

Thurlstone Primary School Air Raid Shelters, Royd Moor Road, Thurlstone, Barnsley – Historic Building Recording

Hague Plant



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Thurlstone, Barnsley – Historic Building Recording

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Executive Summary

Ecus Ltd were commissioned by Hague Plant to undertake Historic Building Recording of an Air Raid Shelter at Thurlstone Primary School, Royd Moor Road, Barnsley, South Yorkshire (hereafter 'the site') located at National Grid Reference 423173, 403709.

The programme of historic building recording had been requested prior to the demolition of the air raid shelters to accommodate an extension to the current school building. The historic building recording was carried out in accordance with a brief from the South Yorkshire Archaeology Service (SYAS).

The air raid shelters are located within the grounds of Thurlstone Primary School, Royd Moor Road, Thurlstone, Barnsley. The building is located immediately to the west of the current primary school building, under the school playing field.

The historic building recording was focused upon the eastern part of the air raid shelter (Tunnel B), with the western tunnel (Tunnel A) not recorded in detail as access was limited by rubble which had been used to partially infill the tunnels. Tunnel A is to remain buried and will not require excavation or demolition. The air raid shelter at Thurlstone Primary School is of a standardised prefabricated design, known as a Stanton Air Raid Shelter. Preparations for the building began in May 1939 and the shelter was completed in late 1939. Regular air raid precaution drills were undertaken and the shelter was used in response to alerts on a handful of occasions during school hours. The building is a good example of what was once a common form of building, and had received little alteration during its lifespan except for the loss of its primary stepped or laddered entrance, the timber benches and chemical toilets.

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Abbreviations and Conventions used in the text

ADS	Archaeological Data Service
BGS	British Geological Survey
c.	circa
HE	Historic England
ha	hectares
HA	Heritage Asset reference
HER	Historic Environment Record
km	kilometres
m	metres
NHLE	National Heritage List for England
NPPF	National Planning Policy Framework
OS	Ordnance Survey
SYAS	South Yorkshire Archaeology Service

1. Introduction

1.1 Project Background

1.1.1 Ecus Ltd were commissioned by Hague Plant to undertake Historic Building Recording of Air Raid Shelters at Thurlstone Primary School, Royd Moor Road, Barnsley, South Yorkshire (hereafter 'the site') located at National Grid Reference 423173, 403709.

1.1.2 The programme of historic building recording had been requested prior to the demolition of the air raid shelters to accommodate an extension to the current school building. The historic building recording was carried out in accordance with directions from the South Yorkshire Archaeology Service (SYAS).

1.2 Site Location

1.2.1 The air raid shelters are located within the grounds of Thurlstone Primary School, Royd Moor Road, Thurlstone, Barnsley (**Figure 1a**). The building is located immediately to the west of the current primary school building, under the school playing field.

1.2.2 The historic building recording was focused upon the eastern tunnel of the air raid shelter (Tunnel B) (**Figure 1b**), due to the extent of rubble, used to partially infill the tunnels, blocking access into the western tunnel (Tunnel A). Tunnel A is to remain buried and will not require excavation or demolition.

2. Methodology

2.1 Aims

2.1.1 The aims of the historic building programme were:

- To accurately record the form, character and architectural details of the building as existing.
- To identify and record any evidence of structural features, fixtures or fittings of historic significance; and
- To prepare a comprehensive indexed and cross referenced archive from the fieldwork record.

2.2 Standards

2.2.1 The building recording was undertaken in accordance with the Chartered Institute for Archaeologists *Standard and guidance for the archaeological investigation and recording of standing buildings or structures* (CIfA, 2014), and Historic England's *Understanding Historic Buildings – a guide to good recording practice* (2006).

2.3 Methodology

2.3.1 An analytical record was undertaken in line with Historic England's Level 2/3 survey (2006) comprising historic research, and the production of a drawn, written and photographic record.

2.3.2 A historical baseline was established for the building based on a desk-based review of existing publically accessible sources of primary and synthesised information, sources consulted comprising:

- National heritage datasets including the National Heritage List for England (NHLE), England's Places, Pastscape, Viewfinder, NMR Excavation Index and Parks and Gardens UK;
- Records held by Thurlstone Primary School;
- Records held by Barnsley Archives and Local Studies; and
- Available Ordnance Survey mapping.

2.3.3 A drawn record was compiled in CAD using a combination of hand measuring techniques and cross referencing with the architects supplied drawings. The final drawings are reproduced as **Figures 2 & 3** in this report, comprising a floor plan of the structure (NTS) and a cross section at a scale of 1:50.

2.3.4 A photographic record of the site was undertaken, comprising both detail and general viewpoints using a 35 mm SLR camera using Ilford HP5 (ISO 400) black and white film. This record is complemented by digital photography taken with a 20.4 megapixel digital camera. Graduated photo scales were positioned within the photos where practical, and the location and subject of each viewpoint was recorded. A selection of the photographic record is reproduced in this report as **Plates 1-11**, and their location and direction illustrated on **Figure 4** and recorded by way of a photo register reproduced in **Appendix 1**.

