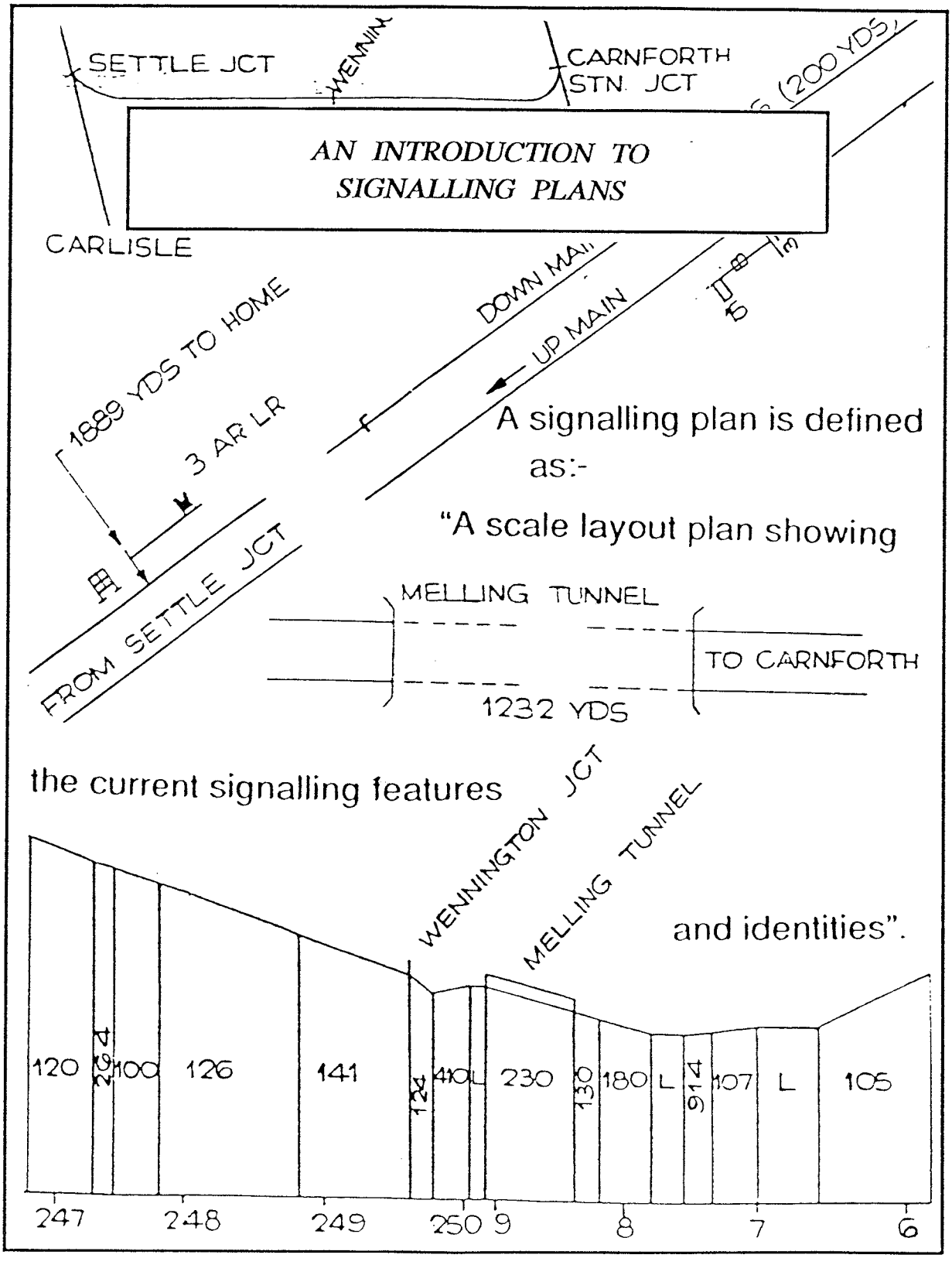
DIRECTOR OF S & T ENGINEERING.
WEST MIDLANDS PROJECTS GROUP.



## AN INTRODUCTION TO SIGNALLING PLANS

A signalling plan is defined in the Signalling Design Handbook No. SDHE11, page A01 as:- "A scale layout plan showing the current signalling features and identities".

In order for you to be able to understand and extract information from a signalling plan you need to know what the plan symbols mean.

This information is contained in BS376, Part 1 - Railways Symbols and Standard Signalling Principle No.51 - symbols to be used on signalling plans and sketches. These documents will be discussed in the next section of the course "An Introduction to Plan Symbols".

