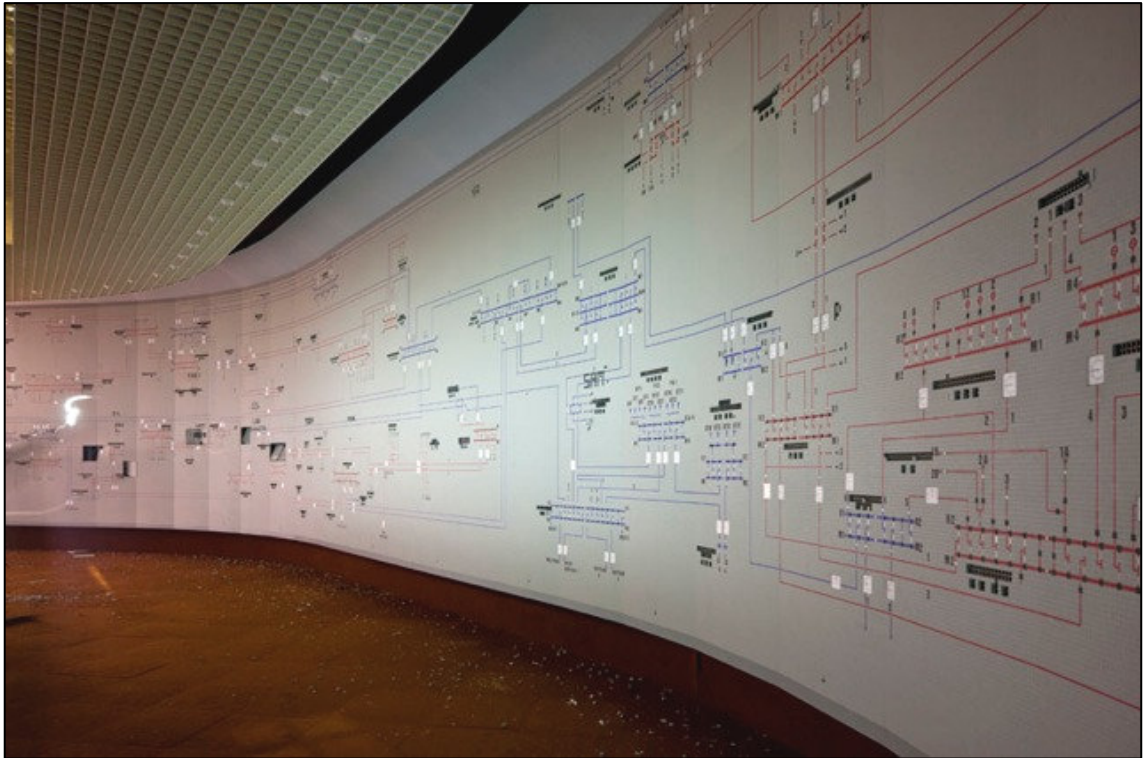




Top: Becca Hall and Control Centre, April 2008.  
 Bottom: Control room (1F15) in use, showing mimic board in operation, late 1990s.

Photos courtesy John Hughes & National Grid.

PROJECT	
CEGB CONTROL CENTRE, BECCA HALL	
TITLE	
PHOTOGRAPHS	
SCALE	DATE
NTS	OCT 2012
EDAS	FIGURE
	5

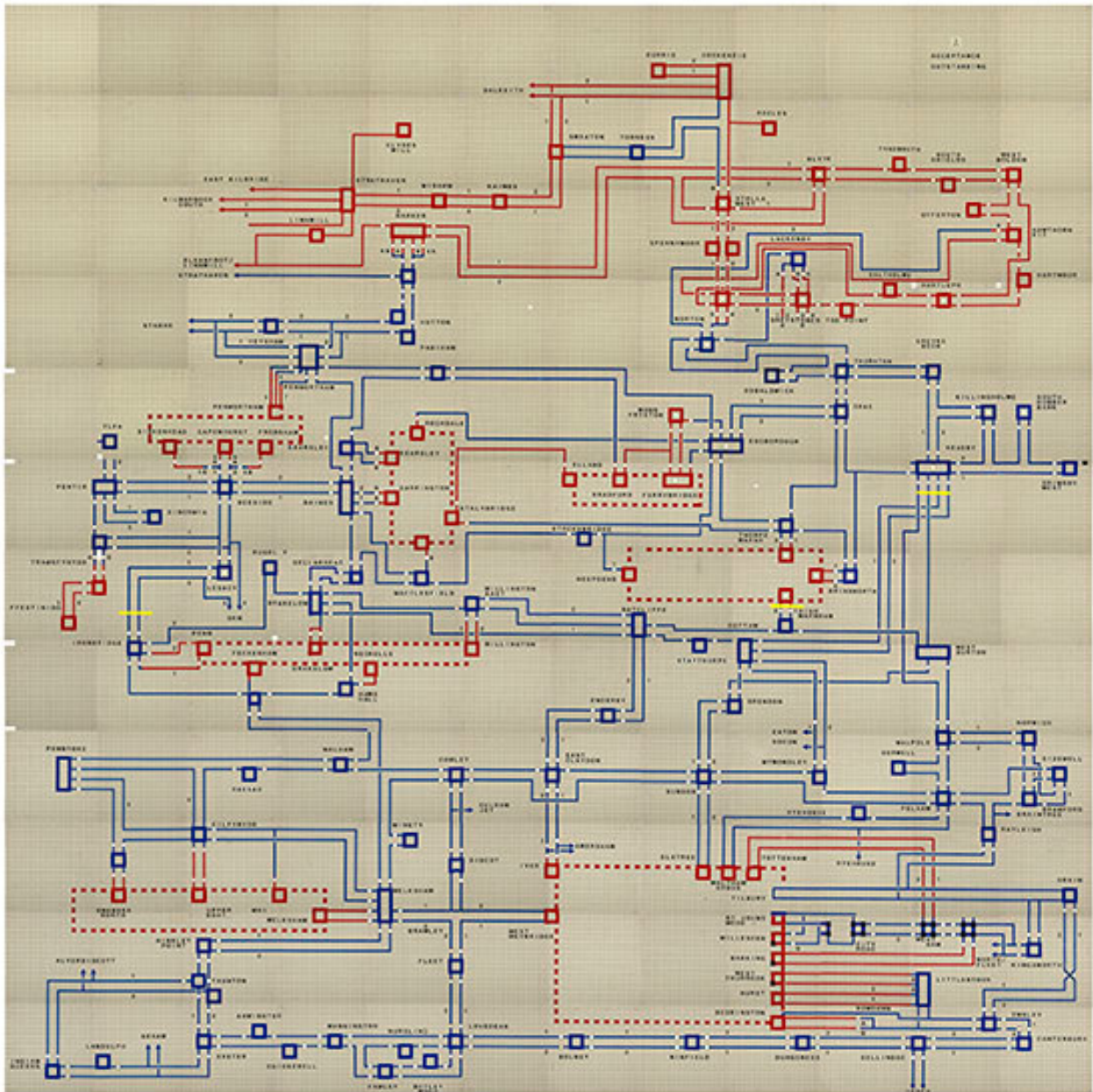


Views of Control Room mimic board when in operation.

Photos courtesy John Hughes & National Grid.

PROJECT	
CEGB CONTROL CENTRE, BECCA HALL	
TITLE	
PHOTOGRAPHS OF MIMIC BOARD	
SCALE	DATE
NTS	OCT 2012
EDAS	FIGURE
	6

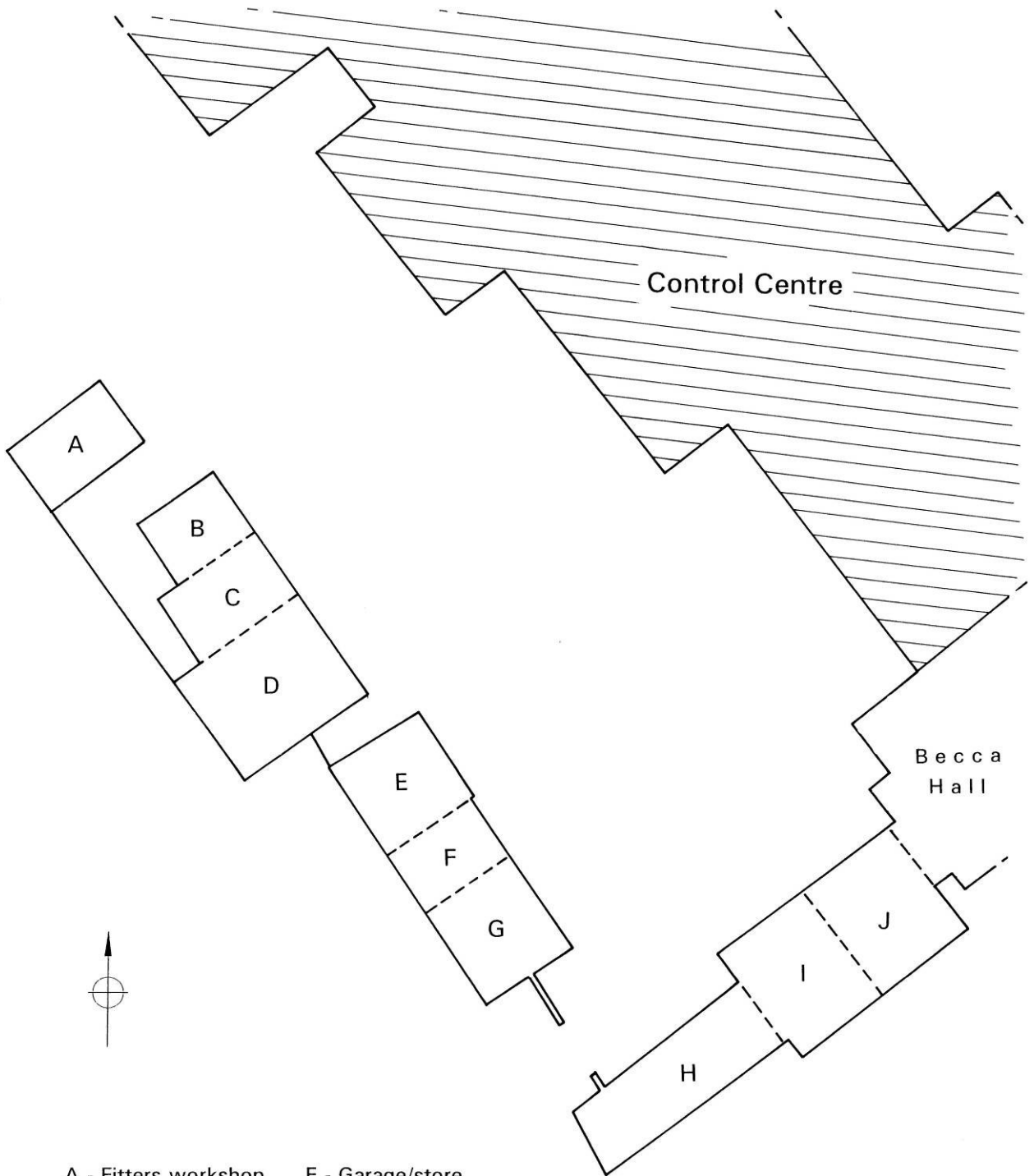




Photograph of section of mimic board removed from site in December 2011 for conservation and storage at the Museum of Science and Industry (MSIM) in Manchester.

Photo courtesy John Beckerson (Senior Curator), MSIM.

PROJECT CEGB CONTROL CENTRE, BECCA HALL	
TITLE REMOVED SECTION OF MIMIC BOARD	
SCALE NTS	DATE OCT 2012
EDAS	FIGURE 7



- A - Fitters workshop
- B - Fuel tank
- C - No 1 Diesel House
- D - No 2 Diesel House
- E - Garage
- F - Garage/store
- G - Garage/store
- H - Store
- I - Garage
- J - Kitchen and showers

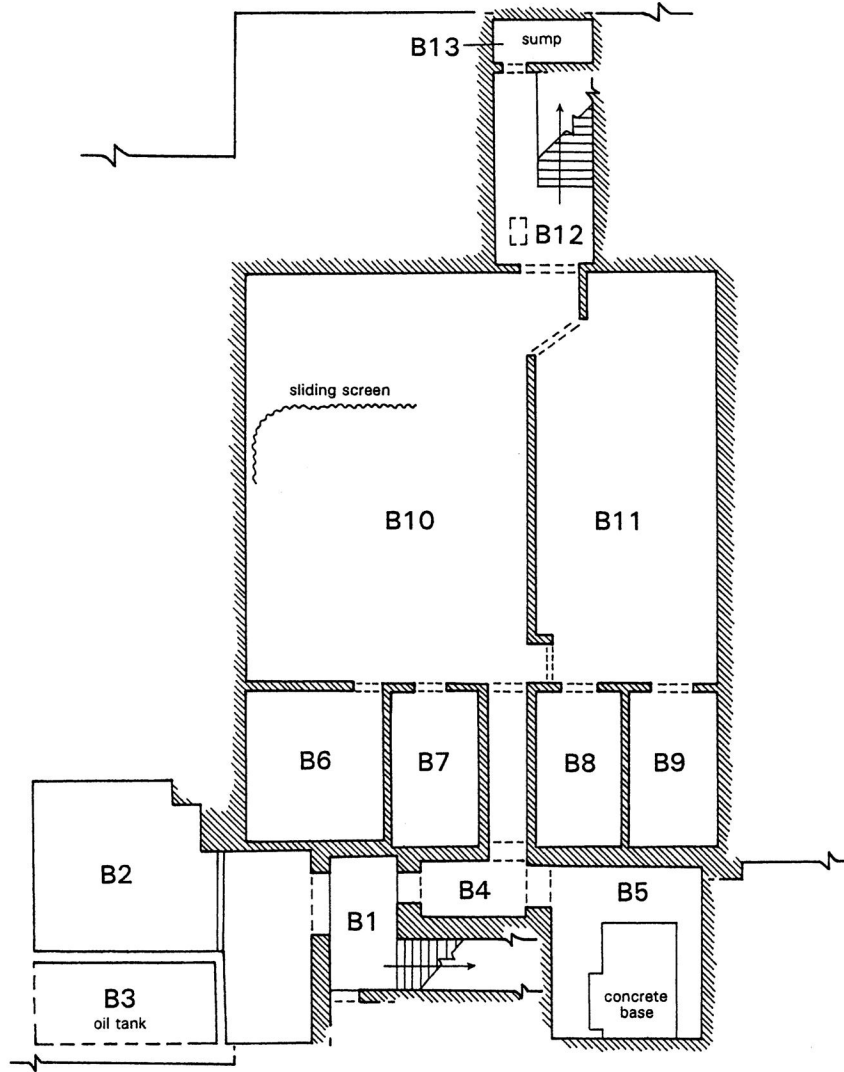
0                      approximate                      20m


PROJECT CEGB CONTROL CENTRE, BECCA HALL	
TITLE PLAN OF OUTBUILDINGS	
SCALE AS SHOWN	DATE OCT 2012
EDAS	FIGURE 8

## BASEMENT ROOMS

<i>Room identifier</i>	<i>Room name/description</i>
B1	Stairway
B2	Oil-Fired boiler house
B3	Oil Tank
B4	Corridor
B5	Generator Room
B6	Male shower
B7	Female shower
B8	Unidentified
B9	Switchboard
B10	Unidentified (former Apparatus Room 1)
B11	Unidentified (former Apparatus Room 1)
B12	Staircase
B13	Sump


PROJECT CEGB CONTROL CENTRE, BECCA HALL	
TITLE BASEMENT PLAN	
SCALE AS SHOWN	DATE OCT 2012
EDAS	FIGURE 9



GF30 ROOM IDENTIFIERS  
 FIRST PHASE OF COMPLEX



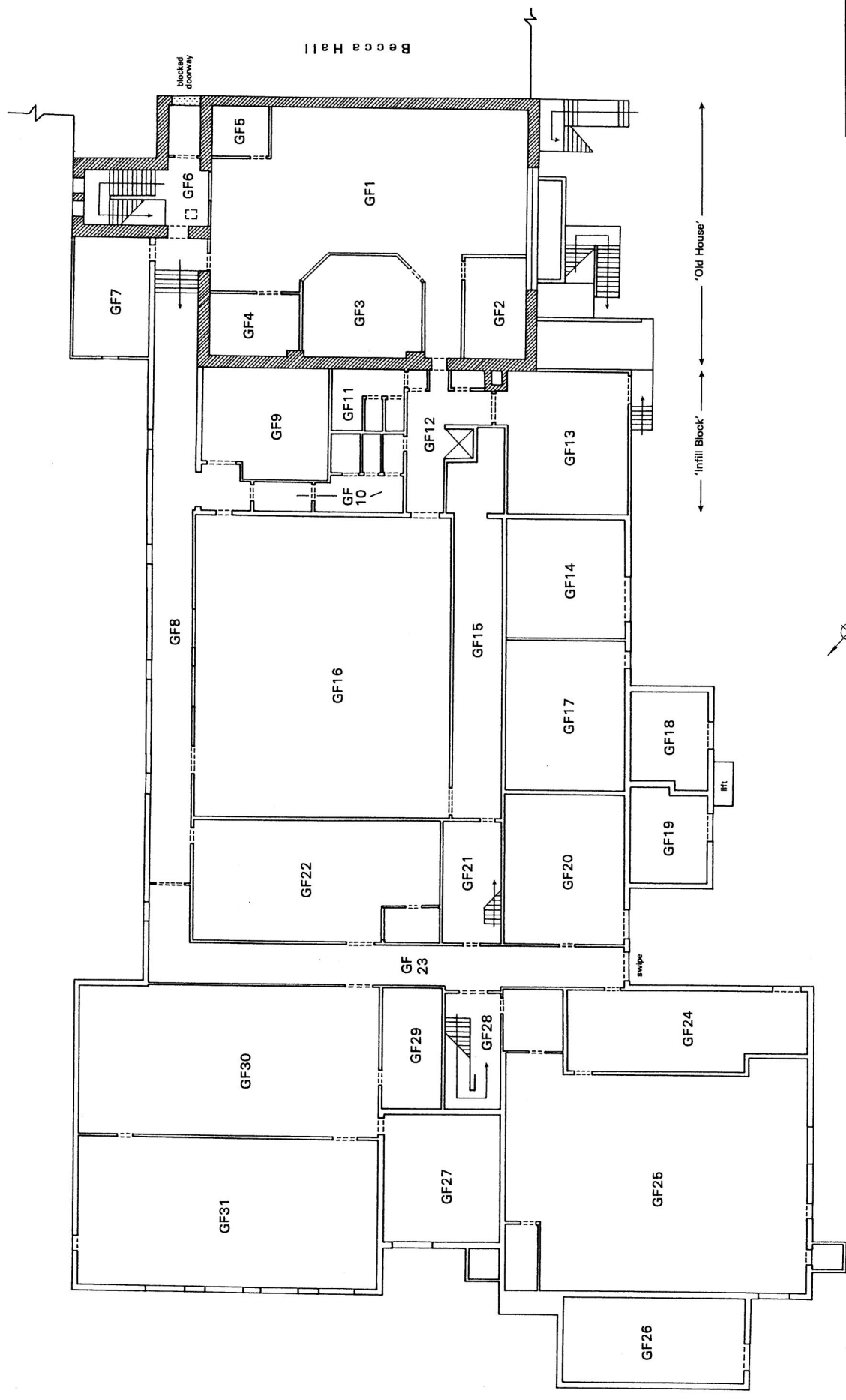
0 approximate scale 20m



## GROUND FLOOR ROOMS

<i>Room identifier</i>	<i>Room name/description</i>
GF1	} All former East Coast District Control Room
GF2	
GF3	
GF4	
GF5	
GF6	Staircase
GF7	Air Conditioning and Security Room
GF8	Corridor
GF9	Air Conditioning Plant Room
GF10	Female toilets
GF11	Male toilets
GF12	Circulation space
GF13	Apparatus Room 6, FSA Computer Room
GF14	Air Conditioning Plant Room
GF15	EMS (Energy Management System)/FSA Plant Room
GF16	Apparatus Room 4, EMS Computer Room
GF17	UPS (Uninterruptible Power Supply) Battery Room
GF18	Motor Generator Room 2
GF19	Motor Generator Room 1
GF20	Essential Switchroom 1
GF21	EBU (Emergency Back Up) Plant Room
GF22	Apparatus Room 5, EBU (Emergency Back Up) Computer Room
GF23	Corridor
GF24	Essential Switchroom 2
GF25	Business Support
GF26	Office Suite Air Conditioning Plant Room
GF27	Apparatus Room 2C?
GF28	Staircase
GF29	Halon Gas Store
GF30	Apparatus Room 2A
GF31	Apparatus Room 2B





Becca Hall

Blocked  
corridor

'Infill Block'      'Old House'

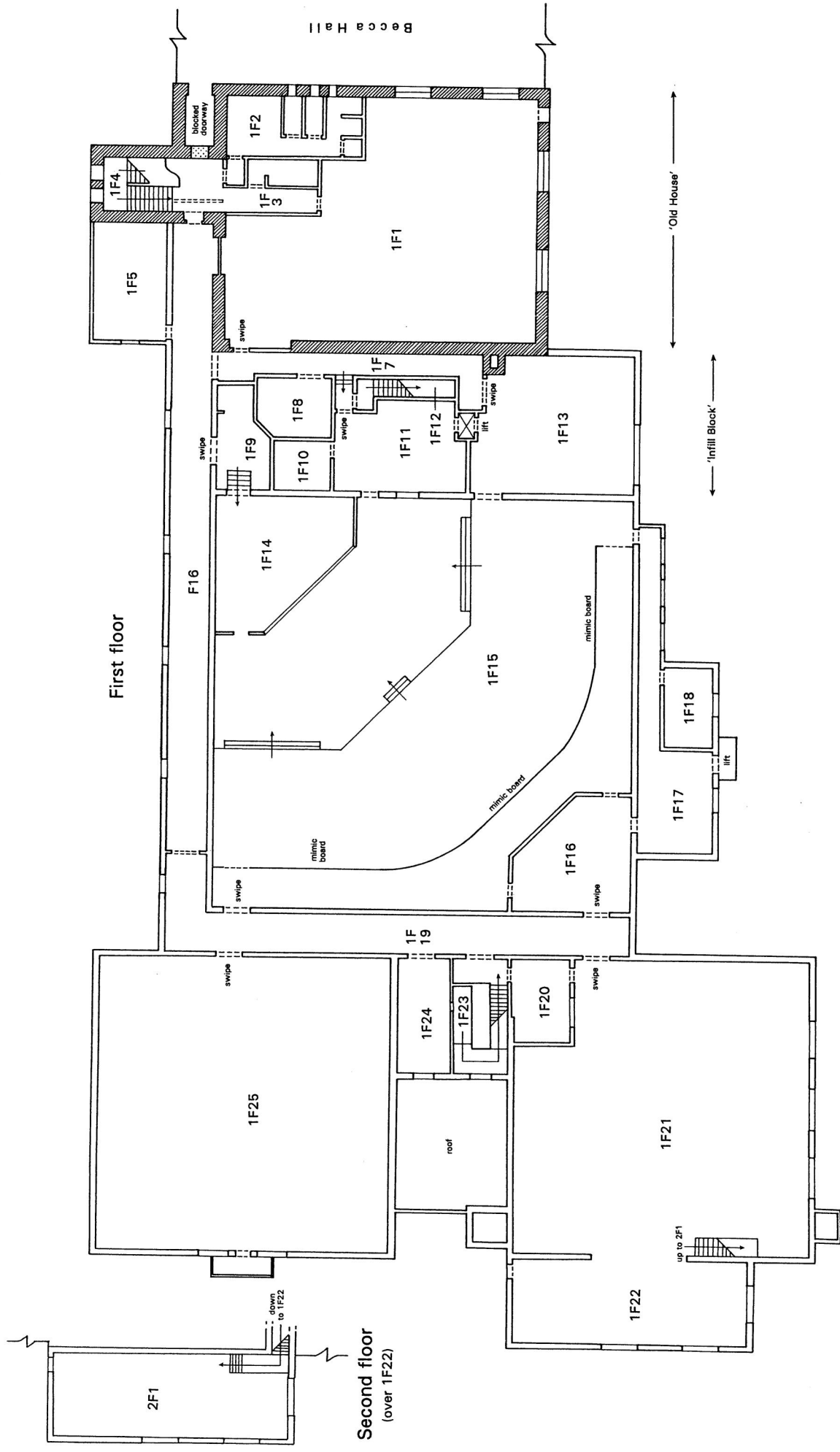
ROOM IDENTIFIERS  
FIRST PHASE OF COMPLEX