3. Historical Background

3.1 Stanton Air Raid Shelters

- 3.1.1 Stanton Air Raid Shelters were produced by the Stanton Ironworks Company Ltd near Nottingham (PGS, 2015). The Stanton Ironworks Company referred to the shelter as the 'Segment Shelter'. They could be built in any length and were comprised of precast concrete arched-shaped units which were bolted together (*ibid*). The segments were typically 20 inches (50.4 cm) wide and 7 feet (213 cm) high (Stanton Ironworks, nd) although variations were produced. These segments were set into transverse struts to ensure rigidity which were then slotted into longitudinal bearers (*ibid*). The segments were bolted at the apex and then each segment was bolted to its neighbour. The joints were then sealed with a bituminous compound (*ibid*). These shelters were often above ground or semi-sunk although concealed by a layer of earth and turf. Like the example at Thurlstone Primary School some were constructed as underground shelters (other examples being located at the Bicester and Oakington Airfields) (PSG 2015).

3.2 The air raid shelter at Thurlstone Primary School

- 3.2.1 The Headteacher's log books for the years 1880-1986 are held at Thurlstone Primary School. The first record of preparations at the school for air raid precautions occurs on the 17th November 1938 when the Headteacher left school at 1.55 pm to attend the first of a series of lectures on Air Raid Precautionary Measures. In March 1939 the log book notes that the children were fitted with gas masks and on the 15th May 1939 a deputation visited the school with regard to the siting of trenches under the Air Raid Precaution Measures. In August 1939 a test excavation was undertaken for the purpose of constructing the air raid shelters. The school closed for the day on the 1st September 1939 in accordance with instructions received – 'Air Raid Precautions – evacuation of Children, close of schools.' This was the day that Germany invaded Poland and the declaration of Britain going to War.
- 3.2.2 The shelter was evidently installed between August and early October as on the 19th October a chemical closet for the air raid shelter was received by the school. By February 1940 regular air raid evacuation drills were taking place and it would take on average 1 ½ - 1 ¼ minutes to evacuate the children. It was not until the 17th December 1940 that an 'Alert' was issued possibly relating to a heightened fear of repeat raids following the 'Sheffield Blitz'. Further 'alerts' occurred on the 10th January and the 12th February 1941. On the 10th February 1941 the caretaker had reported water to a depth of about two feet in the air raid shelter and the log book notes the infants' shelter was also flooded. It is not certain whether the infants' shelter was a tunnel of the same shelter recorded as part of this project, or a different one.
- 3.2.3 In 1942 the school took in limited numbers of official evacuees from London and began to take blackout precautions at the school. A final alert was sounded on the 4th March 1943 at 9:00 interrupting the morning assembly. The all clear was given by 9:25. Throughout 1943 and 1945 a number of the official evacuees began to leave the school either to return to London or continue their studies elsewhere, and finally on the 10th May 1945 it is noted that the school had closed for two days on the 8th and 9th of May for V-Day celebrations.

4. Building Description

4.1 Introduction

- 4.1.1 The air raid shelter is a single phase, single-storey, sub-ground building, constructed of pre-fabricated re-enforced concrete segments. The shelter is L shape in plan, with both tunnels measuring just over 9 m (29 ft 8') with a maximum height of just over 2 m (6 ft 9'). Tunnel B has a small entrance porch located at its south-eastern end measuring 1.44 m (4ft 8'). At the junction of Tunnels A & B is a manhole escape point located in the roof of the structure. A set of stairs or ladder would have been located on the northern side of Tunnel B at its eastern end, either side of which were pre-fabricated reinforced concrete walls. This area was excavated under archaeological supervision, however with the exception of the concrete walls no evidence of steps or ladders remained. A separate ladder would have been available within the shelter for use with the emergency escape.

4.2 Exterior

- 4.2.1 Prior to excavation the main body of the air raid shelter building was located entirely below ground. The exterior of the shelter is formed by smooth concrete sections which form two pointed arched tunnels (**Plate 1**). At the time of survey only Tunnel B had been excavated. The manhole escape point sits at the junction of these two tunnels and is built in brick with a concrete surround (**Plate 2**). The manhole cover is a later replacement by Roberts Castings Ltd.
- 4.2.2 The site of the former access point is marked by two prefabricated re-enforced concrete walls. A later brick wall blocked the entrance to the shelter (**Plate 3**).