The Signalling Design Handbook also goes on to say that the signalling plan "is usually a derivative of a scheme plan".

So what may you ask is a scheme plan? A scheme plan is defined in the signalling design handbook No. SDHE11, page A01 as:-

"A scale layout plan of proposed signalling works which is used for the purpose of obtaining approval by all interested external departments and for estimating purposes. This plan may show equipment to be removed and equipment to be installed or may show the final signalling arrangement only".

As an example for the difference between a signalling plan and a scheme plan let us take a look at Whitchurch signalbox.

This is situated on the line between Crewe to Shrewsbury.

Figure 1 is a copy of a scheme plan No. D910007 (recovery of crossover) showing what signalling alterations have resulted in the crossover being recovered.

This plan is the one which a signal design engineer will use to produce a:

- 10% estimate;
- Wiring design details;
- Mechanical locking diagrams;
- Bonding diagrams etc.

continued

Figure 2 is a copy of Whitchurch signalbox signalling plan. This now no longer shows the crossover as it was recovered under the last scheme at Whitchurch D910007 (recovery of crossover). It tells anybody who refers to it the state of the signalling layout at present. Any consequential scheme plan will generally be derived from this plan.

The basic elements of Figure 3 that you have been given is that it contains:-

1. The stretch of line between Settle Junction and Carnforth which comes under the jurisdiction of Wennington Junction signalbox.

2. Any signals, points or associated signalling equipment controlled from that signalbox.

3. Gradient diagram showing the geographical inclines or declines of the area over which the railwayline passes. It is important to know this when deciding how far to space signals apart, an area covered later in the course.

4. Site plan or Location diagram shows the position of the signal box, in this case Wennington Junction, in relation to the surrounding area.

5. Other physical features which could affect the positioning of signals such as underbridges, overbridges and tunnels are included. These basic elements apply generally to any signalling plan or scheme plan. These will now be covered in more detail in the next section of the course, "An Introduction to Plan Symbols".

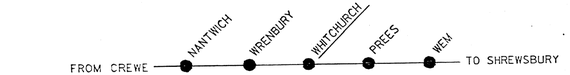
Attached to these notes are 2 examples of signalling plans:-

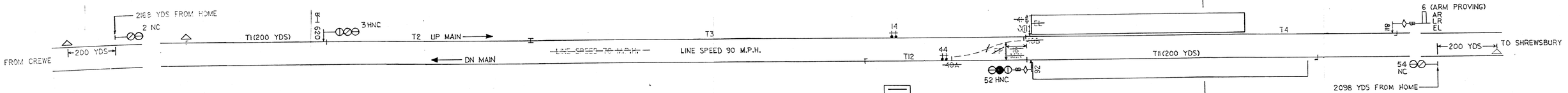
Whaley Bridge, (Figure 4)

Wennington Junction, (Figure 3).

end

## AN INTRODUCTION TO SIGNALLING PLANS




WHITCHURCH 13 MILES: 777 YARDS

SIGNAL BOX
TYPE:- ALL WOOD
SIZE:- 35'0" x 12'0"
ELEVATION:- 16'0"
DISTANCE FROM RAIL:- 8'0"

FRAME
TYPE:- LNW TUMBLER
SET OF 55 LEVERS
SPACES:- 1,27,45
SPARE:- 4,5,7-13,15-26,28-39,40,41
42,43,46-51,53,55

ILLUMINATED DIAGRAM
1 TO SIGNAL 3

EL- ELECTRICALLY LIT SIGNAL

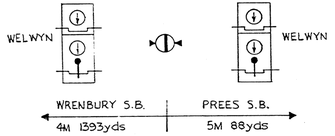
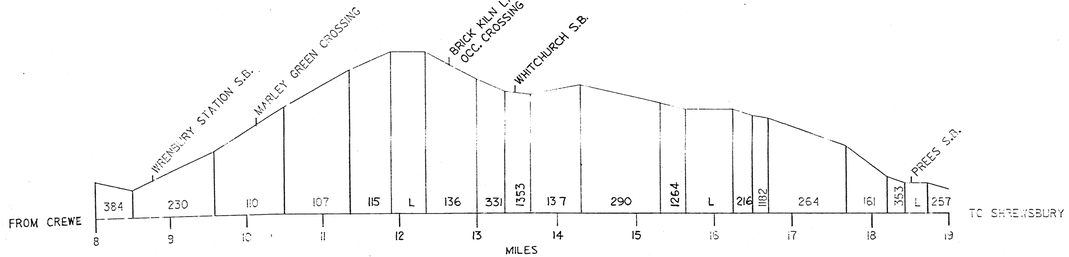
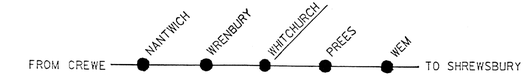