PROJECT	CEGB CONTROL CENTRE, BECCA HALL		
TITLE	GROUND FLOOR PLAN		
SCALE	AS SHOWN	DATE	OCT 2012
	EDAS	FIGURE	10

## FIRST AND SECOND FLOOR ROOMS

<i>Room identifier</i>	<i>Room name/description</i>
1F1	Unidentified
1F2	Male toilets
1F3	Female toilets
1F4	Staircase
1F5	Unidentified
1F6	Corridor
1F7	Corridor
1F8	Store
1F9	Circulation space
1F10	Unidentified
1F11	Unidentified
1F12	Stairway
1F13	Meeting Room?
1F14	Viewing Gallery
1F15	Control Room (Cable Loft Area B below)
1F16	Triangular Office
1F17	Corridor
1F18	Mess Room
1F19	Corridor
1F20	Meeting Room
1F21	Asset Management (Cable Loft Area C below)
1F22	Asset Management office
1F23	Staircase
1F24	Unidentified
1F25	Interim Control Room (formerly West Yorkshire District Control Room) (Cable Loft Area A? below)
2F1	Unidentified



PROJECT	CEGB CONTROL CENTRE, BECCA HALL
TITLE	FIRST AND SECOND FLOOR PLANS
SCALE	AS SHOWN
DATE	OCT 2012
FIGURE	11

ROOM IDENTIFIERS  
FIRST PHASE OF COMPLEX



approximate scale

**APPENDIX 1**  
**PHOTOGRAPHIC RECORD**

## PHOTOGRAPHIC REGISTER: BLACK AND WHITE PHOTOS

Film 1: Medium format black & white photographs taken 6th September 2012

Film 2: Medium format black & white photographs taken 6th September 2012

Film 3: Medium format black & white photographs taken 6th September 2012

Film 4: Medium format black & white photographs taken 6th September 2012

Film 5: Medium format black & white photographs taken 6th September 2012

Film 6: Medium format black & white photographs taken 6th September 2012

Film 7: Medium format black & white photographs taken 12th September 2012

Film 8: Medium format black & white photographs taken 12th September 2012

Film 9: Medium format black & white photographs taken 12th September 2012

\*\* = Large Print (10 x 8") only

<i>Plate</i>	<i>Subject</i>	<i>Film</i>	<i>Frame</i>	<i>Scale</i>
1	Becca Hall and Control Centre complex, looking S	7	1	2m
2	Becca Hall and Control Centre complex, looking S	7	3	2m
3	Control Centre complex, E elevation, looking SW	7	4**	2m
4	Fire hydrant pond, looking NE	9	6	-
5	Radio mast, looking N	9	4	-
6	Radio mast building, looking N	8	5	2m
7	Interior of radio building, looking W	9	10	2m
8	Pump house, looking NW	8	6	2m
9	Interior of pump house, well, looking W	9	11	2m
10	Interior of pump house, looking W	9	12	2m
11	Courtyard buildings (B to G), looking NW	8	18	2m
12	Courtyard buildings (H to J), looking SE	8	17	2m
13	Control Centre complex, S end of E elevation, looking S	7	6	2m
14	Control Centre complex, uppermost N external elevation of stair tower at S end of E elevation, looking E	9	5	-
15	Control Centre complex, S end of E elevation, looking SW	7	8	2m
16	Control Centre complex, S end of E elevation, window detail, looking S	7	9	2m
17	Control Centre complex, S end of E elevation, looking S	7	5	2m
18	Control Centre complex, central part of E elevation, looking W	7	10	2m
19	Control Centre complex, central part and N end of E elevation, looking W	7	11	2m
20	Control Centre complex, brickwork detail in central part of E elevation, looking SW	7	14	2m
21	Control Centre complex, N end of E elevation, looking W	7	12	2m
22	Control Centre complex, N end of E elevation, looking SW	7	15	2m
23	Control Centre complex, NE corner, looking S	7	16	2m
24	Control Centre complex, E end of N elevation, looking SE	7	17	2m
25	Control Centre complex, N elevation, looking S	7	18	2m
26	Control Centre complex, E end of N elevation, looking SE	8	1	2m
27	Control Centre complex, W end of N elevation, looking S	8	3	2m
28	Control Centre complex, security fence and entrance to N of N elevation, looking SE	8	4	2m
29	Control Centre complex, N end of W elevation, looking NE	8	7	2m
30	Control Centre complex, N end of W elevation, looking N	8	10	2m
31	Control Centre complex, central part and N end of W elevation, looking SE	8	9	2m
32	Control Centre complex, central part of W elevation, looking N	8	11	2m
33	Control Centre complex, central part of W elevation, looking N	8	12	2m
34	Control Centre complex, central and S parts of W elevation, looking N	8	13**	2m
35	Stairway B1, looking NW	9	3	1m
36	Stairway B1, covered openings in S wall, looking SE	9	2	1m
37	Control Centre complex, S end of W elevation, looking NE	8	15	2m
38	Control Centre complex, S end of W elevation, looking N	8	16	2m
39	Former East Coast District Control Room (GF1), detail of window in W wall, looking NW	4	13	1m
40	Boiler House (B2), looking N	6	6	2m
41	Generator Room (B5), looking S	5	18	2m
42	Former Apparatus Room 1 (B10), looking SW	6	2	2m

43	Former Apparatus Room 1 (B11), looking SW	6	4	2m
44	Former Apparatus Room 1 (B10), looking N	6	1	2m
45	Staircase B12, looking SW	5	17	2m
46	Staircase B12, looking NE	6	5	2m
47	Staircase GF6, detail of doorway to N wall, looking NW	4	9	1m
48	Staircase GF6, detail of ceiling trap, looking NW	4	7	-
49	Former East Coast District Control Room (GF1), looking N	4	15	2m
50	Former East Coast District Control Room (GF1), looking SW	4	12	2m
51	Corridor GF8, looking NW	4	10	2m
52	Air Conditioning Plant Room (GF9), looking SW	4	16	2m
53	Air Conditioning and Security Room (GF7), looking NW	4	11	2m
54	Apparatus Room 6 (GF13), looking NE	5	16	2m
55	Apparatus Room 4 (GF16), looking E	4	18	2m
56	Apparatus Room 4 (GF16), looking S	4	17	2m
57	EMS/FSA Plant Room (GF15), looking SE	5	1	2m
58	EBU Plant Room (GF21), looking NW	5	3	2m
59	Apparatus Room 5 (GF22), looking SW	5	4	2m
60	UPS Battery Room (GF17), looking SE	9	9	2m
61	Essential Switchroom 1 (GF20), looking E	5	15	2m
62	Business Support (GF25), looking SE	5	12	2m
63	Essential Switchroom 2 (GF24), looking SW	5	14	2m
64	Apparatus Room 2A (GF30), looking E	5	5	2m
65	Halon Gas Store (GF29), looking SE	5	11	2m
66	Apparatus Room 2C? (GF27), looking SE	5	10	2m
67	Apparatus Room 2B (GF31), looking E	5	6	2m
68	Apparatus Room 2B (GF31), looking NE	5	8	2m
69	Staircase 1F4, detail of balustrade, looking NW	4	4	1m
70	Staircase 1F4, detail of balustrade to landing, looking E	4	6	1m
71	Staircase 1F4, windows to E wall, looking NE	4	2	2m
72	Staircase 1F4, upper part W wall, looking SW	4	5	-
73	Room 1F1, looking S	3	17	2m
74	Corridor 1F6, blocked window at S end of W wall, looking S	3	18	1m
75	Corridor 1F6, looking SE	3	15	2m
76	Corridor 1F19, looking NE	2	16	2m
77	Meeting room? (1F13), looking W	3	16	2m
78	Room 1F11, looking SW	2	5	2m
79	Control room (1F15), doorway from corridor 1F19 at NE corner showing swipe card, looking SE	1	17	1m
80	Circulation space (1F9), showing hangers, looking SE	2	4	1m
81	Circulation space (1F9), showing fittings, looking W	2	3	1m
82	Viewing gallery (1F4), looking SW	2	1	2m
83	Control room (1F15), N end of mimic board and control desks, looking N	1	12	2m
84	Control room (1F15), control desks, looking E	1	13	2m
85	Control room (1F15), control desks, looking S	1	15	2m
86	Control room (1F15), control panels to NE corner, looking NE	1	16	1m
87	Control room (1F15), alarm to NE corner, looking NE	1	18	1m
88	Control room (1F15), general view of mimic board, looking NE	1	1**	2m
89	Control room (1F15), general view of mimic board, looking SW	1	11	2m
90	Control room (1F15), S end of mimic board, looking SW	1	4	2m
91	Control room (1F15), S end of mimic board, looking W	1	5	2m
92	Control room (1F15), central area of mimic board, looking W	1	6	2m
93	Control room (1F15), central area of mimic board, looking NW	1	7	2m
94	Control room (1F15), E end of mimic board, looking NW	1	9	2m
95	Control room (1F15), E end of mimic board, showing removed section, looking NW	1	10	2m
96	Control room (1F15), detail of S end of mimic board, looking SW	2	7	1m
97	Control room (1F15), space to rear of mimic board, looking NW	2	6	2m
98	Triangular office (1F16), looking NE	2	10	1m
99	Control room (1F15), control panels on W side, looking S	2	9	1m
100	Control room (1F15), control panels on N side, looking NE	2	11	1m
101	Corridor 1F17 and Mess Room (1F18), looking SE	3	13	2m
102	Staircase 1F23, looking SW	2	18	2m
103	Room 1F24, looking NW	3	1	2m
104	Asset Management suite (1F21), looking N	2	12	2m

105	Asset management suite (1F21), looking E	2	13	2m
106	Cable loft area C below Asset Management (1F21), looking N	9	8	-
107	Corridor 1F19, fire alarm panels, looking NW	2	17	2m
108	Interim Control Room (1F25), doorway from corridor 1F19, looking W	3	3	2m
109	Interim Control Room (1F25), curve of former structure to W side, looking SW	3	10	2m
110	Interim Control Room (1F25), looking W	3	6	2m
111	Interim Control Room (1F25), looking S	3	7	2m
112	Interim Control Room (1F25), concrete frame and girders to S wall, looking SE	3	12	-
113	Interim Control Room (1F25), looking N	3	5	2m
114	Interim Control Room (1F25), concrete frame and girders to N wall, looking N	3	11	-
115	Interim Control Room (1F25), looking E	3	4	2m
116	Interim Control Room (1F25), control panels to SW corner, looking SW	3	9	2m
117	Room 2F1, looking NE	2	15	2m



Plate 1: Becca Hall and Control Centre complex, looking S (photo 7/1).



Plate 2: Becca Hall and Control Centre complex, looking S (photo 7/3).





Plate 3: Control Centre complex, E elevation, looking SW (photo 7/4).



Plate 4: Fire hydrant pond, looking NE (photo 9/6).



Plate 5: Radio mast, looking N (photo 9/4) (top to left).



Plate 6: Radio mast building, looking N (photo 8/5).



Plate 7: Interior of radio building, looking W (photo 9/10).



Plate 8: Pump house, looking NW (photo 8/6).





Plate 9: Interior of pump house, well, looking W (photo 9/11).



Plate 10: Interior of pump house, looking W (photo 9/12).



Plate 11: Courtyard buildings (B to G), looking NW (photo 8/18).



Plate 12: Courtyard buildings (H to J), looking SE (photo 8/17).



Plate 13: Control Centre complex, S end of E elevation, looking S (photo 7/6) (top to left).



Plate 14: Control Centre complex, uppermost N external elevation of stair tower at S end of E elevation, looking E (photo 9/5).



Plate 15: Control Centre complex, S end of E elevation, looking SW (photo 7/8) (top to left).



Plate 16: Control Centre complex, S end of E elevation, window detail, looking S (photo 7/9).





Plate 17: Control Centre complex, S end of E elevation, looking S (photo 7/5).



Plate 18: Control Centre complex, central part of E elevation, looking W (photo 7/10).





Plate 19: Control Centre complex, central part and N end of E elevation, looking W (photo 7/11).

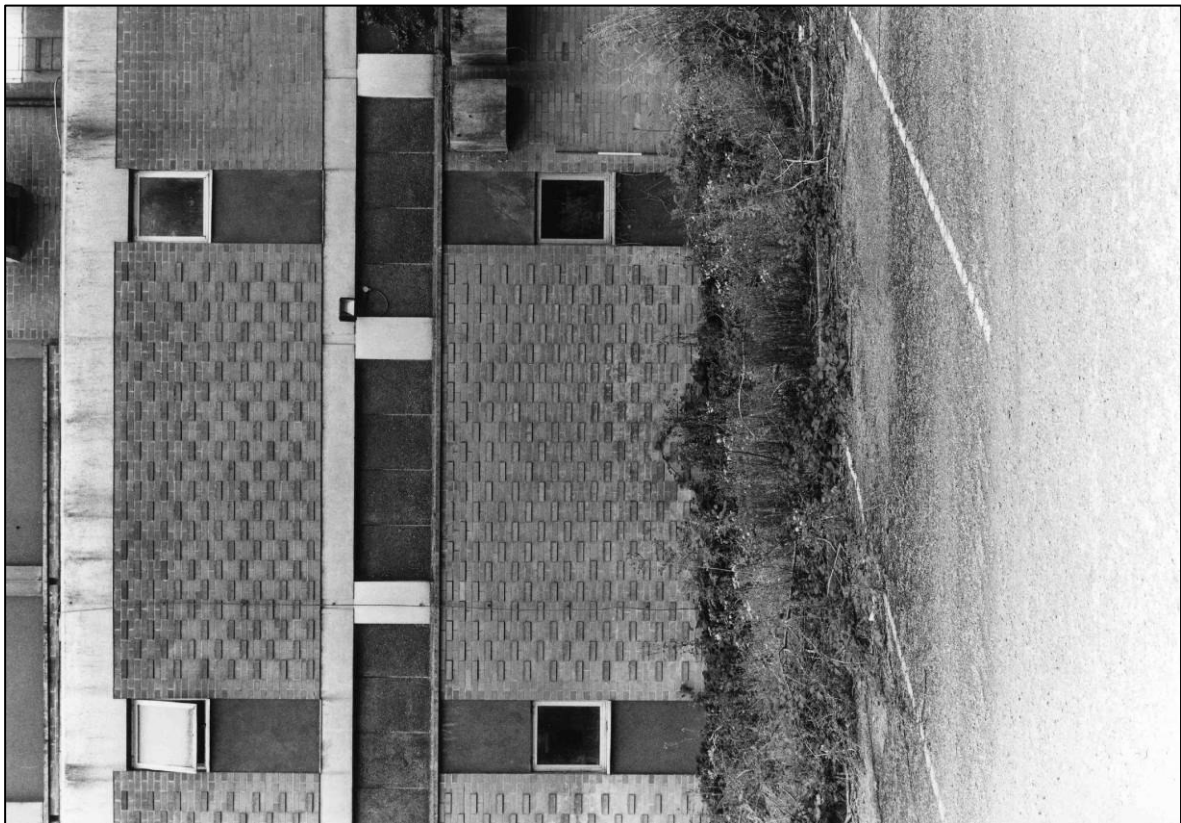


Plate 20: Control Centre complex, brickwork detail in central part of E elevation, looking SW (photo 7/14) (top to left).



Plate 21: Control Centre complex, N end of E elevation, looking W (photo 7/12).



Plate 22: Control Centre complex, N end of E elevation, looking SW (photo 7/15).



Plate 23: Control Centre complex, NE corner, looking S (photo 7/16).



Plate 24: Control Centre complex, E end of N elevation, looking SE (photo 7/17).



Plate 25: Control Centre complex, N elevation, looking S (photo 7/18).



Plate 26: Control Centre complex, E end of N elevation, looking SE (photo 8/1).





Plate 27: Control Centre complex, W end of N elevation, looking S (photo 8/3).

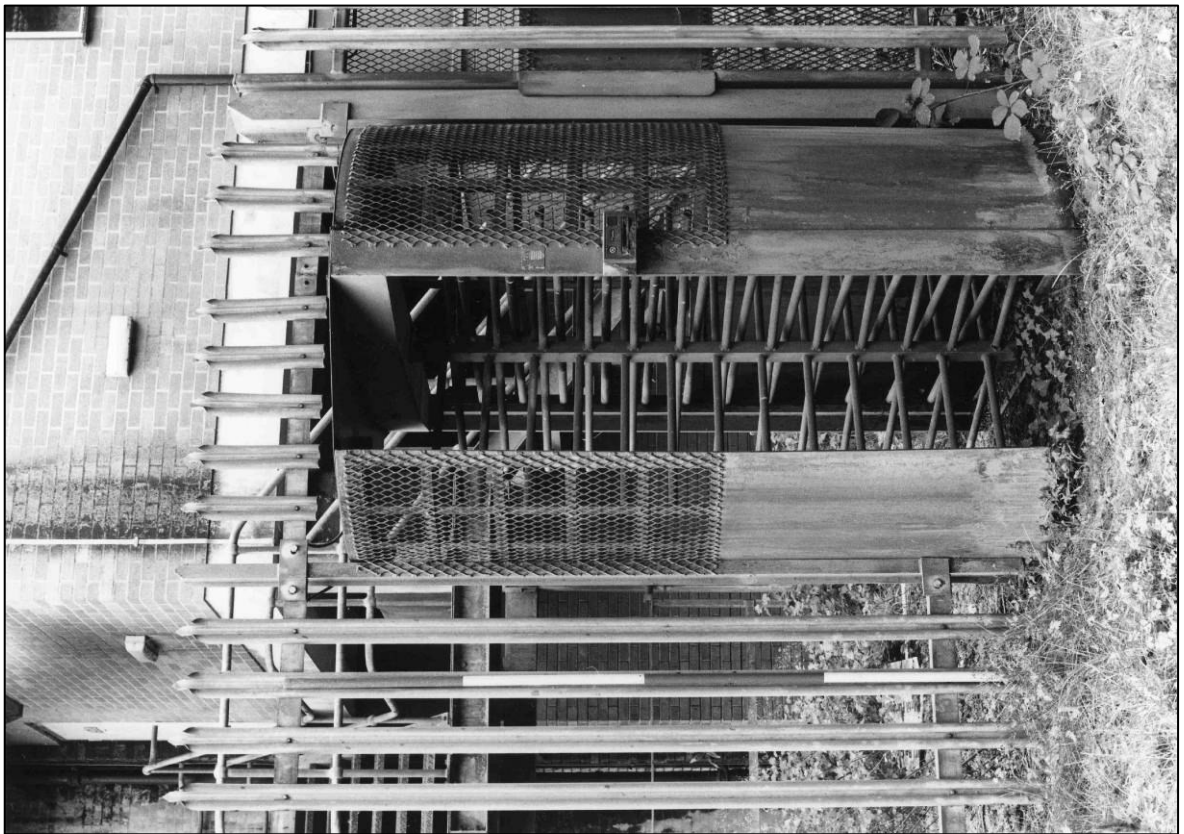


Plate 28: Control Centre complex, security fence and entrance to N of N elevation, looking SE (photo 8/4) (top to left).



Plate 29: Control Centre complex, N end of W elevation, looking NE (photo 8/7).



Plate 30: Control Centre complex, N end of W elevation, looking N (photo 8/10).



Plate 31: Control Centre complex, central part and N end of W elevation, looking SE (photo 8/9).



Plate 32: Control Centre complex, central part of W elevation, looking N (photo 8/11).



Plate 33: Control Centre complex, central part of W elevation, looking N (photo 8/12).



Plate 34: Control Centre complex, central and S parts of W elevation, looking N (photo 8/13).





Plate 35: Stairway B1, looking NW (photo 9/3).



Plate 36: Stairway B1, covered openings in S wall, looking SE (photo 9/2).



Plate 37: Control Centre complex, S end of W elevation, looking NE (photo 8/15).



Plate 38: Control Centre complex, S end of W elevation, looking N (photo 8/16) (top to left).



Plate 39: Former East Coast District Control Room (GF1), detail of window in W wall, looking NW (photo 4/13) (top to left).



Plate 40: Boiler House (B2), looking N (photo 6/6).





Plate 41: Generator Room (B5), looking S (photo 5/18) (top to left).



Plate 42: Former Apparatus Room 1 (B10), looking SW (photo 6/2).



Plate 43: Former Apparatus Room 1 (B11), looking SW (photo 6/4).



Plate 44: Former Apparatus Room 1 (B10), looking N (photo 6/1).



Plate 45: Staircase B12, looking SW (photo 5/17) (top to left).



Plate 46: Staircase B12, looking NE (photo 6/5) (top to left).

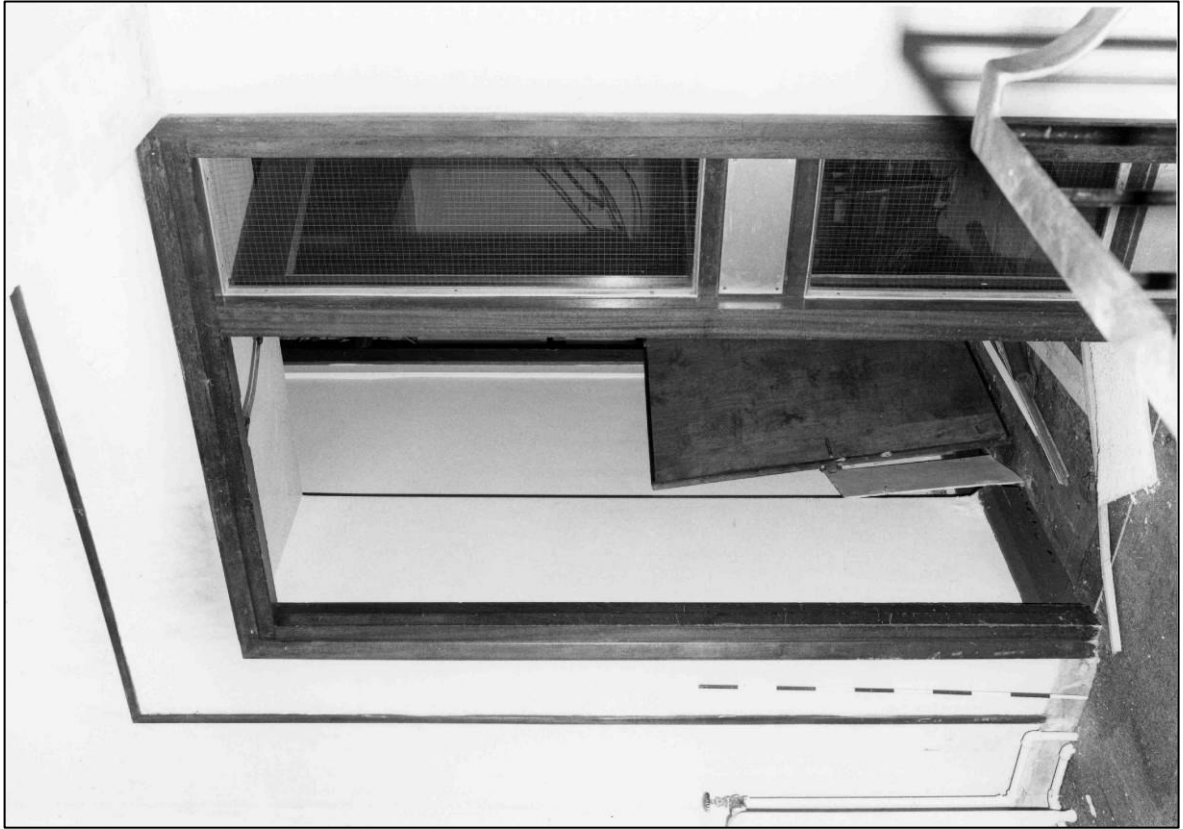


Plate 47: Staircase GF6, detail of doorway to N wall, looking NW (photo 4/9) (top to left).



Plate 48: Staircase GF6, detail of ceiling trap, looking NW (photo 4/7).





Plate 49: Former East Coast District Control Room (GF1), looking N (photo 4/15).



Plate 50: Former East Coast District Control Room (GF1), looking SW (photo 4/12).





Plate 51: Corridor GF8, looking NW (photo 4/10).



Plate 52: Air Conditioning Plant Room (GF9), looking SW (photo 4/16) (top to left).



Plate 53: Air Conditioning and Security Room (GF7), looking NW (photo 4/11).



Plate 54: Apparatus Room 6 (GF13), looking NE (photo 5/16).



Plate 55: Apparatus Room 4 (GF16), looking E (photo 4/18).



Plate 56: Apparatus Room 4 (GF16), looking S (photo 4/17).



Plate 57: EMS/FSA Plant Room (GF15), looking SE (photo 5/1) (top to left).



Plate 58: EBU Plant Room (GF21), looking NW (photo 5/3) (top to left).





Plate 59: Apparatus Room 5 (GF22), looking SW (photo 5/4).



Plate 60: UPS Battery Room (GF17), looking SE (photo 9/9).