4.3 Interior

- 4.3.1 At the time of survey only Tunnel B was accessible for inspection. Tunnel B is formed by 28 concrete segments, each 31 cm wide (12') (**Plates 4 & 5**). These segments are set into a transverse struts which have then been set into longitudinal bearers. The segments have been bolted together at the apex and at three further locations. The joints have been sealed with bitumen. Some of the sections bear numbers or Roman numerals in reverse (**Plate 6**), suggesting they were transferred from the mould. There is no evidence of any other manufacturing marks or graffiti along the length of the tunnel. At the south-eastern end of the tunnel is a re-enforced, two section, concrete door (**Plate 7**) which leads to a covered porch made identically to the remainder of the air shelter into which the stairs would have lead. The floor is formed of precast concrete sections, each measuring approximately 32 cm (1ft 5') cemented together.
- 4.3.2 Down either side of the tunnel are seven steel bench brackets (**Plate 8**). These are bolted by a plate to the lower bolt of the pre-cast segments of the air raid shelter. Formerly these would have carried a timber slatted bench, the majority of which has now perished (**Plate 8**). A single steel hook was noted at the south-eastern end of the tunnel, which may have at one time held a lantern (**Plate 9**).
- 4.3.3 The escape point is located at the junction of Tunnels A & B
- 4.3.4 From the available view of Tunnel A, it appears to be constructed in exactly the same manner as Tunnel B (**Plate 10**).

- 4.3.5 No evidence of the former chemical toilets was noted, however it is thought likely that these would have been located north of the manhole escape point at the junction of tunnels A & B, access could not be gained to this area at the time of survey (**Plate 11**).

5. Discussion

- 5.1.1 The air raid shelter at Thurlstone Primary School is a standard design, prefabricated Stanton Air Raid Shelter. The dimensions of the component parts are smaller than those recorded in observed documentation (Stanton Ironworks nd) and may have been a specific variation designed by the works for civilian use. Preparations for the building began in May 1939 and the shelter was completed in late 1939. Regular drills air raid precaution drills were undertaken and the shelter was used in response to alerts a handful of times during school hours. The building is a good example of what was once a common building and had received little alteration during its lifespan except for the loss of the primary entrance stairs, timber benches and chemical toilets.
- 5.1.2 The state of survival of the shelter, alongside the documentation for its use held by the school, is of particular historical interest. It is hoped that this record preserves the form and character of the shelter for future reference.
- 5.1.3 The shelter was inspected by South Yorkshire Air Museum to assess whether it could be relocated to the museum to form an exhibit, but was unfortunately deemed unsuitable due to the presence of asbestos in the bitumen used to join the segments. The school has, however, an aspiration to potentially use the preserved section of the air raid shelter for history events.

6. Archive

6.1 Location and Deposition

- 6.1.1 The project archive has been compiled into a stable, fully cross-reference and indexed archive in accordance with Appendix 6 of Management of Archaeological Projects (2nd Edition, Historic England 1991) and Archaeological archives – a guide to best practice in creation, compilation, transfer and curation (Brown 2007). The project archive is currently held at the offices of Ecus Ltd in Sheffield, under the project code 7561 and will be deposited in due course with Barnsley Archives and Local Studies.

6.2 OASIS

- 6.2.1 In line with best practice, a copy of this report will be made available through the Online AccesS to Index of archaeological InvestigationS {OASIS} Project (<http://ads.ahds.ac.uk/project/oasis/>), reference no. ecusltd1-244058. A copy of the OASIS form is reproduced in **Appendix 3**.

7. References

Chartered Institute for Archaeologists (CIfA) 2014. *Standard and guidance for the archaeological investigation and recording of standing buildings or structures.*

Historic England (HE) 2006. *Understanding historic Buildings – A guide to good recording practice*

The Pillbox Study Group, 2015. *Stanton Air Raid Shelter*. Available at <http://www.pillbox-study-group.org.uk/other-wwii-defensive-structures/air-raid-shelters/> [Consulted on 22/02/2016]

The Stanton Ironworks Company (SI), nd. *Stanton at War – The story of the part played by Stanton 1939-1945*. Available at https://web.archive.org/web/20120315214008/http://www.stantonironworks.co.uk/main_stanton_dir/books/STANTON%20AT%20WAR%201939%20%2045.pdf [Accessed on 22/02/2016]

Plates



Plate 1: View facing northwest along south side of Tunnel B (1.28)



Plate 2: Detail of the manhole escape point at the junction of Tunnels A & B (1.26)



Plate 3: Detail of south-eastern end of the air raid shelter, including blocked entrance leading from access point (1.33)



Plate 4: View facing southeast, along Tunnel B (1.18)



Plate 5: View facing northwest, along Tunnel B (Digital 1:19)



Plate 6: Detail of Roman numerals and numbers in reverse (1.12)



Plate 7: Detail of door and porch section (1:9)



Plate 8: Detail of steel bench bracket (1.14)



Plate 9: Detail of steel hook (Digital)