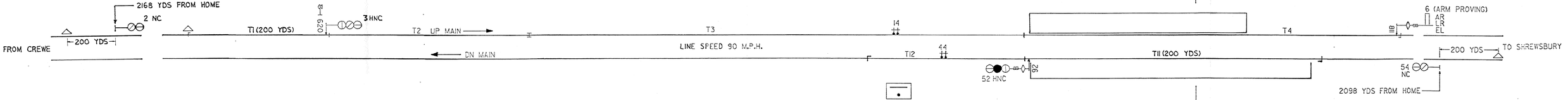

FIGURE 1




| Revisions | Status | Scales NOT TO SCALE | | Director of S & T Engineering | British Rail |
|---|---|---|---|---|---|
| | LINE CLASS 1<br>RS&TE REF. 541 | Produced | Date 28/3/91 | WHITCHURCH S.B.<br>(RECOVERY OF CROSSOVER) | SignalEngineer (works) WEST MIDLANDS |
| | | Checked | Approved | | No. D910007 |
| | | WHITCHURCH.SCH | | | |
| | | Issued | | | |

## AN INTRODUCTION TO SIGNALLING PLANS



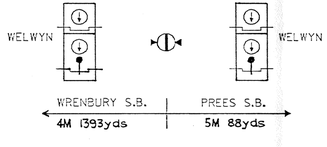

WHITCHURCH 13 MILES: 777 YARDS

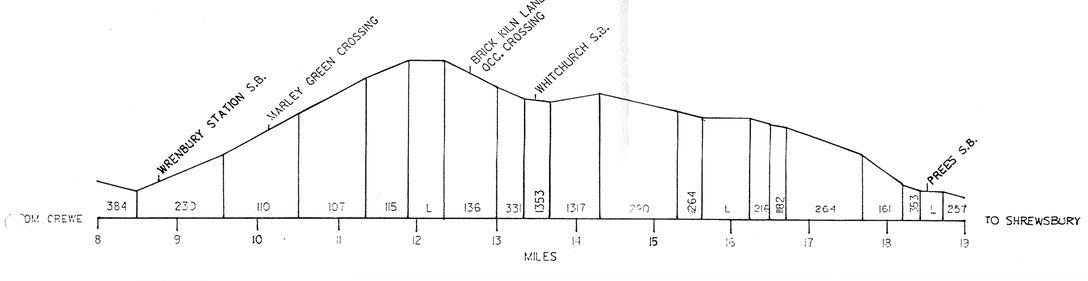
SIGNAL BOX
TYPE:- ALL WOOD
SIZE:- 35'0" x 12'0"
ELEVATION:- 16'0"
DISTANCE FROM RAIL:- 8'0"