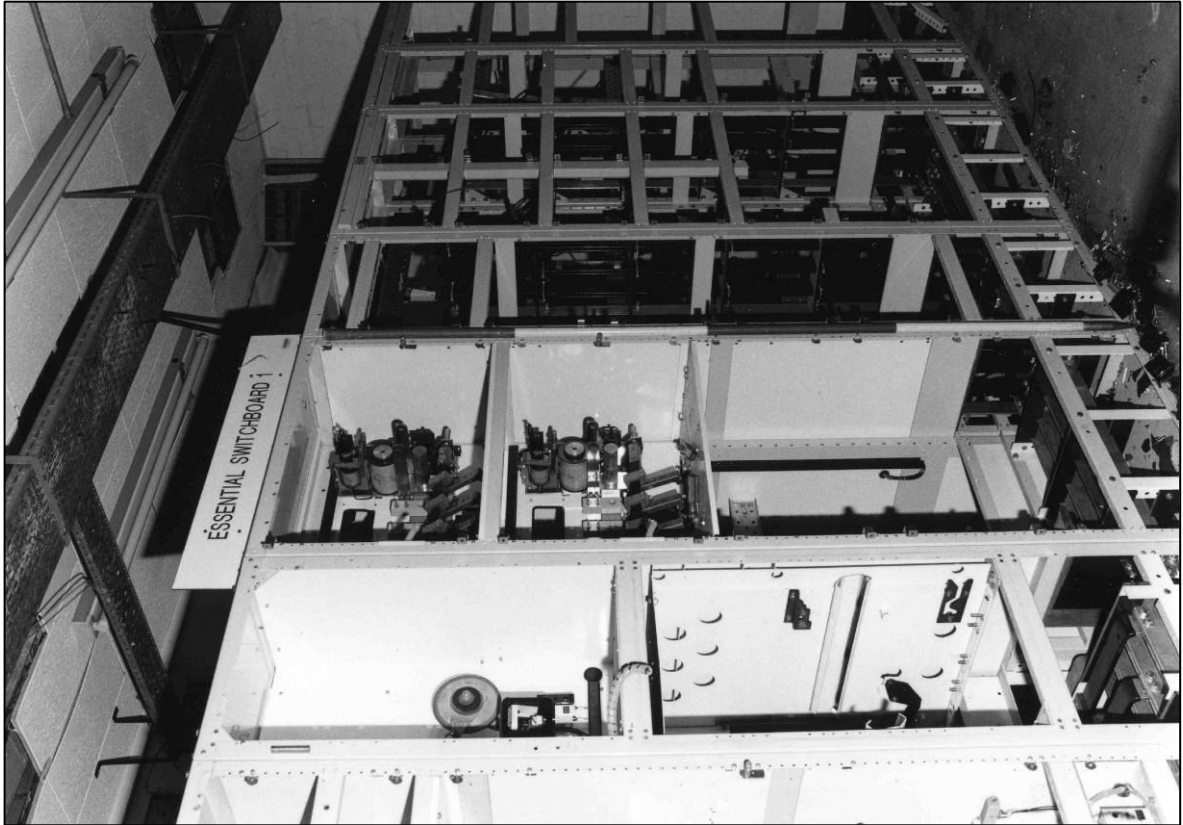


Plate 61: Essential Switchroom 1 (GF20), looking E (photo 5/15) (top to left).



Plate 62: Business Support (GF25), looking SE (photo 5/12).



Plate 63: Essential Switchroom 2 (GF24), looking SW (photo 5/14) (top to left).



Plate 64: Apparatus Room 2A (GF30), looking E (photo 5/5).





Plate 65: Halon Gas Store (GF29), looking SE (photo 5/11).



Plate 66: Apparatus Room 2C? (GF27), looking SE (photo 5/10).



Plate 67: Apparatus Room 2B (GF31), looking E (photo 5/6).



Plate 68: Apparatus Room 2B (GF31), looking NE (photo 5/8).

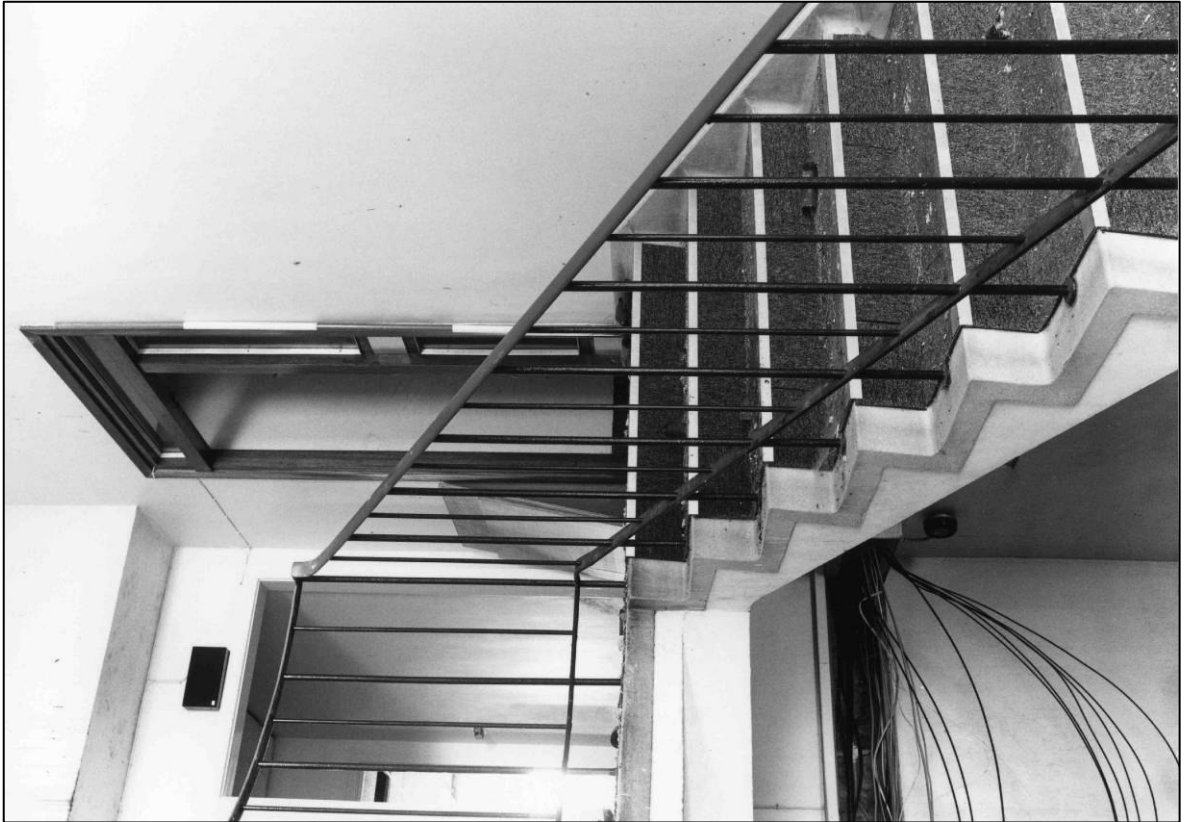


Plate 69: Staircase 1F4, detail of balustrade, looking NW (photo 4/4) (top to left).



Plate 70: Staircase 1F4, detail of balustrade to landing, looking E (photo 4/6) (top to left).



Plate 71: Staircase 1F4, windows to E wall, looking NE (photo 4/2) (top to left).

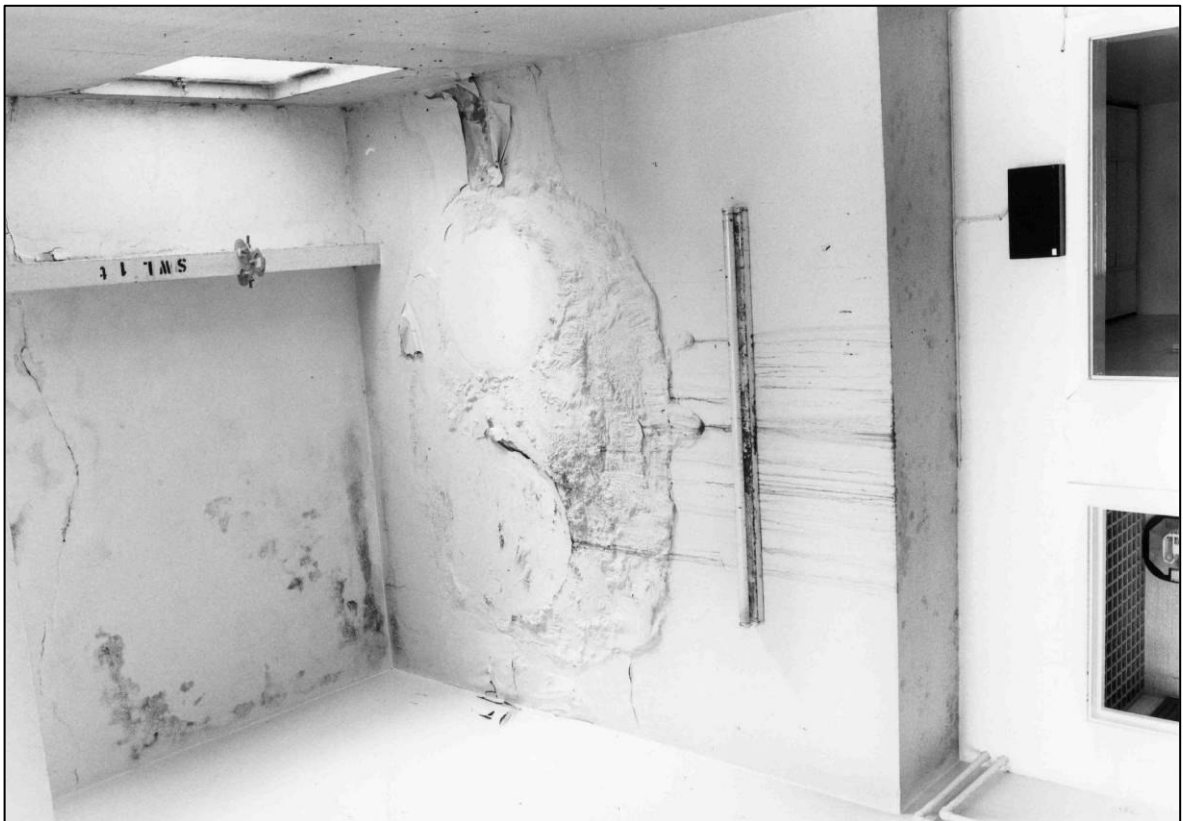


Plate 72: Staircase 1F4, upper part W wall, looking SW (photo 4/5) (top to left).





Plate 73: Room 1F1, looking S (photo 3/17).



Plate 74: Corridor 1F6, blocked window at S end of W wall, looking S (photo 3/18).



Plate 75: Corridor 1F6, looking SE (photo 3/15).



Plate 76: Corridor 1F19, looking NE (photo 2/16).



Plate 77: Meeting room? (1F13), looking W (photo 3/16).



Plate 78: Room 1F11, looking SW (photo 2/5).





Plate 79: Control room (1F15), doorway from corridor 1F19 at NE corner showing swipe card, looking SE (photo 1/17).

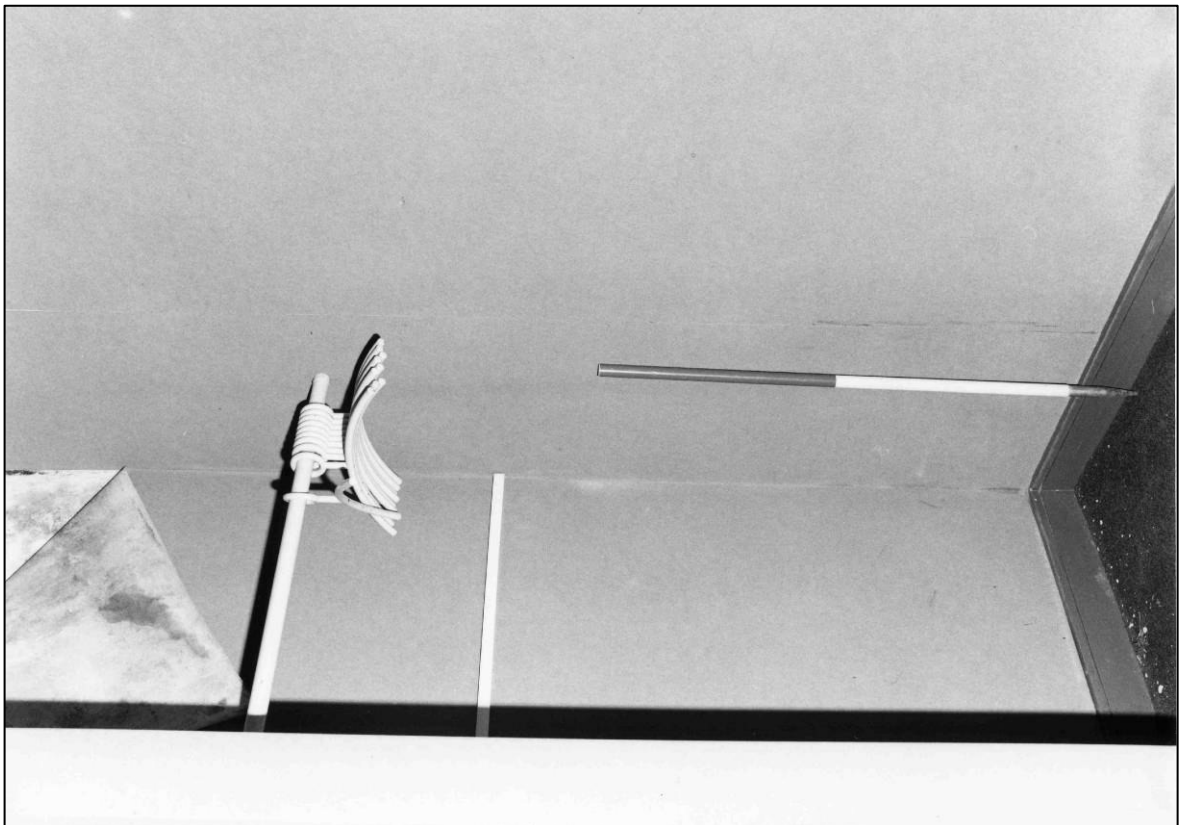


Plate 80: Circulation space (1F9), showing hangers, looking SE (photo 2/4) (top to left).



Plate 81: Circulation space (1F9), showing fittings, looking W (photo 2/3) (top to left).



Plate 82: Viewing gallery (1F4), looking SW (photo 2/1).



Plate 83: Control room (1F15), N end of mimic board and control desks, looking N (photo 1/12).



Plate 84: Control room (1F15), control desks, looking E (photo 1/13).



Plate 85: Control room (1F15), control desks, looking S (photo 1/15).



Plate 86: Control room (1F15), control panels to NE corner, looking NE (photo 1/16).

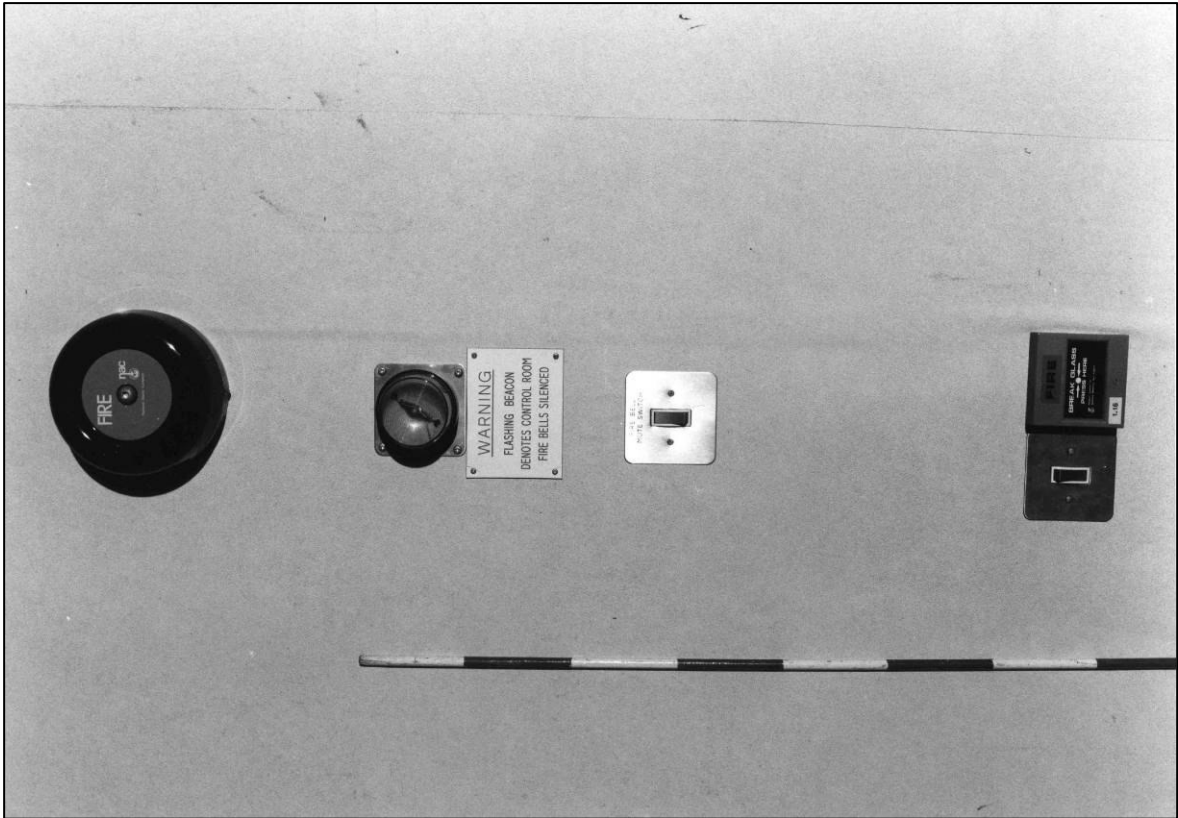


Plate 87: Control room (1F15), alarm to NE corner, looking NE (photo 1/18) (top to left).



Plate 88: Control room (1F15), general view of mimic board, looking NE (photo 1/1).



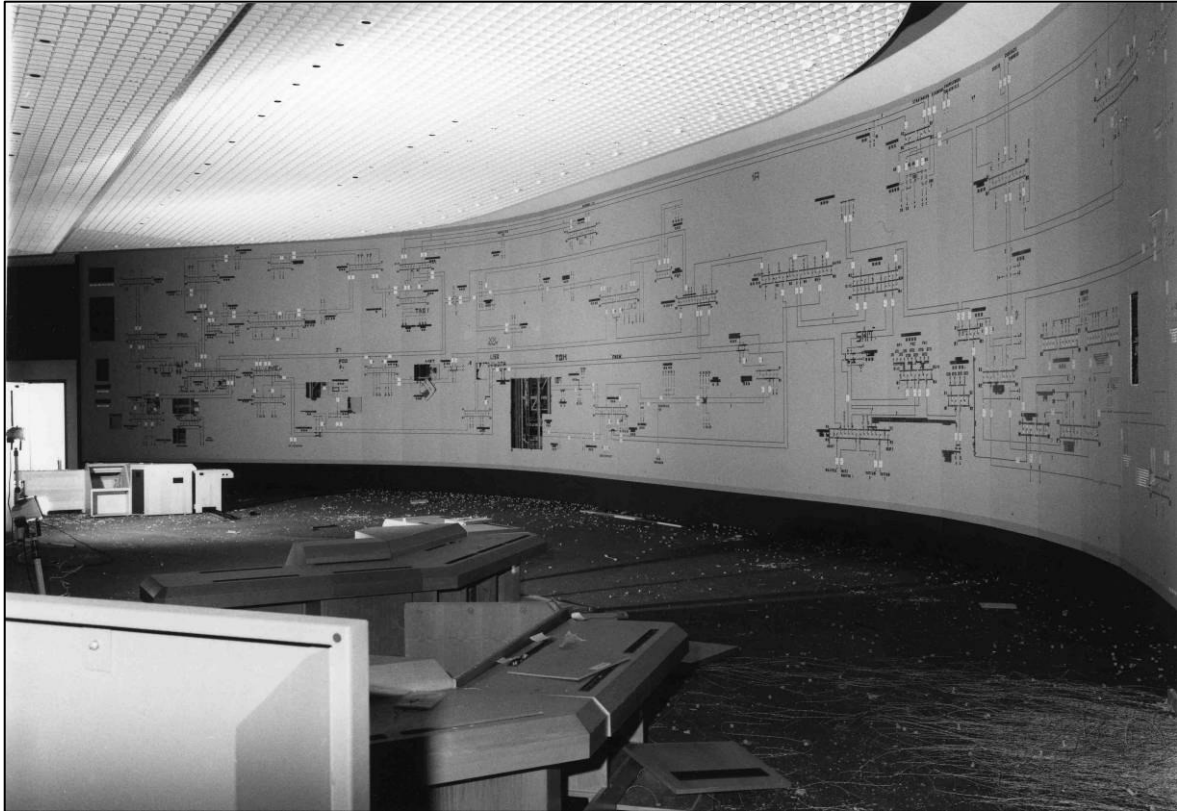


Plate 89: Control room (1F15), general view of mimic board, looking SW (photo 1/11).

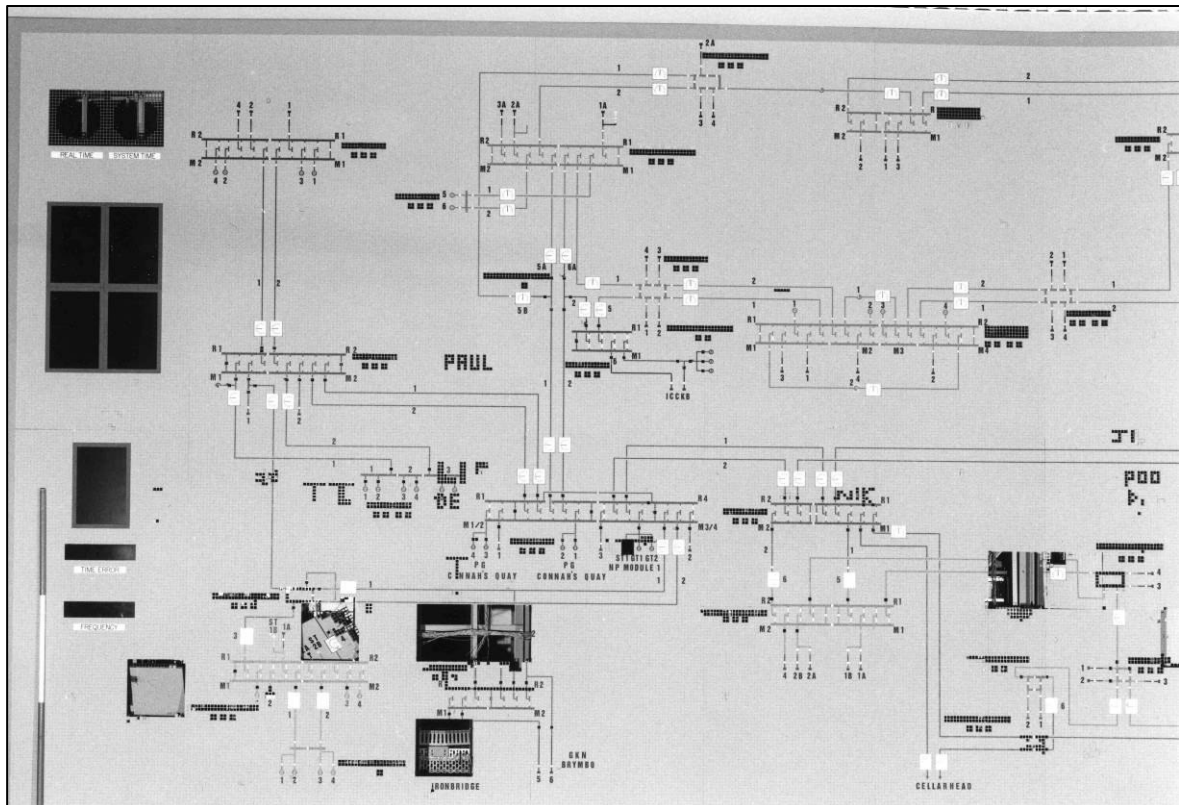


Plate 90: Control room (1F15), S end of mimic board, looking SW (photo 1/4).