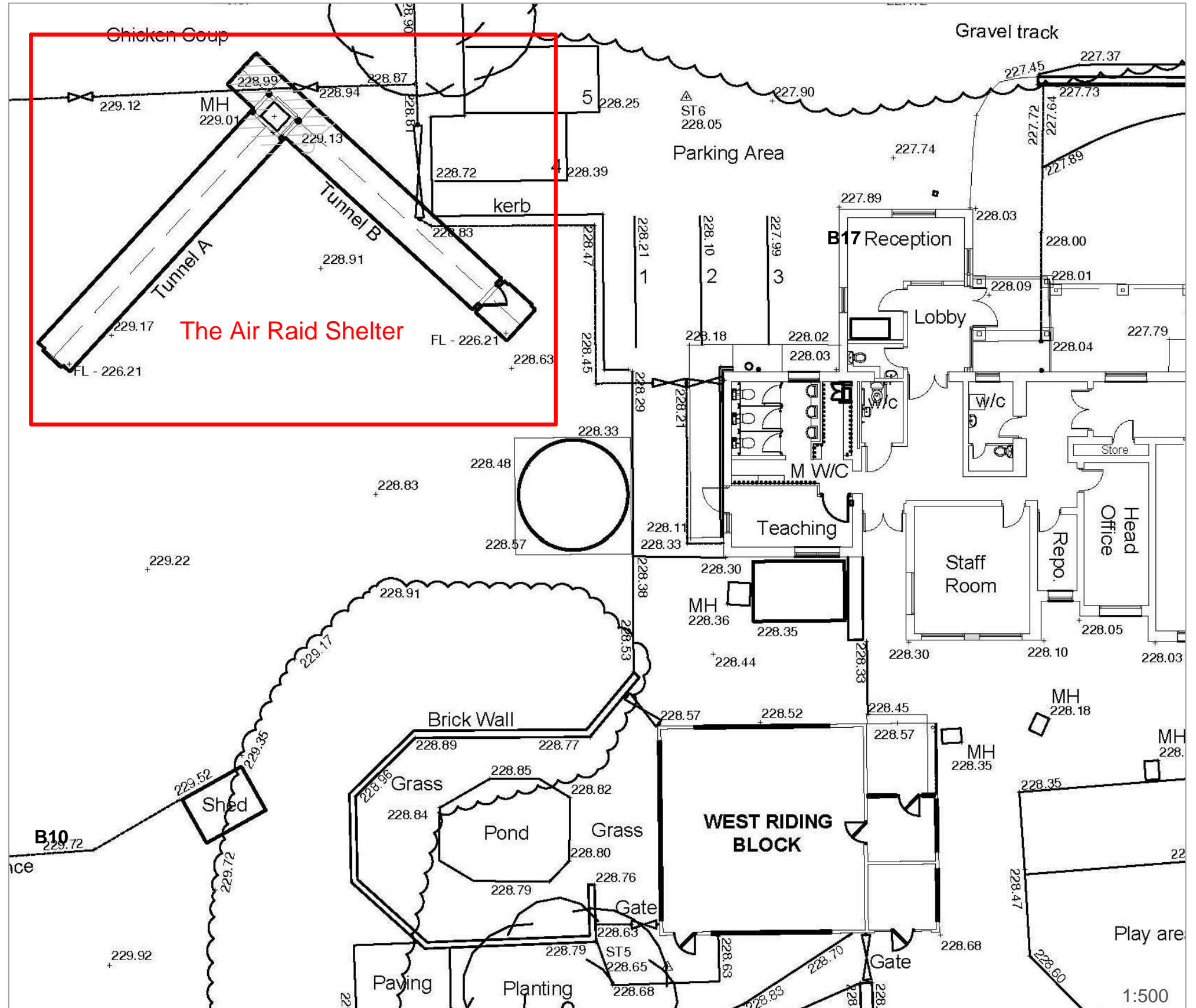
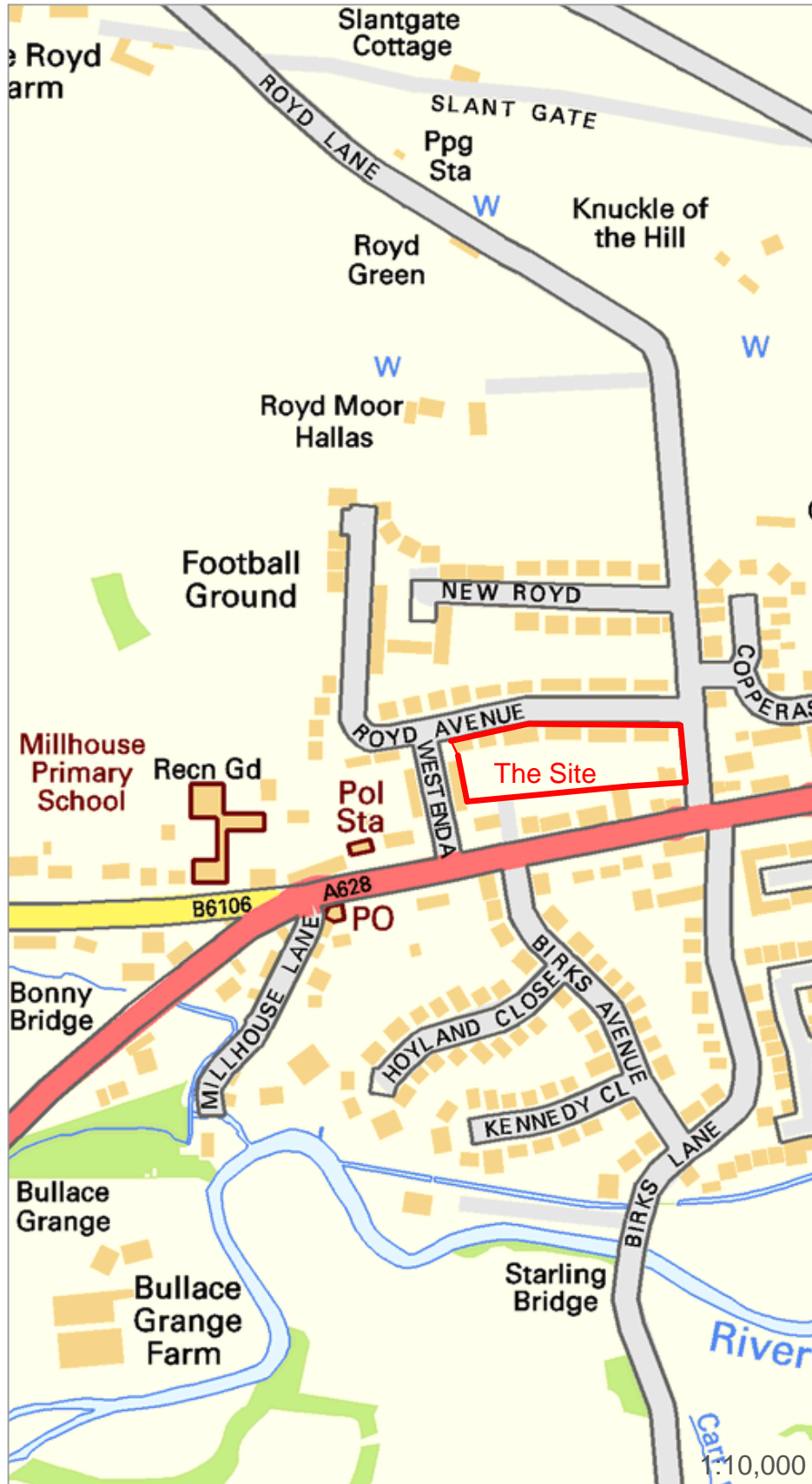


Plate 10: View along Tunnel A (Digital)



Plate 11: View to rear of air raid shelter past manhole escape point at the junction of tunnels A & B (Digital)

Figures

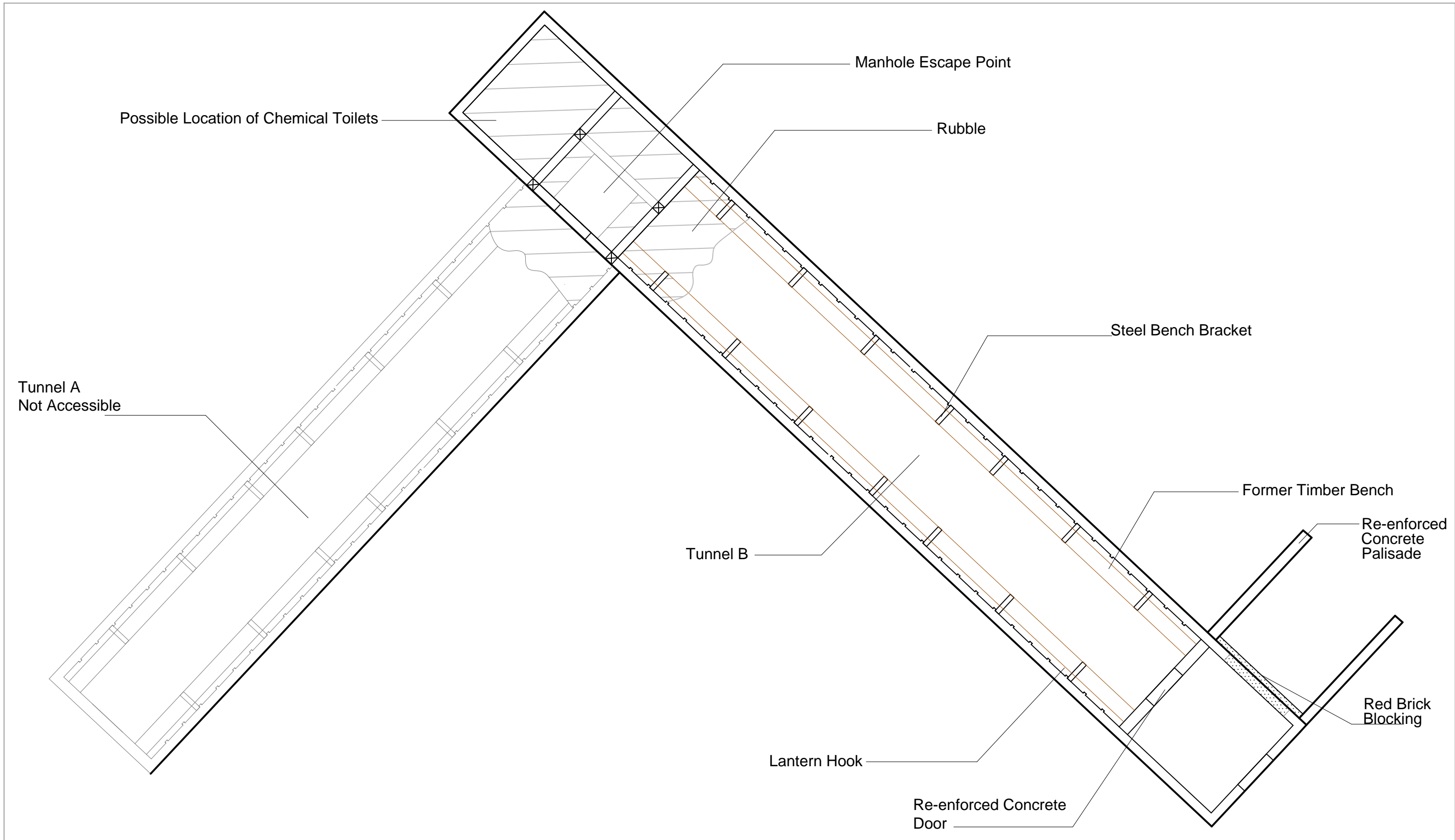


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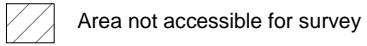



Hague Plant
Thurlstone Primary School, Air Raid Shelter, Royd Moor Road, Thurlston