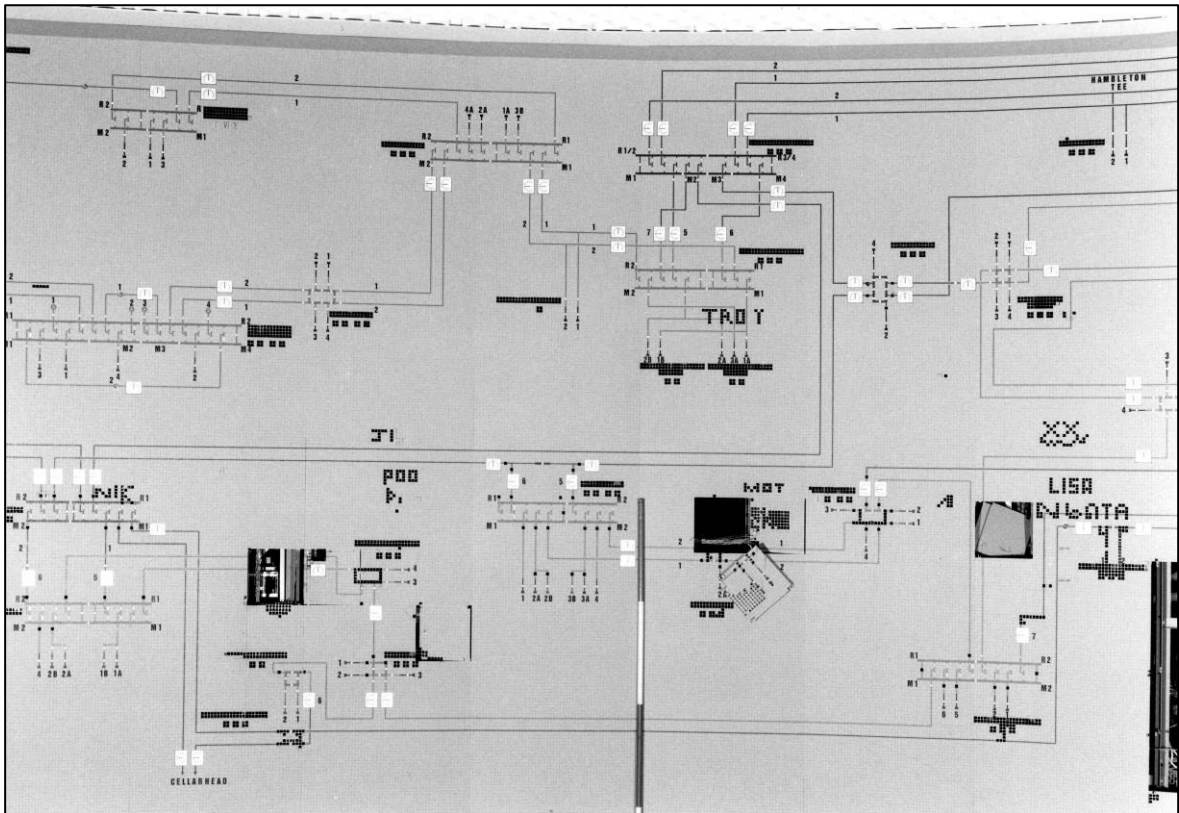


Plate 91: Control room (1F15), S end of mimic board, looking W (photo 1/5).

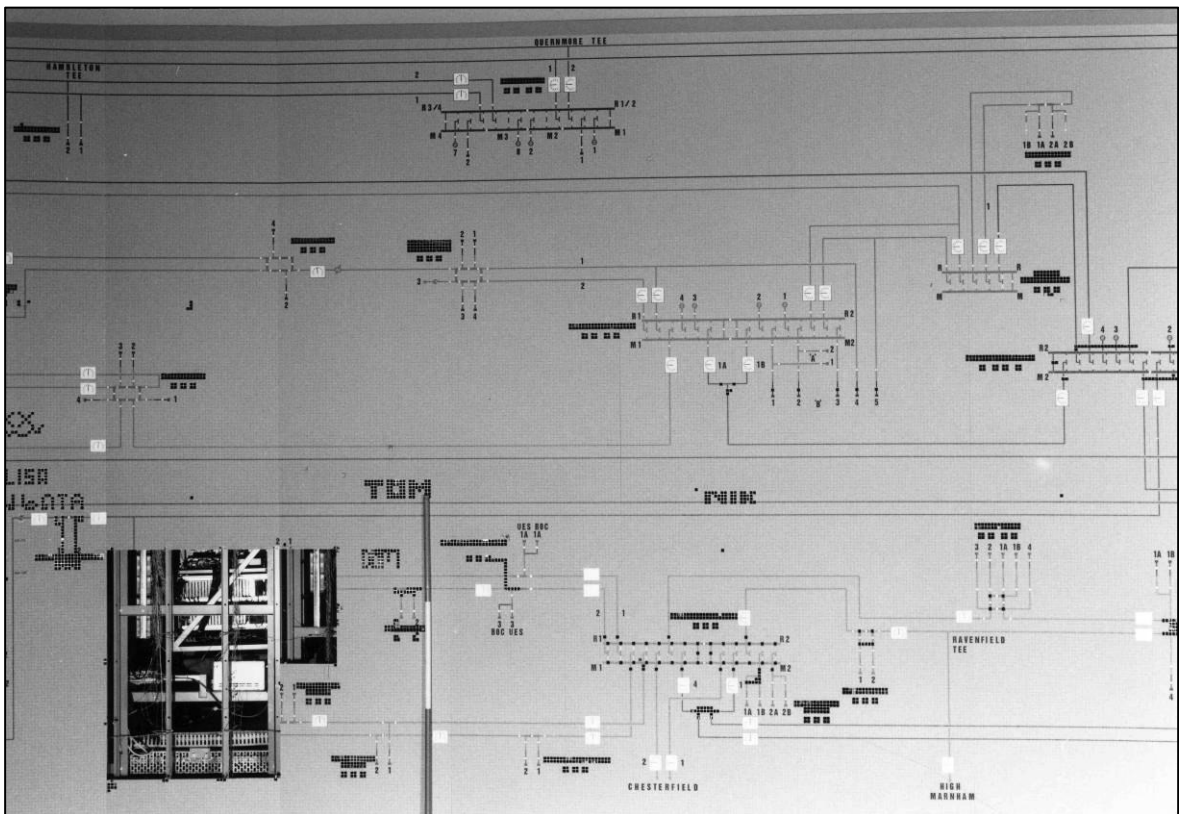


Plate 92: Control room (1F15), central area of mimic board, looking W (photo 1/6).

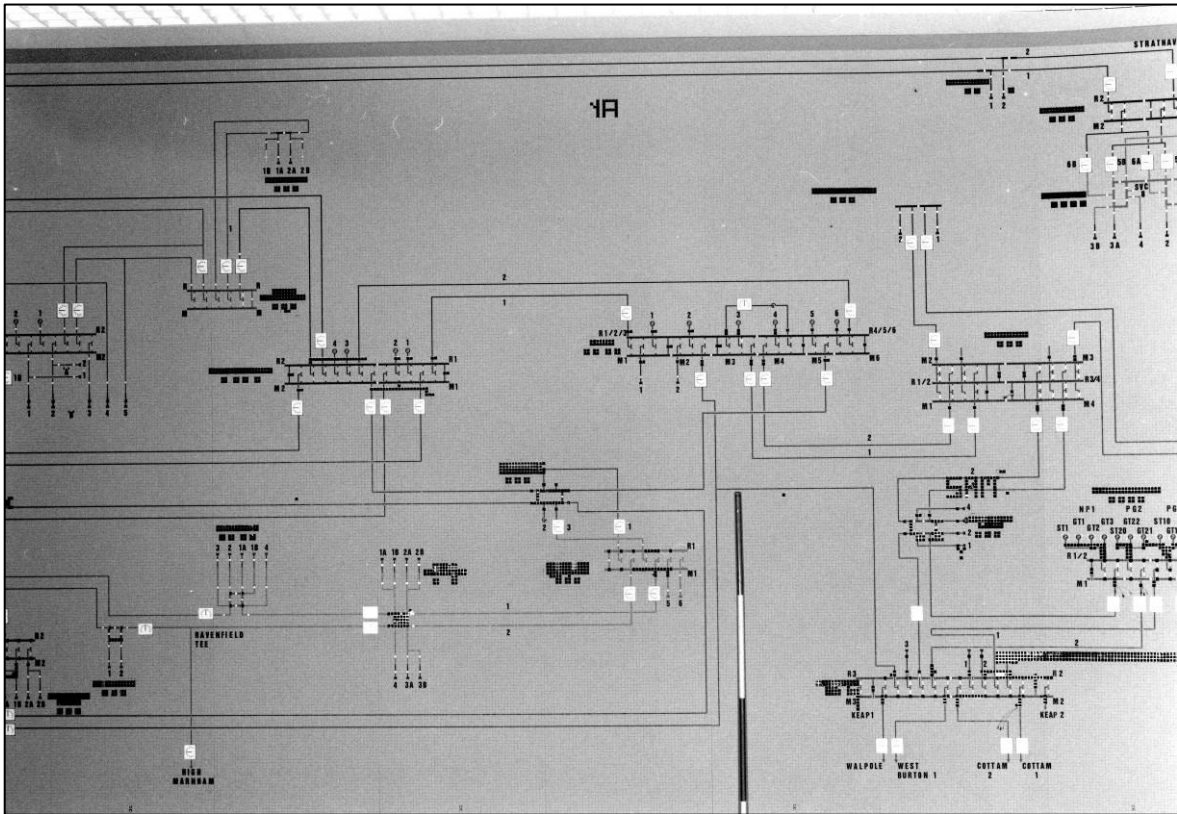


Plate 93: Control room (1F15), central area of mimic board, looking NW (photo 1/7).

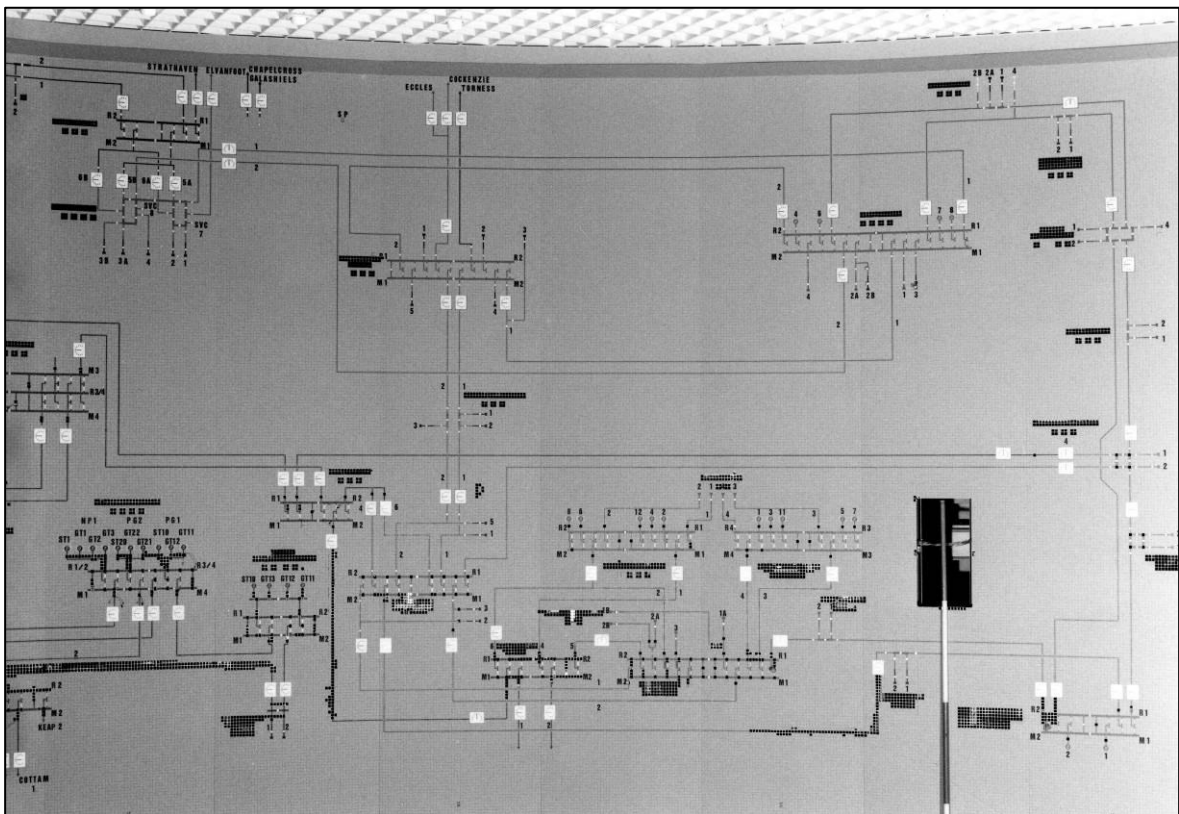


Plate 94: Control room (1F15), E end of mimic board, looking NW (photo 1/9).



Plate 95: Control room (1F15), E end of mimic board, showing removed section, looking NW (photo 1/10).

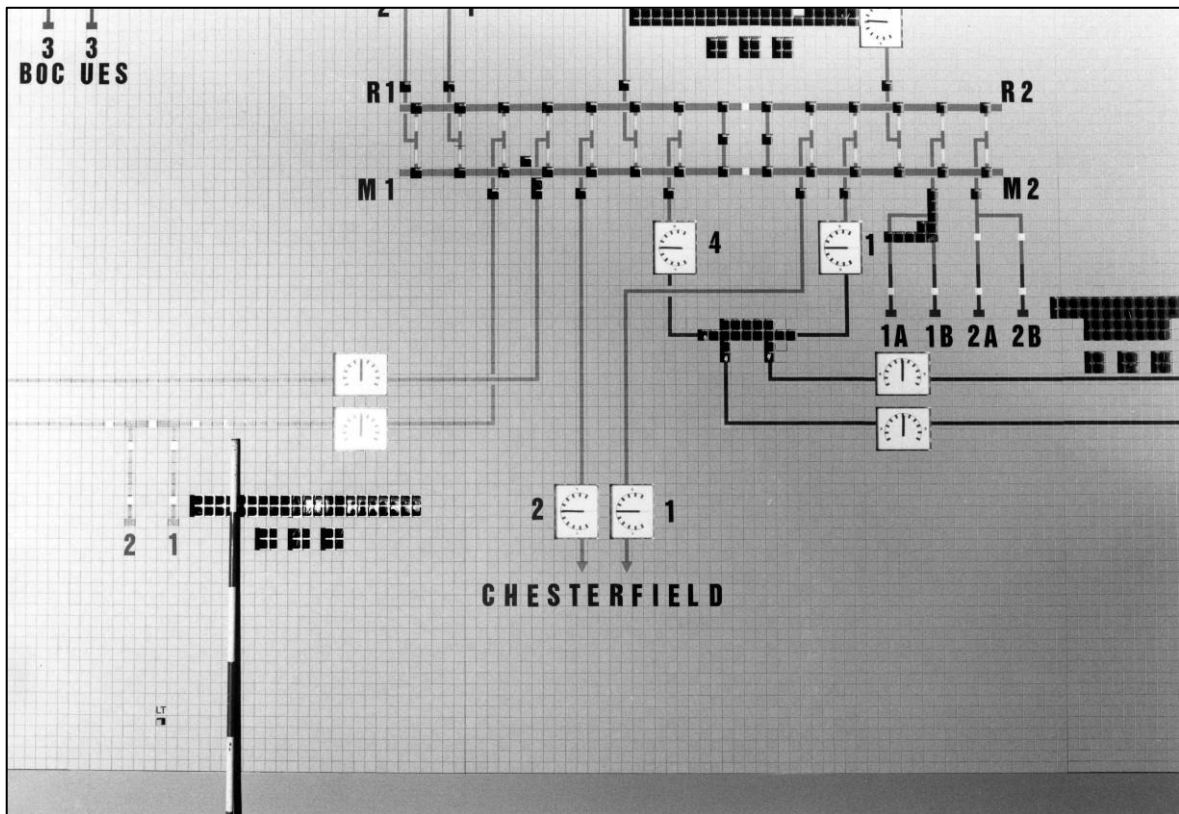


Plate 96: Control room (1F15), detail of S end of mimic board, looking SW (photo 2/7).

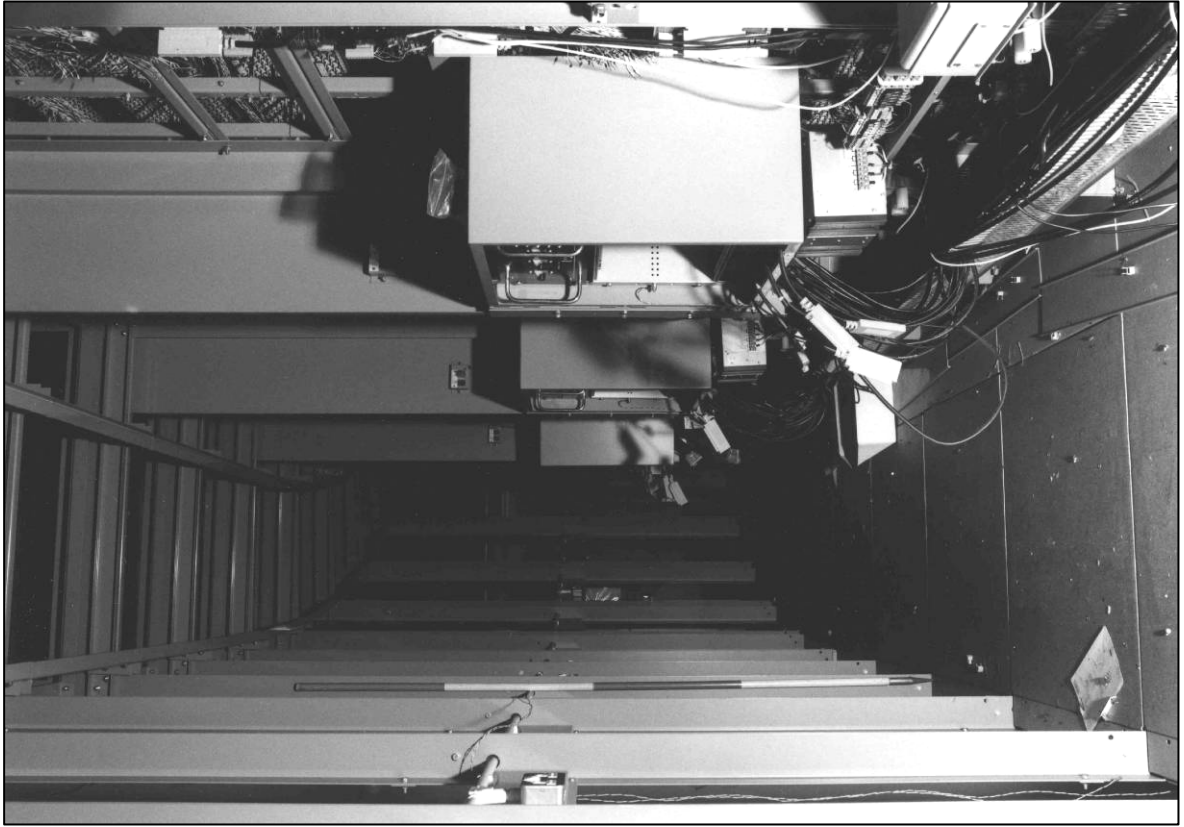


Plate 97: Control room (1F15), space to rear of mimic board, looking NW (photo 2/6) (top to left).



Plate 98: Triangular office (1F16), looking NE (photo 2/10).





Plate 99: Control room (1F15), control panels on W side, looking S (photo 2/9) (top to left).

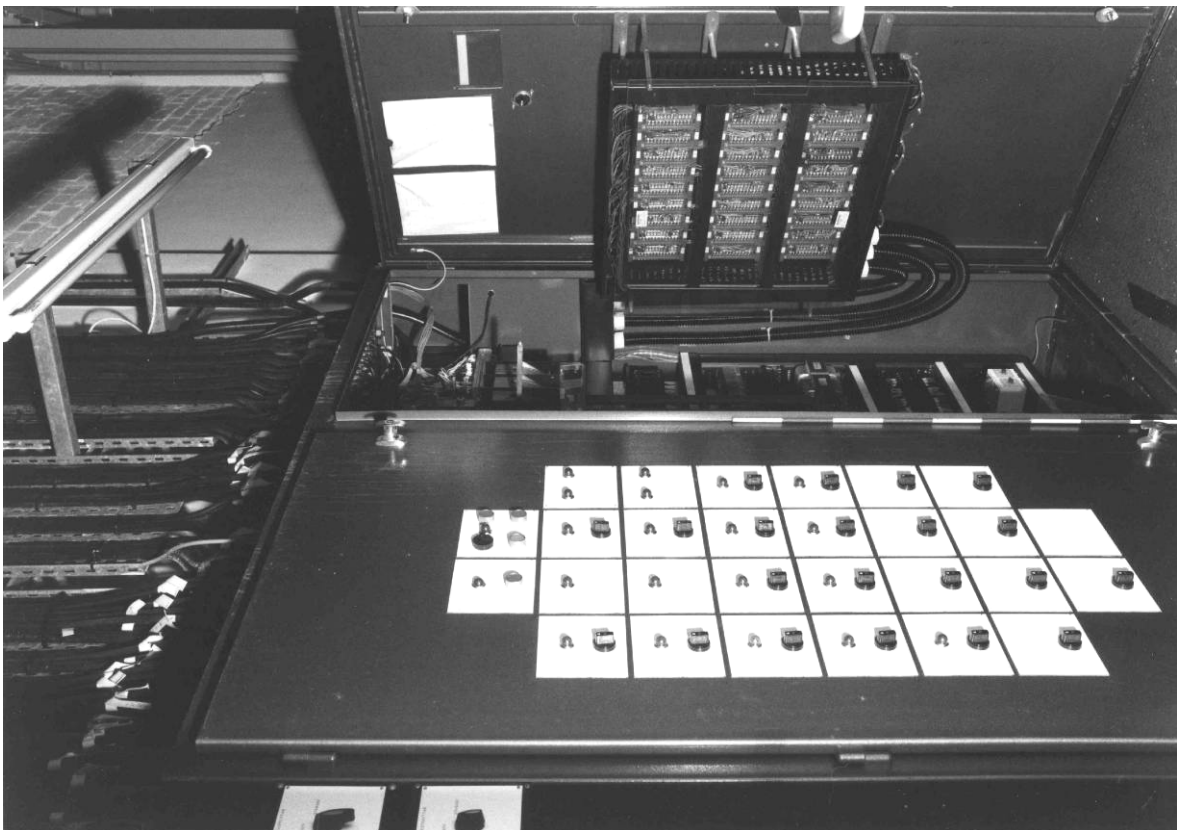


Plate 100: Control room (1F15), control panels on N side, looking NE (photo 2/11) (top to left).



Plate 101: Corridor 1F17 and Mess Room (1F18), looking SE (photo 3/13) (top to left).



Plate 102: Staircase 1F23, looking SW (photo 2/18) (top to left).





Plate 103: Room 1F24, looking NW (photo 3/1).



Plate 104: Asset Management suite (1F21), looking N (photo 2/12).



Plate 105: Asset management suite (1F21), looking E (photo 2/13).



Plate 106: Cable loft area C below Asset Management (1F21), looking N (photo 9/8).



Plate 107: Corridor 1F19, fire alarm panels, looking NW (photo 2/17).



Plate 108: Interim Control Room (1F25), doorway from corridor 1F19, looking W (photo 3/3) (top to left).



Plate 109: Interim Control Room (1F25), curve of former structure to W side, looking SW (photo 3/10).



Plate 110: Interim Control Room (1F25), looking W (photo 3/6).



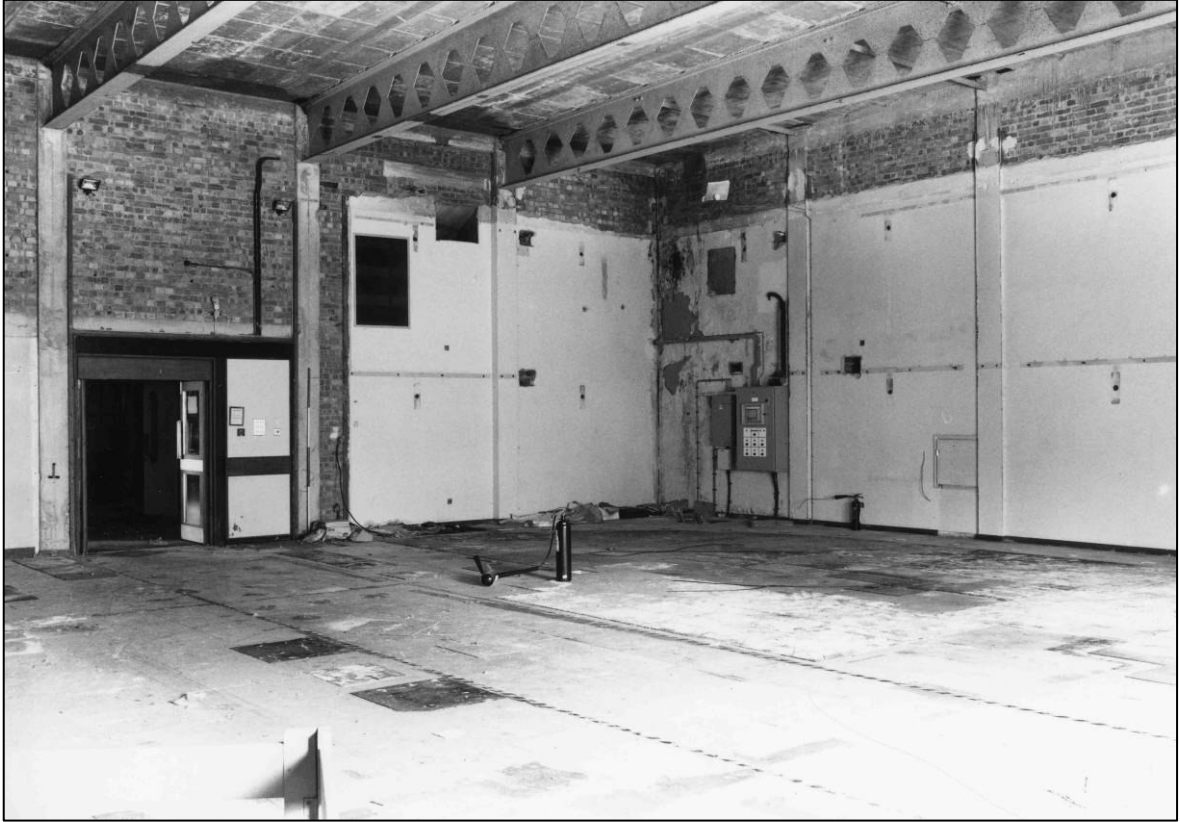


Plate 111: Interim Control Room (1F25), looking S (photo 3/7).



Plate 112: Interim Control Room (1F25), concrete frame and girders to S wall, looking SE (photo 3/12).



Plate 113: Interim Control Room (1F25), looking N (photo 3/5).



Plate 114: Interim Control Room (1F25), concrete frame and girders to N wall, looking N (photo 3/11).





Plate 115: Interim Control Room (1F25), looking E (photo 3/4).

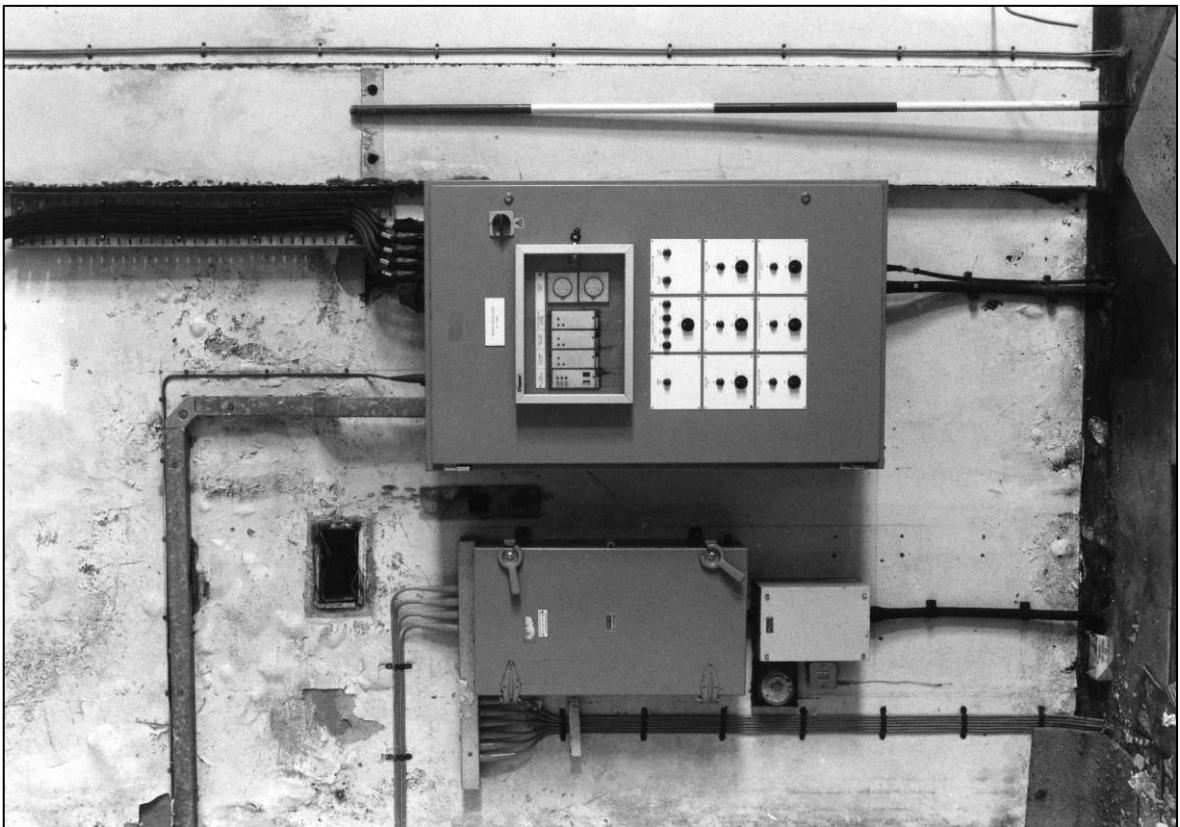


Plate 116: Interim Control Room (1F25), control panels to SW corner, looking SW (photo 3/9) (top to left).



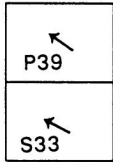
Plate 117: Room 2F1, looking NE (photo 2/15).

## PHOTOGRAPHIC REGISTER: COLOUR SLIDES

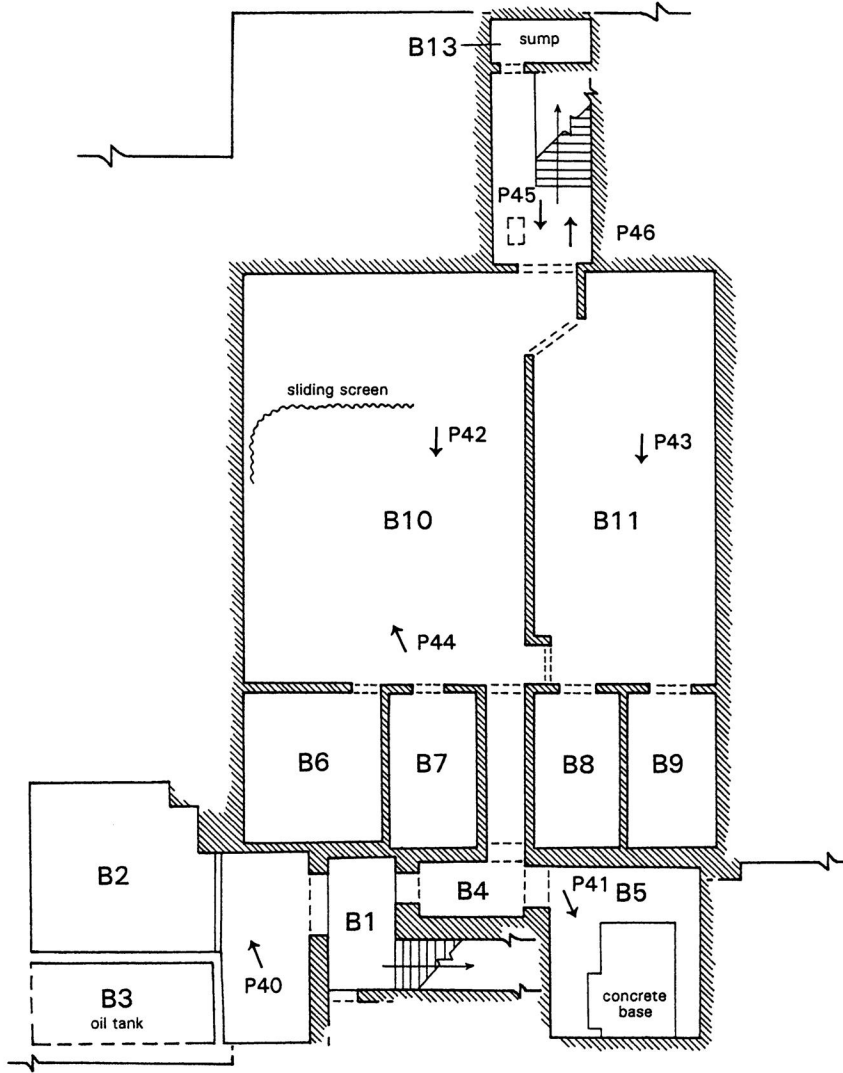
Film 10: 35mm colour slides taken 6th September 2012


<i>Slide</i>	<i>Subject</i>	<i>Film</i>	<i>Frame</i>	<i>Scale</i>
S1	Control room (1F15), general view of mimic board, looking SW	10	1	2m
S2	Control room (1F15), central area of mimic board, looking W	10	2	2m
S3	Becca Hall and Control Centre complex, looking S	10	3	2m
S4	Becca Hall and Control Centre complex, looking S	10	4	2m
S5	Becca Hall and Control Centre complex, looking S	10	5	2m
S6	Becca Hall and Control Centre complex, looking S	10	6	2m
S7	Control Centre complex, central part and N end of E elevation, looking W	10	7	2m
S8	Control Centre complex, central part of E elevation, looking W	10	8	2m
S9	Control Centre complex, S end of E elevation, looking SW	10	9	2m
S10	Control Centre complex, S end of E elevation, looking S	10	10	2m
S11	Control Centre complex, E elevation, looking SW	10	11	2m
S12	Control Centre complex, E end of N elevation, looking SE	10	12	2m
S13	Control Centre complex, W end of N elevation, looking S	10	13	2m
S14	Control Centre complex, N elevation, looking S	10	14	2m
S15	Control Centre complex, E end of N elevation, looking SE	10	15	2m
S16	Control Centre complex, NE corner, looking S	10	16	2m
S17	Control Centre complex, N end of E elevation, looking W	10	17	2m
S18	Control Centre complex, S end of W elevation, looking N	10	18	2m
S19	Control Centre complex, S end of W elevation, looking NE	10	19	2m
S20	Control Centre complex, central and S parts of W elevation, looking N	10	20	2m
S21	Control Centre complex, central part of W elevation, looking N	10	21	2m
S22	Control Centre complex, central part and N end of W elevation, looking SE	10	22	2m
S23	Control Centre complex, N end of W elevation, looking NE	10	23	2m
S24	Radio mast, looking N	10	24	-

PROJECT CEGB CONTROL CENTRE, BECCA HALL	
TITLE PHOTO LOCATIONS - BASEMENT	
SCALE AS SHOWN	DATE OCT 2012
EDAS	FIGURE A1/1




DIRECTION OF BLACK AND WHITE PHOTOGRAPH WITH PLATE NUMBER  
DIRECTION OF COLOUR SLIDE WITH SLIDE NUMBER



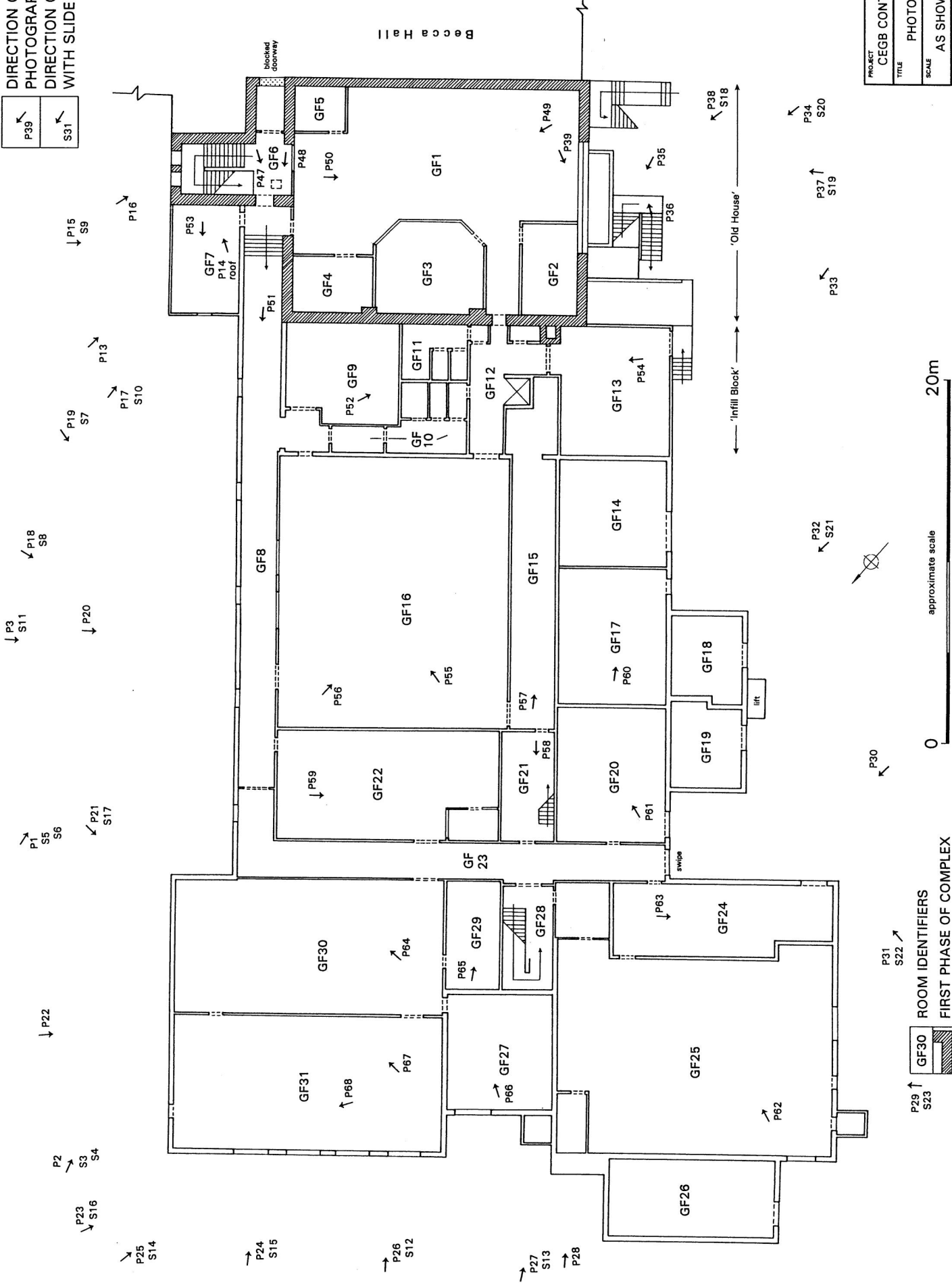
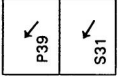
GF30 ROOM IDENTIFIERS  
 FIRST PHASE OF COMPLEX



0 approximate scale 20m



DIRECTION OF BLACK AND WHITE PHOTOGRAPH WITH PLATE NUMBER  
 DIRECTION OF COLOUR SLIDE WITH SLIDE NUMBER

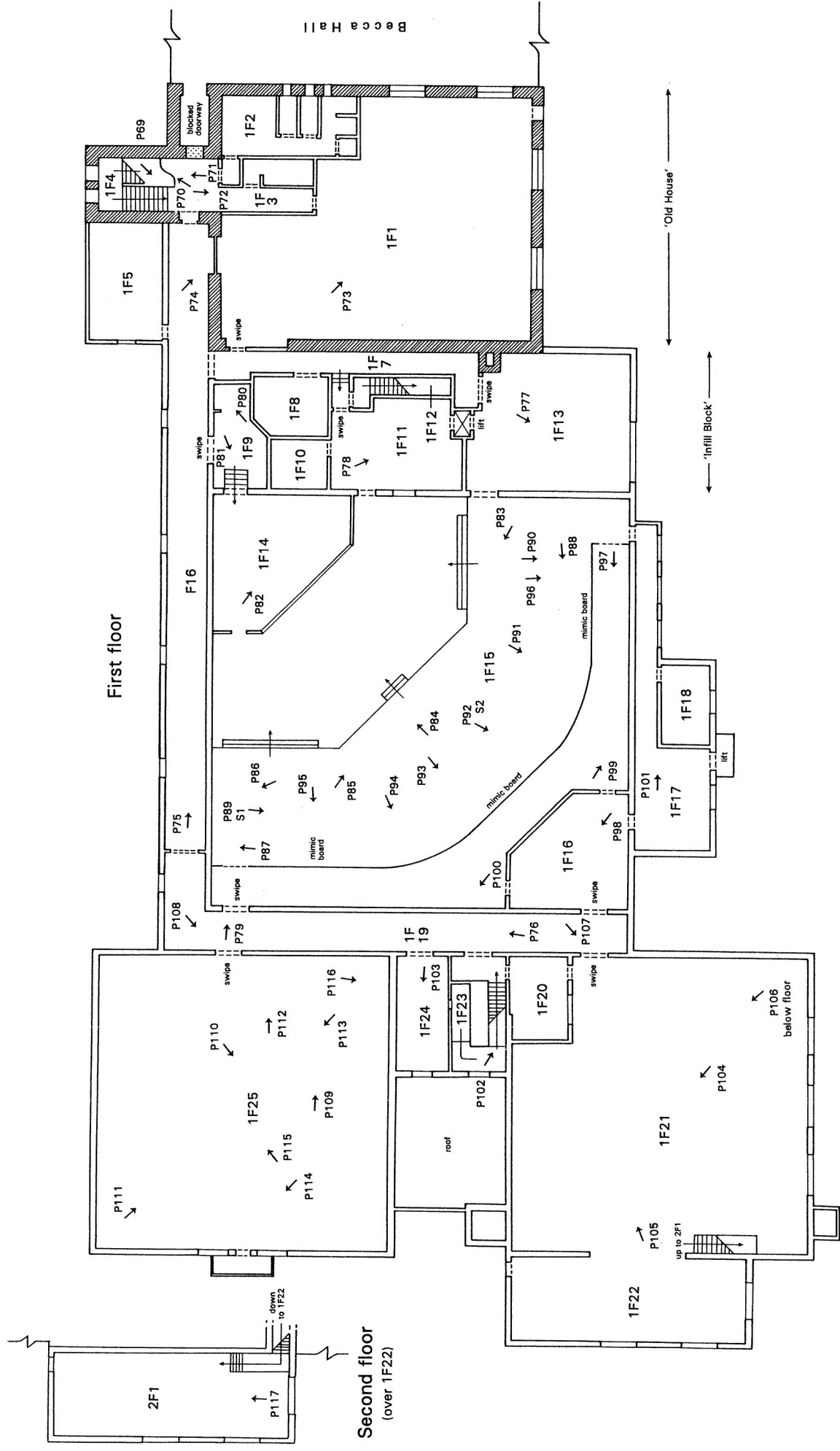
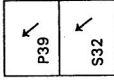


PROJECT	CEGB CONTROL CENTRE, BECCA HALL		
TITLE	PHOTO LOCATIONS - GROUND		
SCALE	AS SHOWN	DATE	OCT 2012
	EDAS	FIGURE	A1/2

ROOM IDENTIFIERS  
 FIRST PHASE OF COMPLEX



DIRECTION OF BLACK AND WHITE PHOTOGRAPH WITH PLATE NUMBER  
 DIRECTION OF COLOUR SLIDE WITH SLIDE NUMBER



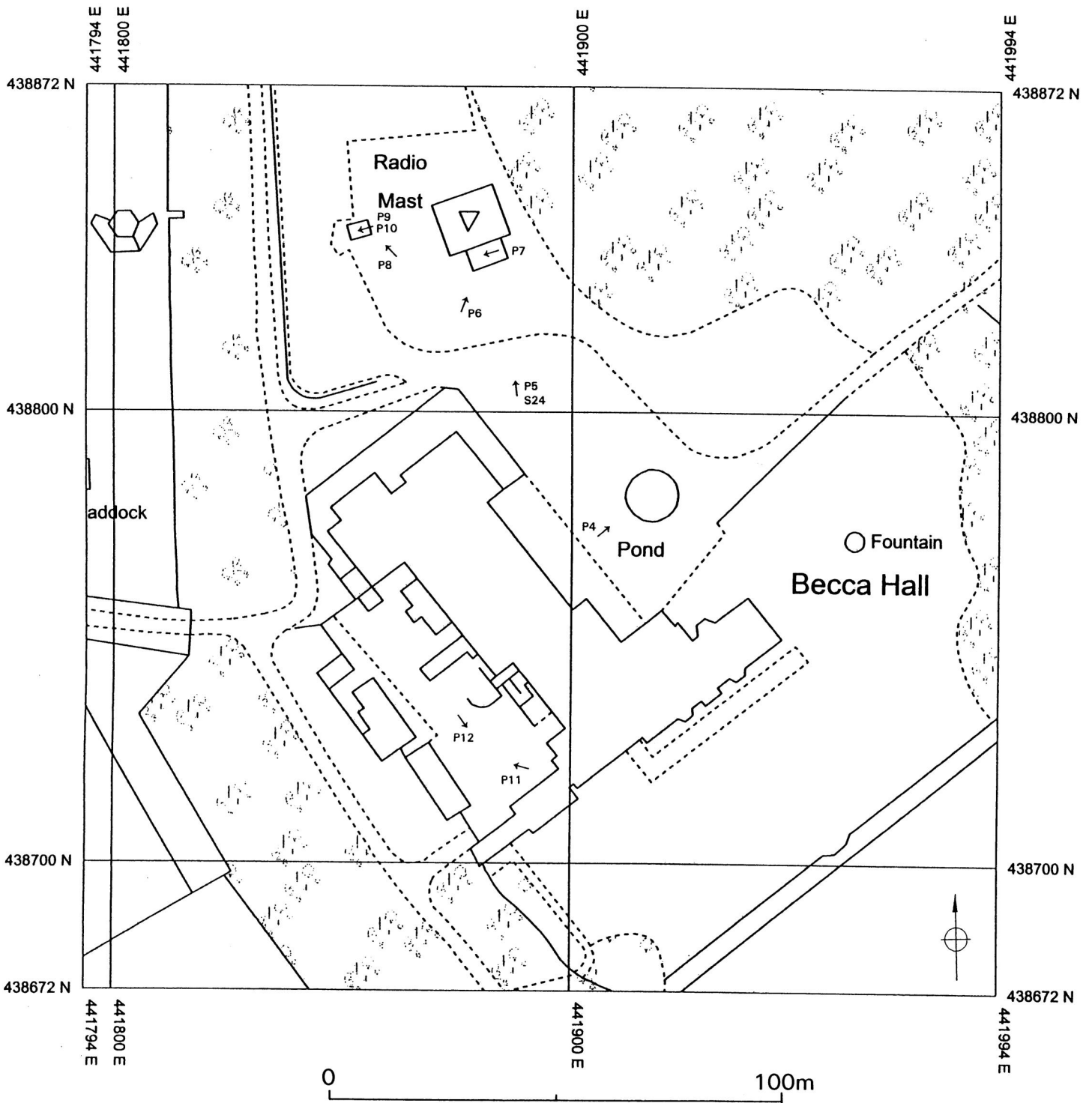
PROJECT	CEGB CONTROL CENTRE, BECCA HALL
TITLE	PHOTO LOCATIONS - FIRST/SECOND
SCALE	AS SHOWN
DATE	OCT 2012
FIGURE	A1/3





ROOM IDENTIFIERS  
 FIRST PHASE OF COMPLEX







 DIRECTION OF BLACK AND WHITE PHOTOGRAPH WITH PLATE NUMBER  
 DIRECTION OF COLOUR SLIDE WITH SLIDE NUMBER

PROJECT CEGB CONTROL CENTRE, BECCA HALL	
TITLE PHOTO LOCATIONS - PERIPHERY	
SCALE AS SHOWN	DATE OCT 2012
EDAS	FIGURE A1/4

**APPENDIX 2  
ROOM RECORD SHEETS**

## *Former CEGB Control Centre, Becca Hall, Aberford, West Yorkshire: Room Record Sheets*

*Room number:* B1

*Room name:* Stairway

*Location:* West side of basement

*Floor level:* Basement

*Internal dimensions and height:* 3.60m north-south by 2.70m east-west.

### *Description:*

The open stairway leading down to the basement from the courtyard on the west side of the complex. The stairway has a dog-leg plan, descending from the courtyard and then turning around through 180 degrees on a small landing to descend to a small enclosed open access area. The walls of the stairway itself are of brick construction throughout, while the steps are of concrete. The walls the stairway have flat concrete coping surmounted by a metal (steel?) railing, of similar design to the original staircase banister to the interior of the earliest phase of the control centre (see GF6, for example), and also likely to be an original feature. The stairway handrail is of a similar design, but is only present between the landing and the base. On the south wall of the landing, at a low level, there are two square openings with raised concrete frames set into the brickwork. The centre of each frame has a piece of thick (and possibly darkened) glass screwed to it, which is itself covered by a substantial metal dome held in place by metal cross-bars. The purpose of these openings and associated features is unclear; they appear to be placed above the basement generator room (B5) although it is not certain if they are associated with it.