Figure 1: Site Location Plan



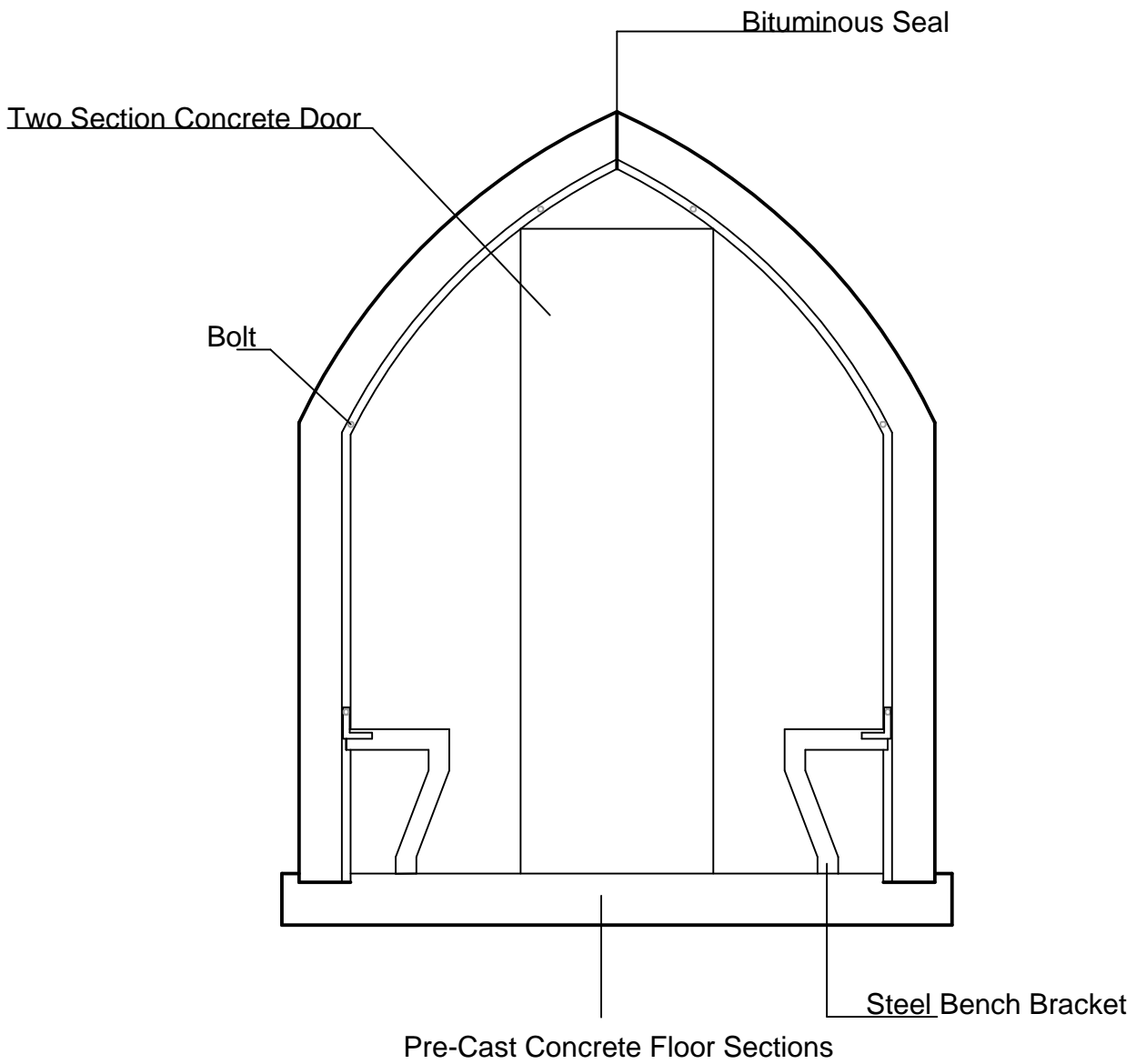
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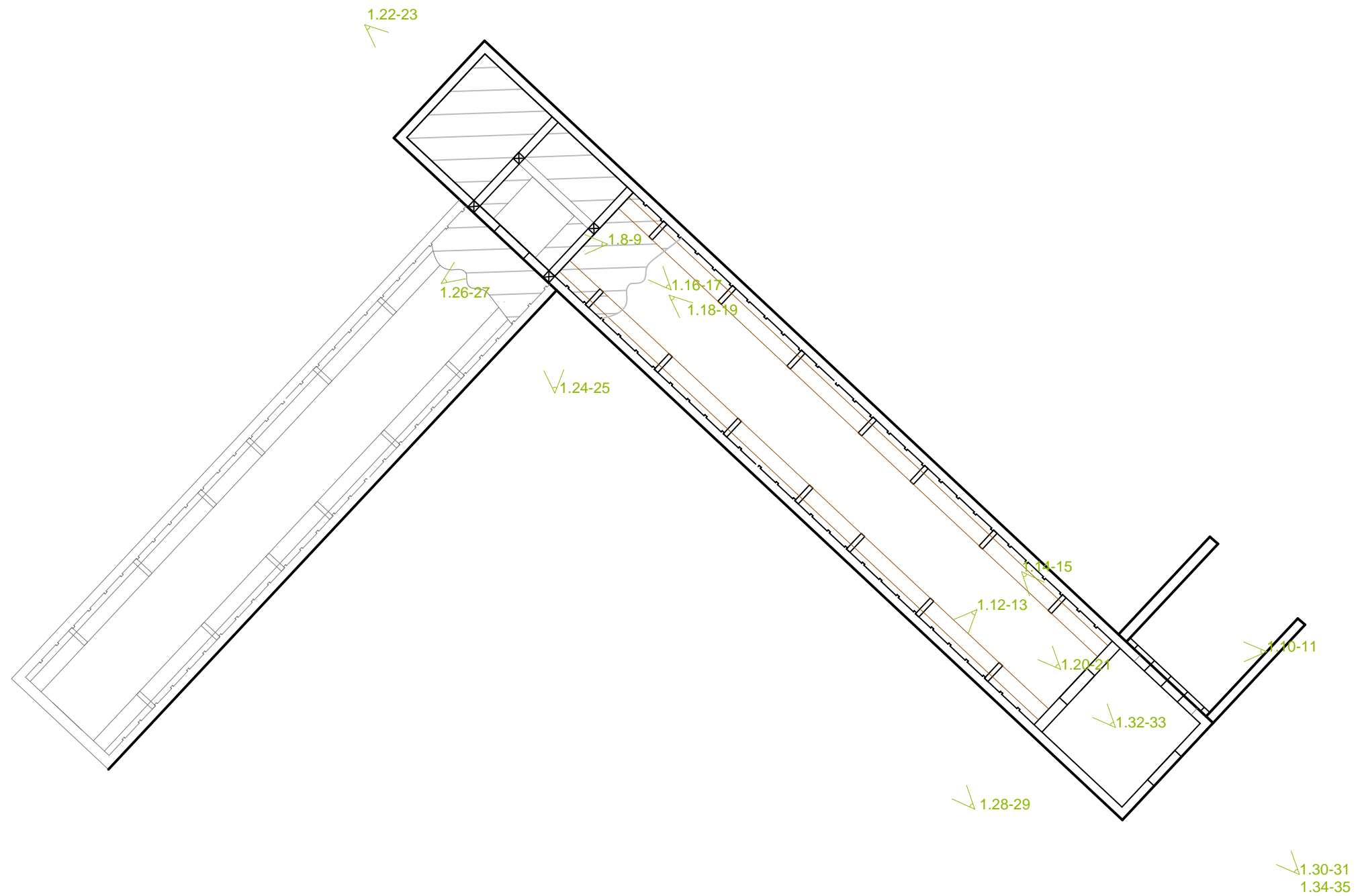
Key	
---	Exterior Wall
---	Overhead feature
---	Wall Unknown
---	Fitting
	Photo viewpoint
	Area not accessible for survey
	Blocking



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 Thurlstone Primary School Air Raid
 Shelter, Royd Moor Road, Thurlstone

Figure 2: Sketch Plan (NTS)





Key

- Exterior Wall
- Overhead feature
- Wall Unknown
- Fitting
- 1.1 Photo viewpoint
- [Hatched Box] Area not accessible for survey
- [Diagonal Line Box] Blocking