Descending from the landing to the base of the stairway, a small rectangular unroofed area is reached. In the west wall there is a doorway giving access to a small under-stairs space, in the north wall is the doorway to the Oil-Fired Boiler House [B2], and in the south wall is the doorway to the basement corridor [B4] [1].

*Features of particular significance:* The openings to the landing with the thick glass and domed covers.

### *Notes on dating/interpretation:*

*Significance/importance:* The stairway is part of the earliest phase of the control centre.

*B/W photographs:* 9/2, 9/3 (plates 36 & 35)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

*Room number:* B2 and B3

*Room name:* Oil-Fired Boiler House and Oil Tank

*Location:* North-west area of basement

*Floor level:* Basement

*Internal dimensions and height:* Maximum 7.30m north-south by 6.80m east-west.

*Description:*

Oil-Fired Boiler House [B2] and Oil Tank [B3]. The boiler house is accessed from the open area at the base of the stairway [B1], through a doorway in the south wall fitted with a ventilated wooden door. The oil storage tank occupies the north-west part of the boiler house and is of concrete construction. The floor, walls and ceiling of the main part of the boiler house are of shuttered concrete construction; there is a large infilled opening in the ceiling adjacent to the oil tank which was presumably used to move heavy equipment in and out. A low brick bund wall runs east-west across the boiler house from the oil tank to prevent flooding to the boilers. The two surviving boilers are small, probably dating to the 1980s, and clearly do not represent the original installation. The return and outflow water pipes from the boilers run south, and retain a thermocouple and isolators. They are linked into a projection at the south-west corner of the room, a former flue which rises the full height of the earliest phase of the control centre and emerges through the roof. A control panel mounted on the east wall controls the heating pumps and shunt pumps; printed operating instructions make reference to the 'Old House', which may be the name latterly given to the earliest phase, rather than Becca Hall itself [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* The rooms are part of the earliest phase of the control centre.

*B/W photographs:* 6/6 (plate 40) [B2]

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* B4

*Room name:* Corridor

*Location:* West side of basement

*Floor level:* Basement

*Internal dimensions and height:* Maximum 2.90m north-south by 6.00m east-west.

*Description:*

The corridor is accessed from the open area at the base of the stairway [B1], where there is a doorway at the north end fitted with a lightweight metal door. The corridor runs south to the generator room [B5] and then returns to the east. It then narrows, and opens out into the northern of the two main basement rooms [B10]. The walls and ceiling are of concrete; the floor is also of concrete, but has a curve at either side where it meets the walls, allowing it to be cleaned out using water [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* The room is part of the earliest phase of the control centre.

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

Room number: B5

Room name: Generator Room

Location: South-west area of basement

Floor level: Basement

Internal dimensions and height: 4.50m east-west by 4.10m north-south.

*Description:*

The generator room is accessed from the basement corridor [B4]. The room is floored with concrete, and the majority is occupied by the former concrete base of the generator. This base measures 3.00m east-west by a maximum of 2.40m north-south, where there is a slight projection to the north side; the base stands 0.30m high. The walls and ceiling are soundproofed with noise-reducing tiles. There is a circular duct for a ceiling fan positioned over the south-east corner of the room, together with two smaller blocked circular ducts, and two similar features to the north wall [1].

*Features of particular significance:* Former concrete base for the generator remains.

*Notes on dating/interpretation:* The generator room still housed a diesel generator in the mid 1970s, forming part of the plant serving the East Coast Control Room housed on the ground floor of the earliest phase of the control centre [2].

*Significance/importance:* The generator room forms part of the earliest phase of the control centre.

*B/W photographs:* 5/18 (plate 41)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

Room number: B6 to B9

Room name: Showers and Basement Switchboard

Location: West side of basement

Floor level: Basement

Internal dimensions and height: B6 - 3.90m east-west by 3.60m north-south; all others - 3.90m east-west by 2.30m north-south.

*Description:*

Showers and Basement Switchboard. There are four rooms on the west side of the basement, arranged in pairs to the north and south of corridor B4. The two rooms to the north are accessed separately from the northern of the main basement spaces [B10]. Of these, the north room [B6] forms the male shower and is somewhat larger than the female shower [B7] to the south. Both have concrete floors, walls and ceilings, and retained a few fittings of no historic interest. The rooms to the south of the corridor [B8 and B9] are accessed separately from the other remain basement space [B11], and are similarly bare and of the same construction. The south room [B9] is the Basement Switchboard. The function of B8 is unknown [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The basement was known as Apparatus Room 1 in the mid 1970s, containing telephony and metering equipment, serving the East Coast District Control Room on the ground floor above [2].

*Significance/importance:* The rooms form part of the earliest phase of the control centre.

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* B10 and B11

*Room name:* Unidentified basement rooms

*Location:* Central area of basement

*Floor level:* Basement

*Internal dimensions and height:* B10 - maximum 10.80m east-west by 6.80m north-south; B11 - 10.80m east-west by 5m north-south.

*Description:*

Two rooms, which occupy the majority of the basement. They are accessed from the basement corridor [B4] to the west and the basement staircase [B12] to the east; the doorway to the former [B4] has an exit sign positioned above it. Both rooms have concrete floors, painted concrete walls and suspended ceilings; the partition wall separating them is probably blockwork, and may well be a later insertion. There are a small number of electrical sockets positioned around the walls of the rooms, and both have ventilation panels set into the ceiling, with strip lighting. At the time of the survey, the floors of both rooms were under a shallow covering of water and also some silt, the remnant of a major flooding event in 2012. However, the floor of the north room [B10] appears to have been laid in a coloured concrete resembling terrazzo, with a walkway or path delineated in a different colour between the two doorways in the south wall. The edge of the floor of both rooms curves upwards where it meets the walls, allowing the room to be cleaned with water. In the north room, a sliding two part screen with metal floor and ceiling tracking is positioned approximately two thirds along the length from the west wall. When fully extended, the screen would have met the concrete walkway/path noted above, but would not have continued as far as the south wall proper. The south room [B11] is largely featureless [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The basement was known as Apparatus Room 1 in the mid 1970s, containing telephony and metering equipment, serving the East Coast District Control Room on the ground floor above [2].

*Significance/importance:* Both rooms form part of the earliest phase of the control centre.

*B/W photographs:* 6/1 (plate 44), 6/2 (plate 42) [B10]; *Colour slides:*  
6/4 (plate 43) [B11]

*References:* [1] Shaun Richardson EDAS, site visit  
[2] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---



*Room number:* B12 and B13

*Room name:* Staircase and sump

*Location:* East side of basement

*Floor level:* Basement

*Internal dimensions and height:* Maximum 5.10m east-west by 2.50m north-south.

*Description:*

The basement staircase and sump are positioned at the east end of the basement, leading into room B10, and are themselves accessed from the ground floor staircase [GF6]. Both spaces appear to have painted concrete walls. The doorway leading to room B10 retains a stepped wooden architrave and a blank framed panel over, both of which may be original fittings. The staircase has terrazzo flooring, curving upwards to meet the walls at its edges so as to allow the area to be cleaned with water. The treads and risers of the open string stairs are also in terrazzo, while the metal (steel?) balustrade has square-section balusters and a copper-coloured handrail - all of these latter are original fittings.

Over the north-west corner of the staircase, there is a substantial rectangular opening in the ceiling. This opening is covered from above with four panels, and a similar feature can be seen to the ground floor staircase [GF6]. A lifting beam on the first floor allowed items or equipment to be raised the full height of the building through these openings within the staircase. The sump is positioned beneath the east end of the staircase and has a concrete floor [1].

*Features of particular significance:* The fittings of the staircase, the doorway architrave and the panel over.

*Notes on dating/interpretation:*

*Significance/importance:* The rooms are part of the earliest phase of the control centre. The staircase retains contemporary fittings and finishes.

*B/W photographs:* 5/17, 6/5 (plates 45 & 46) [B12]

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF1 to GF5

*Room name:* Ground floor rooms

*Location:* Earliest phase of the control centre

*Floor level:* Ground floor

*Internal dimensions and height:* GF1 (largest space) - maximum dimensions 15.50m east-west by 12.30m east-west.

*Description:*

Five rooms now occupying the ground floor of the earliest phase of the control centre. The rooms are all later insertions into the original single ground floor space, and appear to date from the 1980s. The rooms are accessed either from a ground floor circulation space [GF12] to the north or from the ground floor corridor [GF8] to the east; this doorway is numbered C4. All of the rooms are floored with carpet tiles; where these have been pulled up, concrete is visible beneath. The walls are lined with board panels with a smooth finish and the suspended ceilings all contain ventilation panels and square downstand lighting panels.

The largest room [GF1] forms the main circulation space which gives access to all the other, smaller rooms. It is well lit, principally through the lower two-thirds of the large original window in the west wall. When uncluttered by later insertions, the window was originally of nine lights, arranged in three rows of three. The lights of the lower and upper rows were each divided into three panels, but those of the central row into two only. The frames of the lights are of wood, but those of the panes are steel. The central row are all fixed, but the central panes of the upper and low row of lights move vertically on central pivots. An opening to the east wall, now fitted with a modern glazing unit, was probably once a doorway leading off the ground floor staircase [GF6].

Of the other rooms, GF2 (numbered C5 on its doorway), GF4 (numbered C8 on its doorway) and GF5 are positioned in the north-west, north-east and south-east corners of the main circulation space respectively, but were featureless at the time of the survey; room GF4 was formerly used as a kitchen. The room [GF3] on the north side of the circulation space has a fully-glazed, canted south wall [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The ground floor formerly housed the East Coast District Control Room but this was closed on 5th July 1980, with control of the 132kv system being transferred to either Northern Electric or the Area Control Room at Becca Hall [2].

*Significance/importance:* The rooms are all located within the ground floor of the earliest phase of the control centre, but are themselves much more recent insertions.

*B/W photographs:* 4/12 (plate 50), 4/13 (plate 39), 4/15 (plate 49) [GF1]

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

*Room number:* GF6

*Room name:* Staircase

*Location:* Earliest phase of the control centre

*Floor level:* Ground floor

*Internal dimensions and height:* Maximum 6.10m east-west by 2.80m north-south.

*Description:*

The ground floor staircase is accessed from the basement staircase [B12] below and rises to the first floor staircase landing [1F4] above. It also gives access to the long ground floor corridor [GF8].

The staircase is lit by a pair of window openings in the east wall. Each pair of window openings has a slightly projecting concrete surround externally, and is separated by a thick central partition. The face of the partition is slightly recessed from the surround, and this may have been done to allow for the sliding steel-shutters or lead-coated blinds/shutters referred to by some sources, although such protection might have been expected to be mounted internally rather than externally. There is no clear evidence for the former presence of such; a narrow groove to the underside of the lintel probably served the more prosaic function of stopping rain running into the window opening, as there is no corresponding groove in the sill to house a sliding feature. The sides of each window opening incorporate shallowly recessed panels, and they are fitted with a single pane of glass held in a fixed steel casement. The steel frame is flush with the internal wall face, and therefore deeply recessed from the external wall face. The steel frame has a wooden frame set against its exterior side. Threaded bolts project east from the centre of the east and west sides of the wooden frame, but it is unclear what was fixed to them.

The form of the staircase, and the surviving original fittings and finishes are as described for the basement staircase [see B12]. In addition, the doorway off the north side of the stair landing retains a wooden architrave which may also be contemporary; the doorway itself is framed by a narrow strip of beading which is set at the same height as the adjacent intermediate staircase landing, and resembles a 1950s decorative feature. A radiator to the west wall is the only such surviving feature of 1950s appearance noted in the building. There is a covered opening above the north-west corner of the staircase as described for the basement staircase [see B12]. A very short corridor leads off the south side of the staircase and once gave access to Becca Hall itself, although the doorway between the two was filled with blockwork at the time of the survey. The thickness of the corridor walls in plan suggests that its forms an original part of the earliest phase of the complex, although the interior is entirely plain with no visible features of interest [1].

*Features of particular significance:* The window openings, the original fittings and finishes to the staircase and the other possible contemporary decorative features. A radiator to the west wall is the only such surviving feature of 1950s appearance noted in the building.

*Notes on dating/interpretation:*

*Significance/importance:* The staircase forms part of the earliest phase of the control centre and retains contemporary fittings and finishes.

*B/W photographs:* 4/7, 4/9 (plates 48 & 47)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

*Room number:* GF7

*Room name:* Air conditioning and security room

*Location:* South-east corner of central part  
of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 6.00m north-south by 3.80m east-west.

*Description:*

The room once accessed from the south end of the corridor's [GF8] east wall houses the remnants of air-conditioning plant, security cameras and radio equipment. The majority of the west side is occupied by air conditioning plant. On the south wall, two wall-mounted metal cabinets are labelled 'PADX MDF STRIPS 1-34' and 'PADX MDF STRIPS 35-68'. To the north wall, there is the 'PROGRAMMING OFFICE AIR CONDITIONING PANEL'. A variety of further electrical equipment in the north-east corner relates to the control centre's radio transmission equipment [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 4/11 (plate 53)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF8

*Room name:* Corridor

*Location:* East side of central part of  
ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* Maximum dimensions 33.00m north-south by 1.90m east-west.

*Description:*

The ground floor corridor [GF8] is located on the east side of the central part of the complex's ground floor. The north-south aligned corridor is reached from the ground floor staircase [GF6] and gives access to many of the rooms in the central part of the ground floor. At its north end, a doorway separates it from an east-west aligned corridor [GF23]. The corridor is floored with carpet tiles and has walls lined with panels; in-between the panels, the slightly projecting concrete stanchions of the concrete frame of the building are differentiated by softwood panels. The ceiling tiles are held in place within a metal frame, with services above. The corridor is lit by windows in the east wall, all fitted with modern fixed glazing units; there is a flight of five steps at the south end, ascending from south to north. Boxed-out services over the adjacent doorway in the west wall make use of the same varnished wooden corrugated panelling as noted outside the doorway to room 1F25 [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 4/10 (plate 51)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF9

*Room name:* Air conditioning plant room

*Location:* Central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* Maximum 6.30m east-west by 5.40m north-south.

*Description:*

The air conditioning plant room is accessed from a small circulation space off the west side of corridor GF8. A doorway labelled 'C9' at the north-east corner leads onto a small flight of wooden steps, which descend to the floor of the plant room; the plant room is a sunken space, the floor being set c.1m lower than the circulation space outside. The plant room is floored with concrete and has bare brick walls, with a concrete ceiling over. The majority of the floor space is occupied by a very substantial air conditioning unit. A metal wall-mounted cabinet to the west wall is labelled 'ENGINEERING OFFICE H & V CONTROL PANEL' [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 4/16 (plate 52)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF10, GF11 and GF12

*Room name:* Toilets and circulation space

*Location:* Central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* GF12 - maximum 3.80m east-west by 7.30m north-south.

*Description:*

The circulation space [GF12] can be accessed from room GF13 to the west and itself gives access to space GF15 (doorway numbered 'C17') to the north, space GF16 (doorway numbered 'C18') to the north, the female toilets [GF10] (doorway numbered 'C12') to the east and a small storage space (doorway numbered 'C15') to the south. The circulation space also provides access to the male toilets [GF11], positioned to the south of the female ones, and to an internal lift on its west side. There is a second doorway to the female toilets (numbered 'C11') from the small circulation space on the west side of corridor [GF8]. All fixtures and finishes within these three rooms are as described for other parts of the building (for example GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF13

*Room name:* Apparatus Room 6, FSA Computer Room

*Location:* West side of central part of  
ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 6.10m east-west by 7.10m north-south.

*Description:*

Apparatus Room 6 (FSA Computer Room) is accessed externally through a doorway at the south end of the west wall and internally from circulation space GF12. At the time of the survey, the northern half of the room was occupied by a storage cage, and the whole was cluttered with various material and furniture; it had the appearance of a post room. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:* This space was the Apparatus Room 6 FSA Computer Room - it is not certain what the initials FSA stand for [2].

*Significance/importance:*

*B/W photographs:* 5/16 (plate 54)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF14

*Room name:* Air Conditioning Plant room

*Location:* West side of central part of  
ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 6.10m east-west by 5.70m north-south.

*Description:*

A room positioned on the west side of the central part of the ground floor, and only accessible externally through the doorway in the west wall. The room has a concrete floor and ceiling, and painted brick walls. It had once housed more air-conditioning plant, although much of this had been stripped out by the time of the survey [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---



*Room number:* GF15

*Room name:* EMS/FSA Plant Room

*Location:* Central area of central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* GF16 - 12.60m east-west by 15.40m north-south.

*Description:*

The EMS (Energy Management System)/FSA Plant Room [GF15] is formed by a narrow corridor-like space positioned to the west of the EMS Computer Apparatus Room 4 [GF16]. It is wholly enclosed within the building, with no natural lighting. Access is from a circulation space [GF12] to the south (through a doorway numbered 'C17'), from the EBU Plant Room [GF21] to the north, and room GF16 to the east. The internal floor and ceiling are of bare concrete, and the walls of brickwork lined-out with panels. The interior is cramped with air-conditioning ducting; at the very north end of the west wall there is a metal cabinet housing the controls for the air conditioning system for this part of the building [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 5/1 (plate 57)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF16

*Room name:* Apparatus Room 4, EMS Computer Room

*Location:* Central area of central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* GF16 - 12.60m east-west by 15.40m north-south.

*Description:*

Apparatus Room 4 (EMS (Energy Management System) Computer Room) is a large space, in fact the largest undivided space on the ground floor. It is accessed from corridor GF8 to the east through a doorway labelled 'C10.A', from a small circulation space leading off this corridor through a doorway labelled 'C10', from the Plant Room [GF15] to the west, and from another circulation space [GF12] to the south through a doorway labelled 'C18'. There are two windows in the east wall of the room, which take light from corridor GF8 to the east. At the time of the survey, the interior of the room was cluttered with debris, and the only surviving electrical equipment were the metal cabinets housing the PDU (power distribution units) placed along the north, west and south walls. Those that retained their front panels have separate controls for a DC and AC isolator. PDU 'T' is positioned against the north wall, and 'S' against the south wall. Units 'A' to 'D' are positioned from south to north along the west wall, with storage space between them. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The room formerly housed the mainframe computers for the Control Room [1F15] above, arranged in two banks [2].

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 4/17, 4/18 (plates 56 & 55)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Ray Hall, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF17

*Room name:* UPS Battery Room

*Location:* West side of central part of  
ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* GF17 - 5.80m east-west by 7.40m north-south.

*Description:*

The UPS (Uninterruptible Power Supply) Battery Room was located on the west side of the central part of the ground floor, accessed externally only through a doorway at the south end of the west wall. It has a concrete floor and ceiling, and painted brick walls, and had been stripped of most of its fittings at the time of the survey. The room forms part of the main body of the central part of the complex [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 9/9 (plate 60)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF18 and GF19

*Room name:* Motor Generator Rooms 1 and 2

*Location:* West side of central part of  
ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* Both 3.80m east-west by maximum 4.60m north-south.

*Description:*

Motor Generator Room 1 [GF19] and Motor Generator Room 2 [GF18]. Two rooms located on the west side of the central part of the ground floor, both only accessed externally through doorways in their west walls. Both have concrete floors and ceilings and painted brick walls, and had been stripped of most of their fittings at the time of survey. The rooms are clearly a later addition to the complex, and they have a lift on their external west side [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The Motor Generator Rooms were designed to provide a back-up power supply for the Control Room [1F15] should the main electricity supply fail [2].

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Ray Hall, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF20

*Room name:* Essential Switchroom 1

*Location:* North area of central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 5.80m east-west by 7.30m north-south.

*Description:*

Essential Switchroom 1 is accessed externally from a doorway in the west wall or internally from the west end of corridor GF23 through a doorway labelled 'C25A'. The 'ESSENTIAL SWITCHBOARD 1' is positioned along the east side of the room and the 'NON-ESSENTIAL SWITCHBOARD' along the western side. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 5/15 (plate 61)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF21

*Room name:* EBU Plant Room

*Location:* North area of central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 5.90m north-south by 2.80m east-west.

*Description:*

The EBU (Emergency Back Up) Plant Room is accessed either from the north end of the EMS/FSA Plant Room [GF15] to the south or corridor GF23 to the north through a doorway labelled 'C25.B'. It has a concrete floor and ceiling, and walls of brickwork lined out with panels. The interior is cramped with air-conditioning ducting and ventilation equipment; the metal cabinet apparently housing the controls for this is located against the west wall. A flight of metal steps leads to a space over, which may have been associated with Cable Loft B beneath the first floor Control Room [1F15] [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 5/3 (plate 53)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF22

*Room name:* Apparatus Room 5, EBU Computer Room

*Location:* North area of central part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 12.20m east-west by 6.00m north-south.

*Description:*

Apparatus Room 5 (EBU (Emergency Back Up) Computer Room) is accessed either from corridor GF23 to the north, or corridor GF8 to the east through a doorway labelled 'C10.B'. A small partitioned off area in the north-west corner may have functioned as a meeting room. There is a piece of ventilation equipment (a dehumidifier?) mounted on the west wall, and in the south-west corner, a control panel relating to the power distribution units in room GF16 to the immediate south. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 5/4 (plate 59)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF23

*Room name:* Corridor

*Location:* North part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 23.30m east-west by 1.90m north-south.

*Description:*

This long corridor is aligned east-west, and separates the central part of the ground floor from the north part. It is accessed externally through a doorway at the west end; a security swipe-card point is positioned adjacent to the exterior of this doorway. Internally, the east end of the corridor is linked to north-south corridor GF8 which runs along the east side of the ground floor, and gives access to various spaces to the north and south. Its overall appearance is very similar to corridor [GF8] [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF24

*Room name:* Essential Switchroom 2

*Location:* West side of north part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* Maximum 11.90m east-west by 4.00m north-south.

*Description:*

Essential Switchroom 2 is accessed externally from a doorway in the south wall, or internally from the west end of corridor GF23 through a doorway labelled 'C24'; it can also be reached internally from room GF25 to the north. The 'ESSENTIAL SWITCHBOARD 2' is positioned along the centre and north wall of the room, which was filled with debris at the time of survey. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 5/14 (plate 63)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF25

*Room name:* Business Support

*Location:* West side of north part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* Maximum 15.00m east-west by 11.40m north-south.

*Description:*

A large, open, space accessed from staircase GF28 to the east through a doorway labelled 'C30'. This leads into a small lobby, where another doorway (labelled 'C31') in the north wall opens into the space proper. An external doorway is located towards the north end of the west wall, with what appears to be a lift shaft to the west of this. There is a row of boxed-in stanchions along the south side of the room, and a single window for natural light in the west wall. A small partitioned off area to the north-east corner houses ventilation/air-conditioning plant [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 5/12 (plate 62)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF26

*Room name:* Office Suite Air Conditioning Plant Room

*Location:* North side of north part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 9.00m east-west by 4.00m north-south.

*Description:*

The Office Suite Air Conditioning Plant Room can only be accessed by an external doorway in the west wall. The interior has a concrete floor and ceiling, and walls of brickwork lined out with panelling. The remains of the air conditioning plant are set against the south wall but much had been stripped out at the time of the survey [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF27

*Room name:* Apparatus Room 2C?

*Location:* Central area of north part of ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 6.20m north-south by 5.70m east-west.

*Description:*

Possibly Apparatus Room 2C. The room is accessed from Apparatus Room 2A [GF30] via a doorway at the south end of the east wall. Although there is a single window to the north wall, most natural light is provided by four raised sky-lights. A de-humidifier unit is positioned against the south wall. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8); it was noted that where the floor/carpet tiles had been taken up or had collapsed, there is a gap beneath for services [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 5/10 (plate 66)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---



*Room number:* GF28

*Room name:* Staircase

*Location:* Central area of north part of  
ground floor

*Floor level:* Ground floor

*Internal dimensions and height:* 5.60m north-south by 2.80m east-west.

*Description:*

the ground floor staircase is accessed from east-west corridor GF23 through a doorway labelled 'C10.D' in the south wall, and it rises to a first floor landing [1F23]. The open-string staircase has a U-shaped plan, and is built of concrete, with square-section metal balusters and a metal handrail. The internal finishes are as described for other ground floor spaces (for example, GF1 and GF8) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF29

*Room name:* Halon Gas Store

*Location:* East side of north part of ground  
floor

*Floor level:* Ground

*Internal dimensions and height:* 5.70m north-south by 2.90m east-west.

*Description:*

The Halon Gas Store is accessed from Apparatus Room 2A, through a door in the east wall labelled 'C27'. It contains a number of wall-mounted metal cabinets relating to the control of the Halon gas fire-suppression system [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 5/11 (plate 65)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Ray Hall, pers. comm.; John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* GF30 and GF31

*Room name:* Apparatus Rooms 2A and 2B

*Location:* East side of north part of ground floor

*Floor level:* Ground

*Internal dimensions and height:* Both 14.50m east-west by 7.20m north-south.

*Description:*

Apparatus Room 2A [GF30] is accessed from east-west corridor GF23 through a doorway in the south wall. The room was in very poor condition at the time of the survey, but appears to have originally have had internal finishes as described for other ground floor spaces (for example, GF1 and GF8). As with room GF27, it was noted that where the floor/carpet tiles had been taken up or had collapsed, there is a gap beneath for services. Part way along the south wall, a metal cabinet is labelled 'BHSI ISOLATION PROCEDURE', and there is a de-humidifier. A doorway labelled 'C27' in the west wall gives access to the Halon Gas Store [GF29]. The dividing partition between Apparatus Room 2A [GF30] and Apparatus Room 2B [GF31] to the north is formed largely by a glazed screen, fitted with slightly darkened glass.

Apparatus Room 2B [GF31] is in a similarly poor state to Apparatus Room 2A, but in terms of fittings and finishes, appears once to have been very similar. It is lit by four windows in the north wall and also had an external access through a doorway towards the north end of the east wall. There is a de-humidifier positioned against the west wall and a metal cabinet labelled 'COMPUTER POWER DISTRIBUTION UNIT L' to the east wall [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The equipment and computers formerly housed in these rooms were associated with the operation of the Interim Control Room [1F25] on the first floor [2].

*Significance/importance:* Retains some evidence for the most recent functioning of the building.

*B/W photographs:* 5/5 (plate 64) [GF30]; 5/6, 5/8 (plates 67 & 68) [GF31]

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Ray Hall, pers. comm.; John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F1, 1F2 and 1F3

*Room name:* Unidentified rooms and toilets

*Location:* Earliest phase of control centre

*Floor level:* First floor

*Internal dimensions and height:* 1F1 (largest space) - maximum dimensions 15.50m east-west by 12.30m east-west.

*Description:*

Three rooms now occupying the first floor of the earliest phase of the control centre, at the south end of the complex. The rooms are all later insertions into the original first floor space, and appear to date from the 1980s. The rooms are accessed either from a first floor corridor [1F7] to the north (through a doorway labelled 'C1.6') fitted with a security swipe card system externally, or from the first floor staircase [1F4] to the east (through doorways numbered 'C1.6A' and 'C1.15'). There is also external access at the south-west corner from a modern fire escape.

The main space [1F1] is floored with carpet tiles; where these have been pulled up, earlier tiles, perhaps cork, are visible. The concrete and brick walls are lined with panels and the ceilings contain ventilation panels and square downstand lighting panels; again, where these have collapsed, a concrete ceiling can be seen above. The two window openings in the west wall and south wall are fitted with modern fixed glazing units and are almost certainly later insertions. There was also formerly an original wide opening at the east end of the north wall, but the function of this is unclear. A single original window (now infilled) survives to the east wall (see 1F6) and it is likely that there was once a doorway from the first floor staircase [1F4]. The latter has been infilled by the female toilet [1F3], with the male toilet [1F2] positioned to the south. Both the toilets have entirely modern fixtures and finishes [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:* The rooms form part of the earliest phase of the control centre, although they are all later insertions.

*B/W photographs:* 3/17 (plate 73)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

Room number: 1F4

Room name: Staircase

Location: Earliest phase of control centre

Floor level: First floor

Internal dimensions and height: Maximum 6.10m east-west by 2.80m north-south.

*Description:*

The first floor staircase is accessed from the ground floor staircase [GF6] below and rises to a landing with a curved balustrade to the east side. The landing also gives access to the long north-south aligned first floor corridor [1F6]. The staircase is lit by four window openings in the east wall, of the same form as described for the ground floor staircase [GF6]; there is a fifth, similar, window at a high level in the north wall. The form of the staircase, and the surviving original fittings and finishes are as described for the basement staircase [B12]. In addition, a lifting beam (stencilled 'SWL 1t') is placed over the north side of the landing, and was formerly used to lift equipment and materials through the covered openings described to the basement and ground floor staircases.

A very short corridor leads off the south side of the staircase and once gave access to Becca Hall itself, although the doorway was filled with blockwork at the time of the survey. The thickness of the corridor walls in plan suggests that it forms an original part of the earliest phase, and at one point it formed the main access to the Control Room [1F15] from the Hall. At a high level to the west wall over the landing, there are what appear to be two large infilled circular openings; however, on closer examination this was seen to be purely the result of water ingress, blistering of paintwork and mould growth. A loft space, apparently housing further air-conditioning/ventilation equipment, has been inserted at a high level over the east side of the staircase [1] [2].

*Features of particular significance:* The windows to the east and north walls, the original staircase and associated fittings/finishes.

*Notes on dating/interpretation:*

*Significance/importance:* The staircase forms part of the earliest phase of the control centre and retains contemporary fixtures/finishes.

*B/W photographs:* 4/2 (plate 71), 4/4 (plate 69), 4/5 (plate 72), 4/6 (plate 70)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Ray Hall, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

Room number: 1F5

Room name: Unidentified room

Location: East side of central part of first floor

Floor level: First floor

Internal dimensions and height: 5.80m north-south by 3.80m east-west.

*Description:*

This room, accessed from the south end of the long corridor [1F6], through a doorway labelled 'C1.5A', is lit by a window in the north wall, but is otherwise very plain and retains no visible features of significance [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F6

*Room name:* Corridor

*Location:* East side of central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* Maximum dimensions 33.00m north-south by 1.90m east-west.

*Description:*

The long north-south aligned first floor corridor is located on the east side of the central part of the complex's first floor. It is reached from the first floor staircase landing [1F4] and gives access to many of the rooms in the central part of the first floor. At its north end, a doorway separates it from an east-west corridor [1F19]. The corridor is floored with carpet tiles and has walls lined with panels; in-between the panels, the slightly projecting concrete stanchions of the concrete frame of the building are differentiated by softwood panels. The ceiling tiles are held in place within a metal frame, with services above. The corridor is lit by windows in the east wall, all fitted with modern fixed glazing units. Towards the south end of the west wall, a former external window of the earliest phase of the control centre is visible, now blocked by a ventilation grille [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 3/15, 3/18 (plates 75 & 74)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F7

*Room name:* Corridor

*Location:* South side of central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* 13.40m east-west by 1.10m north-south.

*Description:*

The east-west aligned first floor corridor branches off the west side of north-south corridor 1F6, through a doorway labelled 'C1.3', and gives access to various rooms to the north, south and west. The corridor is very plain in appearance, and is finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F8

*Room name:* Store

*Location:* South side of central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* Maximum 3.80m east-west by 3.00m north-south.

*Description:*

This room is a store, and is accessed from corridor 1F7 through a doorway labelled 'C1.7A'. It is very plain in appearance, and is finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:*

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F9

*Room name:* Circulation space

*Location:* South side of central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* Maximum 5.20m north-south by 2.70m east-west.

*Description:*

A foyer or circulation space, accessed from corridor 1F6 to the east through a doorway labelled 'C1.5' and fitted with an external security swipe-card system; the foyer provides access to the Viewing Gallery [1F14] to the north, and so was designed to be seen/used by visitors and VIPs. The foyer has an irregular ground plan, being narrow to the south than to the north. At the south-east corner, there is a built-in plastic rail with plastic coat hangers attached; the hangers cannot be removed from the rail. At the north end of the room, a short flight of steps rise up to the Viewing Gallery [1F14]. The steps are flanked by waist-high metal troughs filled with soil, once containing plants. Given the complete lack of natural light in the room, a lamp with a cylindrical shade was positioned over each of the troughs. Other than these features, the room is finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:* Troughs and lamp shades

*Notes on dating/interpretation:*

*Significance/importance:* Retains contemporary decorative and functional features.

*B/W photographs:* 2/3, 2/4 (plates 81 & 80)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---



*Room number:* 1F10, 1F11 and 1F12                      *Room name:* Unidentified rooms and stairway

*Location:* South side of central part of first floor                      *Floor level:* First floor

*Internal dimensions and height:* Largest room [1F11] - maximum 6.70m east-west by 4.60m north-south.

*Description:*

Three spaces, on the south side of the central part of the first floor. The principal access to these spaces is via a short flight of steps leading to small circulation space off the north side of corridor 1F7. On the west side of the space, a doorway (labelled 'C1.9A') opens onto a flight of metal stairs [1F12] leading up to the roof. A doorway on the north side of the space, fitted with an external security swipe-card system, opens into the largest room [1F11].

This room has a lift positioned at the south-west corner, and in the north wall there is a window and doorway (labelled 'C1.8B'), both connected to the Control Room [1F15]. The room has the same soundproofed ceiling panels as are used in the Control Room. A doorway in the east wall (labelled 'C1.8A') leads into a small and very plain subsidiary room [1F10]. With the exception of the sound-proofed ceiling noted previously, all three spaces are finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:* The sound-proofed ceiling to 1F11.

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 2/5 (plate 78) [1F11]

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F13

*Room name:* Meeting Room?

*Location:* South-west corner of central part of first floor                      *Floor level:* First floor

*Internal dimensions and height:* Maximum 8.20m east-west by 7.00m north-south.

*Description:*

This space was possibly a meeting room. It is accessed via a doorway (fitted with a security swipe-card system externally) at the west end of corridor 1F7, and is connected to the Control Room [1F15] via a doorway (labelled 'C1.11A') in the north wall. The room was filled with debris at the time of the survey. It is well-lit by a large floor to ceiling window in the west wall. Other than this, it is finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 3/16 (plate 77)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F14

*Room name:* Viewing Gallery

*Location:* Central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* Maximum 7.00m east-west by 6.80m north-south.

*Description:*

The majority of the central part of the complex at first floor level comprises a Viewing Gallery, the Control Room and a triangular office.

The Viewing Gallery [1F14] is accessed from the foyer [1F9] through a doorway in the south wall. Almost all of the north-west side of the Viewing Gallery is formed by a glazed screen with slightly darkened glass, placed at an angle across the south-east corner of the Control Room. The screen is fitted with sliding blinds and has a panelled detail above which resembles tongue and groove boarding; this is carried around all the wall tops of the room. A loudspeaker is mounted on the east wall. The ceiling is of the same sound-proofed panels as used in the Control Room and is stepped upwards from south-east to north-west; it has a grid of spot-lights set into it, flush with the surface. A doorway at the east end of the north wall gives access to the Control Room [1F15] [1].

*Features of particular significance:*

*Notes on dating/interpretation:* The Viewing Room was designed for the use of guests, visitors and VIPs, so that they could observe what was taking place within the Control Room without disturbing those inside [2].

*Significance/importance:*

*B/W photographs:* 2/1 (plate 82)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Ray Hall, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F15

*Room name:* Control Room

*Location:* Central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* Maximum 21.10m east-west by 20.40m north-south.

*Description:*

The majority of the central part of the complex at first floor level comprises a Viewing Gallery, the Control Room and a triangular office.

The Control Room is the largest and by far the most impressive space within the whole complex, and it also retains the highest proportion of contemporary equipment and fittings. Access into the Control Room was strictly controlled. There is one doorway at the north-east corner from corridor 1F19, and this is fitted with a security swipe-card system externally. The other entrances, from 1F11 and 1F13, have similar security provisions where they meet the circulation spaces. The floor of the Control Room is covered with carpet tiles; Cable Loft Area B lies below the Control Room, and although it could not be accessed, it is almost certainly of the same form as Cable Loft Area C (see 1F21) i.e. a c.1m high space set between the ground and first floors and crossed by a grid of girders.

The floor of the control room is divided into two parts. The upper, south-east part, houses a pair of U-shaped pine control desks. At the canted edge of the upper area, there are two further pine desks which run parallel to the edge. The outer face of the desks (facing away from the upper area) contain filing cabinet-sized wooden draws; when pulled out, some of these contain board dividers with the name of installations on, some of which are power stations. Flanking the desks, and set between them, are low flights of steps leading down to the lower area; tubular steel railings define the walkways down the steps. To the lower area, there are a pair of smaller U- or C-shaped pine desks to the north-east and a similar, single desk to the south-west.

The ceiling over the Control Room is of sound-proofed panels and is stepped upwards from south-east to north-west; it has a grid of spot-lights set into it, flush with the surface. The walls of the Control Room are lined with the same panels as noted elsewhere within the first floor, and have the same panelled detail above as noted to the Viewing Gallery [1F14]. In the north-east corner of the room, there are four metal cabinets set against the east wall. These have had their fronts removed and these now stand loose; from south to north they are labelled 'SITE SECURITY SYSTEM', 'BOMB WARNING SIREN', 'MVAC MIMIC DIAGRAM' and 'DIESEL REMOTE CONTROL PANEL'. Above and to the side of these, a red light is mounted on the wall with a metal sign below stating 'WARNING - FLASHING BEACON DENOTES CONTROL ROOM FIRE BELLS SILENCED'.

The main feature of the Control Room is the floor to ceiling curved mimic board which occupies almost the entire north-west wall of the room [1]. The east end of the mimic board housed what was known as the Configuration Diagram, showing the grid in the north of England and Wales. It had originally been intended that this would only cover the back (north) wall of the room but, after the merger of Manchester with Leeds in 1993, it had to be extended across the corner of the room to include more detail; the same Configuration Diagram was used at the National Control Centre until late 2004/early 2005 [4]. The mimic board is of composite construction; a steel framework to the rear holds metal grids in place, and then tens of thousands of plastic cubes are secured by clips into the grid. The cubes have stickers placed on them, principally either a red or a blue line, but also sometimes lettering or numbering, and these have been used to diagrammatically represent the distribution network on the mimic board; some of the cubes also once housed LED lights. When facing the mimic board, at the very left hand upper end there was once a pair of clocks displaying 'REAL TIME' and 'SYSTEM TIME'. Below these are a group of four speakers set flush with the wall face, and below these former digital displays for 'TIME ERROR' and 'FREQUENCY'. There appear to have once been similar displays at the very right hand end of the mimic board, but these have largely been removed. The majority of the mimic board shows a system of blue and red lines, the blue lines denoting 400 kV grid lines and the red lines 275kV grid lines. Various named installations, including power stations, are shown but the majority of the locations shown on the board are sub-stations; unfortunately many of the names of the latter have been removed. The LED lights of the sub-station displays would be on or off depending on whether the sub-station was in use of not [4]. The right-hand panel of the mimic board (the Configuration Diagram) has been taken to the Museum of Science and Industry in Manchester to form part of its collections [2].

The space behind the mimic board is accessed principally through a doorway at the south end, although it can also be reached from within the Triangular Office [1F16] in the north-west corner of the room. The rear area is formed by a walkway, from which the wiring at the rear of the mimic board's panels can be reached. On the rear of the mimic board, there are a series of metal cabinets labelled 'AREA CONFIGURATION DIAGRAM TIE' and numbered one to fourteen; the letter/number combination R1 to R27 appears above them. Behind the mimic board panel that was removed, the metal cabinets continue, but here they are labelled 'NATIONAL CONFIGURATION DIAGRAM TIE' and are numbered one to four; the letter/number combination N1 to N4 appears above them [1]. The 'TIE' units were manufactured by Trinitron of Ashby de la Zouch and acted as the interface between the mimic board and the computer systems [4]. There is a metal ladder leading to an upper walkway but this was not accessed for safety reasons. It was noted from within this area that the steel trusses over the north-west corner of the Control Room are of the same design as those visible above room [1F25] [1].

*Features of particular significance:* The mimic board and all other associated contemporary equipment surviving within the Control Room [1F15].

*Notes on dating/interpretation:* A photograph of the Control Room taken during the 1990s shows computer

units standing to the front of each desk [2]. The computer screens essentially duplicated what could be seen on the mimic board which dominates the Control Room. There would be at least five engineers in each shift working in the room [3]. In the mid 1970s, what is now the Control Room had previously housed the Area Control Room. However in 1983, this was moved into the former West Yorkshire Control Room [1F25], which then became the Interim Control Centre. The former Area Control Room was refitted between 1983 and 1986 to become the existing Control Room, but because of software problems it did not become operational until 1993 [4].

*Significance/importance:* The Control Room retains the highest proportion of contemporary mid 1980s equipment and fittings within the entire complex.

*B/W photographs:* 1/1, 1/4, 1/5, 1/6, 1/7, 1/9, 1/10, 2/7 (plates 88, 90-96) (mimic board), 1/11, 1/12, 1/13, 1/15, 1/16, 1/17, 1/18, 2/6, 2/9, 2/11 (plates 89, 83-86, 79, 87, 97, 99, 100) *Colour slides:* S1, S6 (mimic board)

*References:* [1] Shaun Richardson EDAS, site visit  
[2] Information from Museum of Science and Industry, Manchester  
[3] Ray Hall, pers. comm.  
[4] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F16

*Room name:* Triangular Office

*Location:* Central part of first floor

*Floor level:* First floor

*Internal dimensions and height:* Maximum 6.00m east-west by 6.00m north-south.

*Description:*

The majority of the central part of the complex at first floor level comprises a Viewing Gallery, the Control Room and a triangular office.

The Triangular Office is accessed from east-west corridor 1F19 via a doorway in the north wall fitted with a security swipe-card system externally. There is a raised area of floor around the south-east edge of the room which, as with Viewing Gallery [1F14], is set at an angle across the corner of the Control Room; the room is also equipped with sound-proofed ceiling panels, stepping upwards from north-west to south-east. Doorways in the east and south walls lead through to equipment housed in an area between the room and the rear of the mimic board. Through the south door, a series of metal cabinets house AC and DC isolators, as well as controls for the lights in the Control Room area. Through the east door, further metal cabinets house controls for heating, air-conditioning and ventilation units; one is labelled 'H & V PANEL CPI' [1].

*Features of particular significance:* Associated contemporary equipment surviving within the Triangular Office.

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 2/10 (plate 98)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F17 and 1F18

*Room name:* Mess room and corridor

*Location:* West side of central area of first floor

*Floor level:* First floor

*Internal dimensions and height:* Corridor [1F17] - maximum 16.20m north-south by 3.90m east-west; mess room [1F18] - 4.00m north-south by 2.50m east-west.

*Description:*

Mess room and corridor. The north-south aligned corridor is accessed from the possible triangular office [1F16] at the north end and the Control Room [1F15] at the south end; there is also access to an external lift at the northern end of the west wall, where the corridor widens substantially. The Mess Room [1F18] is fitted out as a kitchen. Both spaces are floored with concrete; otherwise they are finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 3/13 (plate 101)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F19

*Room name:* Corridor

*Location:* Between central and north parts of first floor

*Floor level:* First floor

*Internal dimensions and height:* 23.30m east-west by 1.90m north-south.

*Description:*

The corridor is aligned east-west, separating the central part of the first floor from the north part, and it is linked to north-south corridor 1F6 which runs along the east side of the first floor; it provides access to various spaces to the north and south. Its overall appearance is very similar to corridor 1F6, but at the west end of the north wall, there are a number of metal cabinets mounted on the wall. These house the controls for the fire alarms and are labelled 'FIRE ALARM PANELS 1', '2' AND '3'. Panel no. 1 refers to the Control Room and associated spaces, the 'Infill Block' (ground and first floors), the basement area, the Engineer's Office, Apparatus Rooms 4/5/6, the 'ex-PTP Office', the Control Support Office and the ex-Interim Control Room. Panel no. 2 refers to many of the ground floor spaces, including the UPS Battery Room and the Essential Switchrooms. Panel no.3 was for the 'TAM Office' and the Air-Conditioning Plant Room [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 2/16 (plate 76), 2/17 (plate 107)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F20, 1F21 and 1F22      *Room name:* Asset Management room and office, and Meeting Room

*Location:* West end of north part of first floor      *Floor level:* First floor

*Internal dimensions and height:* The largest space [1F21] - 15.40m east-west by 16.10m north-south; meeting room 1F20 - 2.90m east-west by 4.20m north-south; 1F22 - 11.80m east-west by 4.30m north-south..

*Description:*

The Asset Management room [1F21] and separate Office [1F22] are accessed from a doorway fitted with a security swipe-card system externally at the west end of corridor 1F19. The majority of the area is formed by a large single open space [1F21], with windows to the west wall. A wide opening on the north side of the room leads through into the smaller office area [1F22] with two windows in its north wall. A staircase on the north side of the large space rises to the second floor room [2F1] over the smaller office space, which also has a doorway in the east wall leading out onto an external fire escape. At the south-west corner of the large space, a floor trap gives access to the below-floor space, which forms Cable Loft Area C; this is c.1m in height and is crossed by lattice girders of composite angle-steel construction. The smaller Meeting Room [1F20] is positioned at the south-east corner of the main room. All three spaces are finished in the same manner as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:* The lattice girder construction visible beneath the floor.

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 2/12, 2/13, 9/8 (plates 104-106)      *Colour slides:*  
[1F21]

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

*Room number:* 1F23 and 1F24      *Room name:* Staircase and unidentified room

*Location:* Central area of north part of first floor      *Floor level:* First floor

*Internal dimensions and height:* Staircase 1F23 - 5.60m north-south by 2.80m east-west; Room 1F24 - 5.60m north-south by 8.60m east-west.

*Description:*

The first floor staircase [1F23] is accessed from the ground floor staircase [GF28], and from corridor 1F19 through a doorway in the south wall. The detailing and internal finishes of the staircase are as described for the ground floor staircase [GF28]. The adjacent room to the east [1F24] is also accessed from corridor [1F19] through a doorway in the south wall. The interior of this is very plain, and the internal finishes are as described for other first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:*

*Notes on dating/interpretation:*

*Significance/importance:*

*B/W photographs:* 2/18 (plate 102) [1F23]; 3/1 (plate 103) [1F24]      *Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

*Record created:* SR 09/12

*Record updated:* ED 10/12

---



*Room number:* 1F25

*Room name:* Interim Control Room (formerly West Yorkshire District Control Room)

*Location:* East side of north part of first floor    *Floor level:* First floor

*Internal dimensions and height:* 14.80m east-west by 14.80m north-south.

*Description:*

The Interim Control Room is accessed from corridor 1F19 through a doorway in the south wall. The doorway is fitted with a security swipe card system externally and retains a pair of doors unlike any others surviving within the complex. Each door has two glazed panels and a curved steel handle. To the immediate west of the doorway, there is a panel of varnished corrugated woodwork, like that seen over the doorway at the south end of the west side of corridor GF8 on the ground floor. At a high level, a metal box is mounted on the woodwork, from which a bare bulb projects.

The interior of the room had been partly stripped out when the survey took place, exposing elements of the internal construction. The floor is covered with carpet tiles, but at the south-east and south-west corners, floor traps provide access to the below-floor space, which may form Cable Loft Area A. This is c.1m in height, and is crossed by lattice girders of composite angle-steel construction, as also noted beneath Asset Management [1F21]. The carpet tiles form two broadly semi-circular areas, separated by a narrow walkway which runs north-south across the room. At the outer edge of both semi-circular areas, there is a row of small square metal plates. These formed the bases for uprights, which once comprised part of curved mimic boards projecting from the east and west walls of the room; the steel beams which formed the horizontal element of the board have been cut back flush with the wall face, where their ends are still visible.

The walls of the room are plastered behind where the structures would have stood, but above, panels of bare brickwork are visible, comprising brown machine made bricks laid in English Bond and set with a cement mortar. The panels of brickwork run between the uprights of the concrete frame. These are all of the same form, and rise to the concrete ceiling, apart from in the north wall. Here, a two-light window (with a later inserted door leading to an external fire escape) is set between three uprights. The lintel of the window is formed by a substantial horizontal concrete beam which appears to be contemporary with the uprights; c.1m above the lintel, the uprights incorporate a thickened horizontal cross-piece, essentially forming a T-shaped 'head'. The uprights continue above this 'head' as before to ceiling level, but it could not be determined if these upper ends are of the same date i.e. if the roof has been raised at some point or not. The uprights to the north and south walls support four north-south aligned steel girders. The girders are slightly cambered, increasing in height towards the centre, and are pierced by regularly spaced hexagonal openings. The same girders are visible over the rear north-west area of the Control Room [1F15].

The only piece of electrical equipment to survive within the room is located at the south-west corner. Here, two metal cabinets house the controls for the Interim Control Room's heating and air-conditioning systems [1].

*Features of particular significance:* The evidence for the form of the curving mimic boards to the east and west walls.

*Notes on dating/interpretation:* In the mid 1970s, this room formed the West Yorkshire District Control Room, one of two District Control Rooms within the Becca Hall complex. However, from 1983 to 1993, it housed the Interim Control Centre, which was itself replaced by the existing Control Room [1F15] when this became operational in 1993. Each mimic board was apparently of two levels, and electrical plug sockets are set into the wall at the approximate height of where the base of the upper level would have been; one board formed a diagram of sub-station layouts and the other an overview diagram [2].