Appendix 1: Photo Register

SITE CODE: 7561 THURLSTONE PRIMARY SCHOOL		CAMERA: 35 MM FILM: B/W			FILM No. / 001	
FRAME	SUBJECT	DESCRIPTION	SCALE (M)	VIEW FROM	INITIAL	DATE
1.1 -1.7						
1.8	SHELTER	DETAIL OF JUNCTION	N/A	N	JO	10/02/16
1.9	SHELTER	DETAIL OF JUNCTION	N/A	N	JO	10/02/16
1.10	SHELTER	DETAIL OF DOOR	1M	E	JO	10/02/16
1.11	SHELTER	DETAIL OF DOOR	1M	E	JO	10/02/16
1.12	SHELTER	DETAIL OF PANEL SECTION	N/A	E	JO	10/02/16
1.13	SHELTER	DETAIL OF PANEL SECTION	N/A	E	JO	10/02/16
1.14	SHELTER	DETAIL OF BENCH BRACKET	0.3 M	N	JO	10/02/16
1.15	SHELTER	DETAIL OF BENCH BRACKET	0.3 M	N	JO	10/02/16
1.16	SHELTER	DETAIL OF COLLAPSED END	1M	S	JO	10/02/16
1.17	SHELTER	DETAIL OF COLLAPSED END	1M	S	JO	10/02/16
1.18	SHELTER	VIEW OF INTERIOR	1M	N	JO	10/02/16
1.19	SHELTER	VIEW OF INTERIOR	1M	N	JO	10/02/16
1.20	SHELTER	VIEW OF INTERIOR	1M	S	JO	10/02/16
1.21	SHELTER	VIEW OF INTERIOR	1M	S	JO	10/02/16
1.22	SHELTER	VIEW ALONG SHELTER	2M	N	JO	10/02/16
1.23	SHELTER	VIEW ALONG SHELTER	2M	N	JO	10/02/16
1.24	SHELTER	DETAIL OF JUNCTION	2 M	SW	JO	10/02/16
1.25	SHELTER	DETAIL OF JUNCTION	2 M	SW	JO	10/02/16
1.26	SHELTER	DETAIL OF MANHOLE	2 M	W	JO	10/02/16
1.27	SHELTER	DETAIL OF MANHOLE	2 M	W	JO	10/02/16
1.28	SHELTER	GENERAL VIEW OF LONG ELEVATION	2 M	SE	JO	10/02/16
1.29	SHELTER	GENERAL VIEW OF LONG ELEVATION	2 M	SE	JO	10/02/16
1.30	SHELTER	GENERAL VIEW OF ENTRANCE	N/A	S	JO	10/02/16
1.31	SHELTER	GENERAL VIEW OF ENTRANCE	N/A	S	JO	10/02/16
1.32	SHELTER	DETAIL OF BOLT ON EXTERNAL DOOR	2 M	S	JO	10/02/16
1.33	SHELTER	DETAIL OF BOLT ON EXTERNAL DOOR	2 M	S	JO	10/02/16
1.34	SHELTER	EXPOSED SOUTH FACING ELEVATION	2 M	S	JO	10/02/16
1.35	SHELTER	EXPOSED SOUTH FACING ELEVATION	2 M	S	JO	10/02/16
1.36	I.D SHOT	ID SHOT	N/A	JO	JO	10/02/16

Appendix 2: OASIS form

OASIS ID: ecusltd1-244058

Project name: Thurlstone Primary School Air Raid Shelters

Short description of the project: Ecus Ltd were commissioned by Hague Plant to undertake Historic Building Recording of an Air Raid Shelter at Thurlstone Primary School, Royd Moor Road, Barnsley, South Yorkshire (hereafter 'the site') located at National Grid Reference 423173, 403709. The Air Raid shelters are located within the grounds of Thurlstone Primary School, Royd Moor Road, Thurlstone, Barnsley. The building is located immediately to the west of the current primary school building, under the school playing field. The historic building recording was focused upon the eastern part of the air raid shelter (Tunnel B), with the western tunnel (Tunnel A) not recorded in detail as access was limited by rubble which had been used to partially infill the tunnels. Tunnel A is to remain buried and will not require excavation or demolition. The air raid shelter at Thurlstone Primary School is of a standardised prefabricated design, known as a Stanton Air Raid Shelter. Preparations for the building began in May 1939 and the shelter was completed in late 1939. Regular air raid precaution drills were undertaken and the shelter was used in response to alerts on a handful of occasions during school hours. The building is a good example of what was once a common form of building, and had received little alteration during its lifespan except for the loss of its primary stepped or laddered entrance, the timber benches and chemical toilets.

Project dates: Start: 19-02-2016 End: 26-02-2016

Previous/future work: No / No

Any associated project reference codes: 7561 - Contracting Unit No.

Type of project: Building Recording

Site status: None

Current Land use: Other 9 - Subterranean

Monument type: Building Modern

Significant Finds: None None

Methods & techniques: 'Annotated Sketch', 'Photographic Survey', 'Survey/Recording Of Fabric/Structure'

Prompt: National Planning Policy Framework - NPPF