*Significance/importance:*

*B/W photographs:* 3/3, 3/4, 3/5, 3/6, 3/7, 3/9, 3/10,    *Colour slides:*  
3/11, 3/12 (plates 108, 115, 113,  
110, 111, 116, 109, 114, 112)

*References:* [1] Shaun Richardson, EDAS site visit  
[2] John Hughes, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

*Room number:* 2F1

*Room name:* Extension Upper Floor

*Location:* Above west end of north part of  
first floor

*Floor level:* Second floor

*Internal dimensions and height:* 12.10m east-west by 4.40m north-south.

*Description:*

Extension Upper Floor. The room is accessed via a staircase rising from Asset Management [1F21] on the first floor. The room is lit by windows in the north and west walls, and has a doorway leading to an external fire escape to the east wall. The interior is very plain, and the internal finishes are as described for the first floor spaces (for example, 1F1 and 1F6) [1].

*Features of particular significance:*

*Notes on dating/interpretation:* Although the outline of the room is shown in plan in 1988, the second floor was apparently not added until after 1989 [2] [3].

*Significance/importance:*

*B/W photographs:* 2/15 (plate 117)

*Colour slides:*

*References:* [1] Shaun Richardson EDAS, site visit

[2] Ordnance Survey 1988 1:2500 map sheet SE4138

[3] Ray Hall, pers. comm.

*Record created:* SR 09/12

*Record updated:* ED 10/12

---

**APPENDIX 3**  
**LISTED BUILDING SPECIFICATION**

### APPENDIX 3: LISTED BUILDING DESCRIPTION



IoE Number: 342219  
Location: BECCA HALL (HOUSE ONLY) AT SE419387,  
ABERFORD, LEEDS, WEST YORKSHIRE  
Photographer: Mr A J Ridsdale ARPS  
Date Photographed: 06 November 1999  
Date listed: 03 December 1986  
Date of last amendment: 03 December 1986  
Grade II

#### ABERFORD SE43NW LS25 2/1 Becca Hall (house only) at SE419387 II

Country house, now offices. Late C18, attributed to William Lindley for William Markham; enlarged and altered in C19. Sandstone ashlar, low-pitched hipped slate roofs on 2 levels. Original house of rectangular double-depth plan, enlarged by addition of set-back receding crosswings and extension to rear between these. Classical style, symmetrical. Main range of 2 storeys and 5 bays, with 3-bay pediment breaking a balustraded parapet, has a tetrastyle Tuscan porch with entablature surmounted by a shield with scrolled bearers, a large single-storey canted bay on each side and tripartite sashed window above (probably C19 alterations), 4 sashed windows as 1st-floor and an oculus in the pediment. Wings of 2 higher storeys with the appearance of 3; each has a 1st-floor sillband, on each floor a tripartite sashed window in a shallow segmental-headed recess, and above the ground-floor window a low tripartite mezzanine window; a moulded cornice and low parapet with urn finials on the corners. Rear of main range remodelled in C19 to make principal entrance and staircase. Interior: central reception hall with flying stone staircase (C19); principal ground-floor rooms have moulded plaster decoration in exuberant late C19 style, and that in the east wing also has fielded panelling which may be C18. William Markham was Private Secretary to Governor General of India, Warren Hastings. (Service wing attached at west end and modern workshop wing to north are not included in the item).

**APPENDIX 4  
WYAAS SPECIFICATION**

**Specification for Historical Research Photographic Building Recording  
Former CEGB Control Centre, Becca Hall, Aberford  
(4188 3873)**

**Specification prepared at the request of the James Fawcett (in advance of demolition)**

## **1 Summary**

1.1 A building record (both drawn and photographic survey) is required to identify and document items of archaeological and architectural interest prior to the demolition of this 1950s and later Central Electricity Generating Board control centre. This specification for the necessary work has been prepared by the West Yorkshire Archaeology Advisory Service, the curators of the West Yorkshire Historic Environment Record.

NOTE: The requirements detailed in paragraphs 6.1.1 to 6.1.5 inclusive, 8.3 and 8.4 are to be met by the archaeological contractor **prior** to the commencement of fieldwork by completing and returning the attached form to the WY Archaeology Advisory Service.

## **2 Site Location and Description**

### **2.1 Location**

(Grid ref. 4188 3873) The site lies to the rear (north-west facing side) of the grade II Becca Hall which is located in farm and parkland to the north-west of Aberford.

The site, with associated yard has a foot print of c295m<sup>2</sup>.

### **2.2 Description**

The Becca Hall Control Centre is constructed on gently rising ground to the north-west of the listed Georgian hall and comprises 3 obvious phases dated on on the style of construction and limited historic information to the late 1950s- 60s, 1970s and 1980s. The centre is a two storey flat roofed building that appears to be of concrete frame with brick curtain walling construction. The earliest block comprises redbrick cladding with a blue brick diaper pattern. A basement, including backup generator room is located below this part of the control centre. Later phases are in buff to grey bricks and utilitarian. The earliest phase is attached to the hall via a two storey link wing.

A court yard with various garages, diesel storage tanks and backup generator house lies to the west of the centre. A car park, turning area and fire-fighting reservoir/pond are located to the east and a radio mast and associated small building is located to the north-east.

## **3 Planning Background**

The site owners Mr James Fawcett wishes to demolish the control centre buildings and return the listed hall to a domestic residence. Although no planning application is currently active the WYAAS as supplied this specification for recording works on behalf of Leeds City Council's and it is in accordance with paragraph 141 of the National Planning Policy Framework.

## 4 Archaeological Interest

### 4.1 Historical Background

The Central Electricity Generating Board (CEGB) was created in 1957 to rationalise the structure of the electricity industry which had been nationalised in the years after the Second World War. The CEGB was tasked with generating and distributing electricity in a cost efficient manner and initially comprised 12 regional divisions (soon reduced to 5 regions). The CEGB made huge investments in new and innovative generating plant and distribution networks.

It is understood that under this new structure the CEGB acquired Becca Hall in 1958 as the Leeds Regional Control Centre. Its role would have been to anticipate local demand, secure sufficient supplies of electricity and control and monitor its distribution through the high voltage network (400/275/132kV) within its area of responsibility. There was a National Control Centre in London and up to 8 regional control centres. The control centres were often located near large cities or conurbations. It is believed that control of remote installations was affected through telephony and electromechanical systems and latterly radio control. Considerable quantities of this last fit of equipment survives *in situ* at Becca Hall. Following privatisation of the electricity industry in 1990 national Grid PLC took on the role of the CEGB for the regional electricity companies.

Although the (CEGB) control centre is identified by English Heritage as a “central war room at Becker [sic] Hall near Leeds” in their study of Cold War Architecture (Cocroft et al 2002: pp 227) this assertion has subsequently undergone exaggeration to claims of the site being a nuclear bunker. Further Information from Wayne D Cocroft of English Heritage has established that the emergency or wartime arrangements made by national utility providers are very poorly understood. However, During the period of its operation it is unlikely that Becca Hall would have been designed to resist attack but probably had a protected element although an inspection in March 2006 revealed little evidence of this. Becca Hall is described as “CEGB Becca Hall Atomic & Computer Centre” in a 1973 list of projects by the consulting engineers F J Samuely and Partners Ltd.. It is unclear what is meant in this title.

Recent inspection by the WYAAS and comparison with other cold war structures would suggest that although a secure complex that superficially exhibits some aspects of a protected structure the overall nature of the site would not render it particularly defensible during a nuclear confrontation or conventional attack. The Central Electricity Authority, which was formed on the nationalisation of the industry in 1958, built a hardened bunker at Rothwell during the early to mid 1950s. This structure may have been intended to control the network during wartime.

From an architectural, organisational, technological and historical perspective the control centre exhibits a variety of interesting features and phases of development. For these reasons the CEGB facility at Becca is considered worthy of further study and record prior to its demolition.

### 4.2 Impact of proposed development

The owner proposes to demolish the entirety of the CEGB building as part of his plans to reinstate the hall as a private dwelling.



## 5 Aims of the Project

5.1 The first aim of the proposed work is to identify and objectively record by means of photographs and annotated measured drawings any significant evidence for the original and subsequent historical form and functions of the complex, and to place this record in the public domain by depositing it with the WY Historic Environment Record (Registry of Deeds, Newstead Road, Wakefield WF1 2DE).

5.2 The second aim of the proposed work is to analyse and interpret the buildings as an integrated system intended to perform a specialised function with various subdivisions and disciplines within accommodated within the site. The archaeologist on site should give particular attention to reconstructing as far as possible the functional arrangements and division of the building. The roles of historical plan form, technical layout, functional divisions and staff circulation should all be considered in this process of interpretation.

## 6 Recording Methodology

### 6.1 General Instructions

#### 6.1.1 Health and Safety

The archaeologist on site will naturally operate with due regard for Health and Safety regulations. Prior to the commencement of any work on site (and preferably prior to submission of the tender) the archaeological contractor may wish to carry out a Risk Assessment in accordance with the Health and Safety at Work Regulations. The archaeological contractor should identify any contaminants which constitute potential Health and Safety hazards (e.g. chemical drums) and make arrangements with the client for decontamination/making safe as necessary and appropriate. The WY Archaeology Advisory Service and its officers cannot be held responsible for any accidents or injuries which may occur to outside contractors engaged to undertake this survey while attempting to conform to this specification.

#### 6.1.2 Confirmation of adherence to specification

Prior to the commencement of any work, the archaeological contractor must confirm in writing adherence to this specification (using the attached form), or state in writing (with reasons) any specific proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WY Archaeology Advisory Service to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor (see para. 8.3, below). Modifications presented in the form of a re-written project brief will not be considered by the West Yorkshire Archaeology Advisory Service.

#### 6.1.3 Confirmation of timetable and contractor's qualifications

Prior to the commencement of *any work*, the archaeological contractor must provide WYAAS in writing with:

- a projected timetable for the site work
- details of project staff structure and numbers
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*)
- details of any specialist sub-contractors

All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. In particular, staff involved in building recording

should have proven expertise in the recording and analysis of industrial buildings. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

#### 6.1.4 Documentary research

The archaeological contractor undertake a rapid survey of documents and plans which the WYAAS observed were held on site which contains information on the construction and operation of the centre (the contractor should liaise with Mr Fawcett on this matter). Other relevant sources may be held at in a Local History Library (in the first instance contact Leeds Central Library; [localstudies@leedslearning.net](mailto:localstudies@leedslearning.net)) and the West Yorkshire Archive Service's Leeds Branch (WYAS, Leeds 2 Chapeltown Road Sheepscar Leeds LS7 3AP; 0 113 214 5814). Contact should be made with the current electricity distribution company, National Grid PLC, Yorkshire Electric and the National Archives (<http://www.nationalarchives.gov.uk/>) to establish if they hold any information. This work is intended to inform the archaeological recording by providing background information with regard to function and phasing. Please note that this exercise is not intended to be a formal desk-based assessment, and should not represent a disproportionate percentage of the time allowed for the project overall.

#### 6.1.5 Use of existing plans

General drawings were prepared for an earlier application (Leeds 07/ 07702/LI) and materials are held on site. These may be employed to provide photographic location plans If the archaeological contractor considers them suitable and relevant permission is obtained from the originator.

### **6.2 Sequence of 6.2.1 Initial record**

The structures should be recorded as extant, with due provision made for the removal of any debris or modern material which may obscure fabric or features requiring an archaeological record.

### **6.3 Written Record**

The archaeologist on site should carefully examine all parts of each building prior to the commencement of the photographic recording, in order to identify all features relevant to its original use and to obtain an overview of the development of the building and of the site as a whole. As part of this exercise, the archaeologist on site should produce written observations (e.g. on phasing; on building function) sufficient to permit the preparation of a report on the structure. This process should include the completion of a Room Data Sheet or similar structured recording pro-forma<sup>1</sup> for each room or discrete internal space within the volume of the structure. The crucial requirement is that each room should be examined individually, that the results of that examination should be noted in a systematic fashion, and that these objective observations should be used to inform an analytical interpretation of the overall development and operation of the site.

but this list should not be treated as exhaustive. The archaeologist on site should also identify and note:

<sup>1</sup> The WY Archaeology Advisory Service would recommend the employment of the attached pro-forma, but will consider any suitable alternative which the archaeological contractor may wish to submit (Note that agreement for the employment of an alternative *schema* must be obtained in writing from the WY Archaeology Advisory Service prior to the commencement of work on site).

- any significant changes in construction material – this is intended to include significant changes in stone/brick type and size
- any blocked, altered or introduced openings
- evidence for phasing, and for historical additions or alterations to the building.

## **6.4 Photographic Record**

### 6.5.1 External photographs

An external photographic record should be made of all elevations of each building in the complex, from vantage points as nearly parallel to the elevation being photographed as is possible within the constraints of the site. The contractor should ensure that all visible elements of each elevation are recorded photographically; this may require photographs from a number of vantage points. A general external photographic record should also be made which includes a number of oblique general views of the buildings from all sides, showing them and the complex as a whole in their setting. In addition, a 35mm general colour-slide survey of the buildings should also be provided (using a variety of wide-angle, medium and long-distance lenses). While it is not necessary to duplicate every black-and-white shot, the colour record should be sufficiently comprehensive to provide a good picture of the form and general appearance of the complex and of the individual structures.

### 6.4.2 Internal photographs

A general internal photographic record should be made of each building. General views should be taken of *each room* or discrete internal space from a sufficient number of vantage points to adequately record the form, general appearance and manner of construction of each area photographed. In areas which are wholly modern in appearance, character and materials, a single shot to record current appearance will suffice.

### 6.4.3 Detail photographs

In addition, detailed record shots should be made of all individual elements below. Elements for which multiple examples exist (e.g. each type of roof truss, column or window frame) may be recorded by means of a single representative illustration.

- The Control Room status board
- Original (pre 1980s) window and door opening
- Plant rooms and plant spaces
- The basement of the early red brick centre
- The different construction system employed within the centre where accessible in ceiling voids etc.
- All entrances/exits
- Circulation spaces
- The radio mast and associated structures
- Garages and storage rooms off the courtyard
- Any security measures and methods of controlling access

**N.B.** Detail photographs must be taken at medium-to-close range and be framed in such a way as to ensure that the element being photographed clearly constitutes the principal feature of the photograph.

### 6.5.4 Equipment

General photographs should be taken with a Large Format camera (5" x 4" or 10" x 8") using a monorail tripod, or with a Medium Format camera which has, if appropriate, perspective control, using a tripod. The contractor must have proven expertise in this type of work. Other detail photographs may be taken with either a Medium Format or a 35mm camera. All detail photographs must contain a graduated photographic scale of appropriate dimensions (measuring tapes and surveying staffs are not considered to be acceptable scales in this context). A 2-metre ranging-rod, discretely positioned, should be included in a selection of general shots, sufficient to independently establish the scale of all elements of the building and its structure.

#### 6.5.5 Film stock

All record photographs to be black and white, using conventional silver-based film only, such as Ilford FP4 or HP5, or Delta 400 Pro (a recent replacement for HP5 in certain film sizes such as 220). Dye-based (chromogenic) films such as Ilford XP2 and Kodak T40CN are unacceptable due to poor archiving qualities.

#### 6.5.6 Digital photography

As an alternative to our requirement for colour slide photography, good quality digital photography may be supplied as an alternative, using cameras with a minimum resolution of 4 megapixels. Note that conventional black and white print photography is still required and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied in three file formats (as a RAW data file, a DNG file and as a JPEG file). The contractor must include metadata embedded in the DNG file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. Images are to be supplied to WYAAS on gold CDs by the archaeological contractor accompanying the hard copy of the report.

#### 6.5.7 Printing

6.5.6a Record photographs should be printed at a minimum of 5" x 7". In addition a small selection of photographs (the best of the exterior setting shots and interior shots) should be printed at 10" x 8". Bracketed shots of identical viewpoints need not be reproduced, but all viewpoints must be represented within the report.

6.5.6b Prints may be executed digitally from scanned versions of the film negatives, and may be manipulated to improve print quality (but **not** in a manner which alters detail or perspective). All digital prints must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, the contractor must supply details of the paper/inks used in writing to the WY Archaeology Advisory Service, with supporting documentation indicating their archival stability/durability. Written confirmation that the materials are acceptable must have been received from the WYAAS prior to the commencement of work on site.

#### 6.5.7 Documentation

A photographic register detailing (as a minimum) location, direction and subject of shot must accompany the photographic record; a separate photographic register

should be supplied for any colour slides or for colour digital photographs. The position and direction of each photograph and slide should be noted on a copy of the building plan, which should also be marked with a north pointer; separate plans should be annotated for each floor of each building

## **7. Post-Recording Work and Report Preparation**

### **7.1 After completion of fieldwork**

Prior to the commencement of any other work on site, the archaeological contractor should arrange a meeting at the offices of the WY Archaeology Advisory Service to present a photo-location plan, and photographic contact prints adequately referenced to this plan (material supplied will be returned to the contractor). **N.B.** if full-sized prints or digital versions of contact sheets are supplied for this purpose, they must be accompanied by a sample of the processed negatives. If appropriate, the WY Archaeology Advisory Service will then confirm to District Planning Services that fieldwork has been satisfactorily completed and that other work on site may commence (although discharge of the archaeological condition will not be recommended until a completed copy of the full report and photographic record has been received and approved by the West Yorkshire Archaeology Advisory Service). Please note that as of the 1<sup>st</sup> April 2011, the WYAAS will charge the archaeological contractor a fee for each fieldwork verification meeting.

### **7.2 Report Preparation**

#### 7.2.1 Report format and content

A written report should be produced. This should include:

- an executive summary including dates of fieldwork, name of commissioning body, and a brief summary of the results including details of any significant finds
- an introduction outlining the reasons for the survey
- a brief architectural description of the buildings presented in a logical manner (as a walk around and through the buildings, starting with setting, then progressing to all sides of the structure in sequence, and finally to the interior from the basement up)
- a discussion placing the complex in its national, historical and technological contexts, describing and analysing the development of individual structures and of the complex as a whole. This analysis should consider the site type as an integrated system intended to perform a specialised function, with particular attention being given to historical plan form, technical layout and process flow.

Both architectural description and historical/analytical discussion should be fully cross-referenced to the drawn and photographic record, sufficient to illustrate the major features of the site and the major points raised.

The cover sheet should include a centred eight-figure OS grid reference and the name of the township in which the site is located (Aberford).

#### 7.2.2 Report Illustrations

Illustrations should include:

- a location map at a scale sufficient to allow clear identification of the control centre in relation to other buildings in the immediate area



- an overall keyed plan of the site showing the surviving buildings in relation to each other and to the buildings on site which have been demolished
- any relevant historic map editions, with the position and extent of the site clearly indicated
- a complete set of site drawings at a legible scale, on which position and direction of each photograph has been noted
- any additional illustrations pertinent to the site
- a complete set of good-quality laser copies of all photographs (reproduced at a minimum of 6" by 4").

The latter should be bound into the report in the same logical sequence employed in the architectural description (Para. 7.2.1 above) and should be appropriately labelled (numbered, and captioned in full). When captioning, contractors should identify the individual photographs by means of a running sequence of numbers (e.g. Plate no. 1; Plate no. 2), and it is this numbering system which should be used in cross-referencing throughout the report and on the photographic plans. However, the relevant original film and frame number should be included in brackets at the end of each caption.

### 7.3 Report deposition

#### 7.3.1 General considerations

7.3.1a The report should be supplied to the client and identical copies supplied direct to the West Yorkshire HER, the WY Archive Service and to the National Monuments Record (English Heritage, Kemble Drive, Swindon SN2 2GZ – for the attention of Mike Evans, Head of Archives). The report supplied to the NMR should be in digital format only. A recommendation from WYAAS for discharge of the archaeological condition is dependant upon receipt by WYAAS of a satisfactory report which has been prepared in accordance with this specification. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS.

7.3.1b The report copy supplied to the West Yorkshire HER should include a complete set of photographic prints (see Para. 7.3.2 below). The finished report should be supplied within eight weeks of completion of all fieldwork, unless otherwise agreed with the West Yorkshire Archaeology Advisory Service. The information content of the report will become publicly accessible once deposited with the Advisory Service, unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposit.

7.3.1c **Copyright** - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act 1988* (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for non-commercial use by third parties, with the copyright owner suitably acknowledged.

7.3.1.d The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project

is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

7.3.1e With the permission of the developer, the archaeological contractor are encouraged to consider the deposition of a copy of the report for this site with the appropriate Local History Library.

### 7.3.2 Deposition with WY Archaeology Advisory Service (West Yorkshire Historic Environment Record)

The report copy supplied to the WY Archaeology Advisory Service should also be accompanied by both the photographic negatives and a complete set of labelled photographic prints (mounted in KENRO display pockets or similar, and arranged in such a way that labelling is readily visible) bound in a form which will fit readily into a standard filing cabinet suspension file (not using hard-backed ring-binders). Labelling should be on the *back* of the print in pencil giving film and frame number only and on applied printed labels on the front of the appropriate photographic sleeve which should include:

- film and frame number
- date recorded and photographer's name
- name and address of building
- national grid reference
- specific subject of photograph.

Negatives should be supplied in archivally stable mounts (KENRO display pockets or similar), and each page of negatives should be clearly labelled with the following:

- Township name
- Site name and address
- Date of photographs (month/year)
- Name of archaeological contractor
- Film number

Colour slides should be mounted, and the mounts suitably marked with – ‘Aberford’ (the Township name) with ‘Becca Hall CEGB Leeds Control Room’ under, at the top of the slide; grid reference at the bottom; date of photograph at the right hand side of the mount; subject of photograph at the left hand side of the mount. Subject labelling may take the form of a numbered reference to the relevant photographic register. The slides should be supplied to the WY Archaeology Advisory Service in an appropriate, archivally stable slide hanger (for storage in a filing cabinet).

## **7.4 Summary for publication**

The attached summary sheet should be completed and submitted to the WY Archaeology Advisory Service for inclusion in the summary of archaeological work in



West Yorkshire published on the WYAAS website. During fieldwork monitoring visits WYAAS officers will take digital photographs which may be published on the Advisory Service's website as part of an ongoing strategy to enable public access to information about current fieldwork in the county.

### **7.5 Preparation and deposition of the archive**

After the completion of all recording and post-recording work, a fully indexed field archive should be compiled consisting of all primary written documents and drawings, and a set of suitably labelled photographic contact sheets (only). Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum, 2007). The field archive should be deposited with the Leeds City Office of the West Yorkshire Archive Service (WYAS, Leeds 2 Chapeltown Road Sheepscar Leeds LS7 3AP, 0113 214 5814, leeds@wyjs.org.uk), and should be accompanied by a copy of the full report as detailed above. Deposition of the archive should be confirmed in writing to the WY Archaeology Advisory Service.

## **8 General considerations**

### **8.1 Technical queries**

Any technical queries arising from this specification should be addressed to the WY Archaeology Advisory Service without delay.

### **8.2 Authorised alterations to specification by contractor**

It should be noted that this specification is based upon records available in the West Yorkshire Historic Environment Record and on a brief examination of the site by the West Yorkshire Archaeology Advisory Service. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or
- iii) any features which should be recorded, as having a bearing on the interpretation of the structure, have been omitted from the specification,

then it is expected that the archaeologist will contact the WY Archaeology Advisory Service as a matter of urgency. If contractors have not yet been appointed, any variations which the WY Archaeology Advisory Service considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, the WY Archaeology Advisory Service will resolve the matter in liaison with the developer and the Local Planning Authority.

### **8.3 Unauthorised alterations to specification by contractor**

It is the archaeological contractor's responsibility to ensure that they have obtained the West Yorkshire Archaeology Advisory Service's consent in writing to any

variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in the WY Archaeology Advisory Service being unable to recommend discharge of the archaeological recording condition to the Local Planning Authority and are made solely at the risk of the contractor.

#### **8.4 Monitoring**

This exercise will be monitored as necessary and practicable by the WY Archaeology Advisory Service in its role as 'curator' of the county's archaeology. The Advisory Service should receive at least one week's notice in writing of the intention to start fieldwork. A copy of the contractor's Risk Assessment should accompany this notification.

#### **8.5 Valid period of specification**

This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

Any queries relating to this specification should be addressed to the WY Archaeology Advisory Service without delay.

**West Yorkshire Archaeology Advisory Service**  
**David Hunter**

**March 2012**

**West Yorkshire Archaeology Advisory Service**  
**Registry of Deeds**  
**Newstead Road**  
**Wakefield**  
**WF1 2DE**

**Telephone: (01924 306798).**  
**Fax: (01924) 306810**  
**E-mail: [dhubter@wyjs.org.uk](mailto:dhubter@wyjs.org.uk)**