FRAME
TYPE:- LNW TUMBLER
SET OF 55 LEVERS
SPACES:- 1,27,45
SPARE:- 4.5.7-13.15-26.28-39.40.41
42.43.46-51.53.55

ILLUMINATED DIAGRAM
TO SIGNAL 3

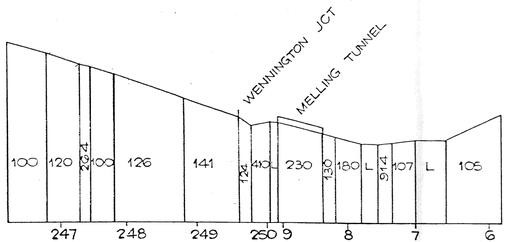
EL- ELECTRICALLY LIT SIGNAL

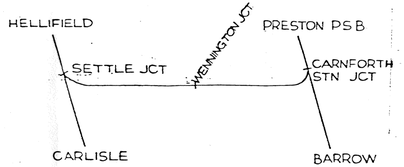


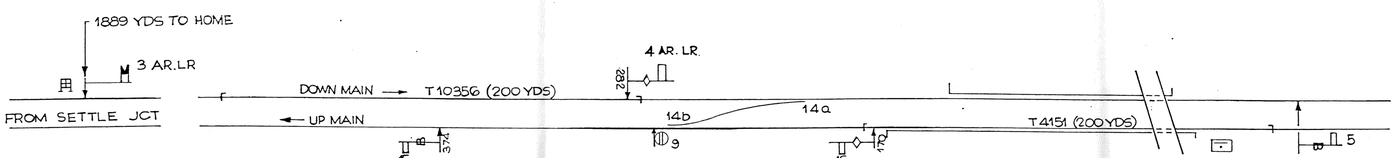



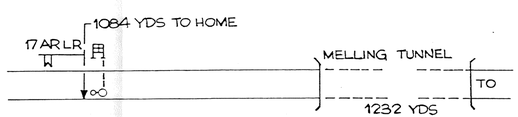

# FIGURE 2

| Revisions | Status | Scale NOT TO SCALE | | Director of S & T Engineering | British Rail |
|---|---|---|---|---|---|
| | LINE CLASS 1<br>RS&TE REF. 541 | Produced | Date 28/3/91 | WHITCHURCH S.B. | Signal Engineer (works) WEST MIDLANDS |
| | | Checked | Approved | | No. |
| | | | | | |
| | | Issued | | | |




SIGNAL BOX
SET OF 27 LEVERS
SPARES 1.2.6.7.8.10.11.12.13.18.19.
20.21.22.23.24.25.26.27.

ARMS 3.4.17. } TO BE NORMAL BEFORE
LEVERS 4.16 } LINE CLEAR CAN BE GIVEN



**FIGURE 3**

BRITISH RAILWAYS — LONDON MIDLAND REGION
SIGNAL & TELECOMMS ENGINEERS DEPT
MANCHESTER DIVISION

SCALE
1 = 1250

# WENNINGTON JCT.

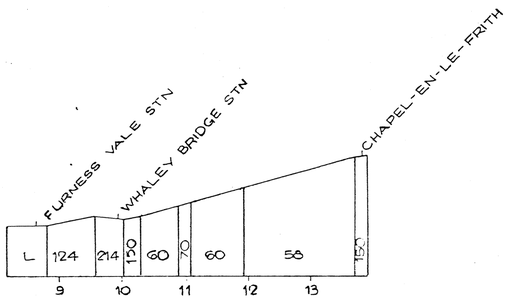
LINE CLASSIFICATION
CLASS B
DIV MAN

C.S. & T.E.

D.S & T.E

PRODUCED BY _____ PLAN NO. _____
CHECKED BY _____ PLAN DATE _____

AN INTRODUCTION TO SIGNALLING PLANS



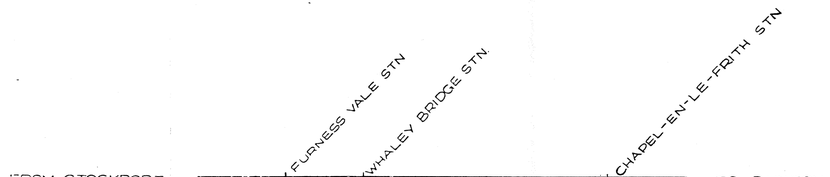
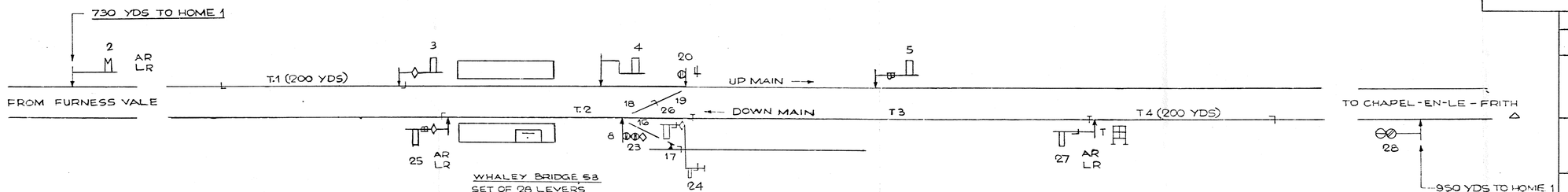




**FIGURE 4**




WHALEY BRIDGE SB
SET OF 28 LEVERS
16 WORKING
12 SPARE

LEVERS 3 27 ARMS 2 27 ASPECT 28 } TO BE NORMAL BEFORE L C CAN BE GIVEN

MECHANICAL DETECTION

| F.P.L. | POINTS | DETECTED BY SIGNALS | |
|---|---|---|---|
| | | NORMAL | REVERSE |
| | 16 | 23 | 8 |
| | 17 | | 24 |
| | 18 | | 23 |
| | 19 | | 20 |

AMENDMENTS

BRITISH RAILWAYS — LONDON MIDLAND REGION
SIGNAL & TELECOMMS ENGINEERS DEPT
MANCHESTER DIVISION

SCALE
1 2500
LONGITUDINAL

LINE
CLASS '2'

DIVISIONAL MANAGERS REF

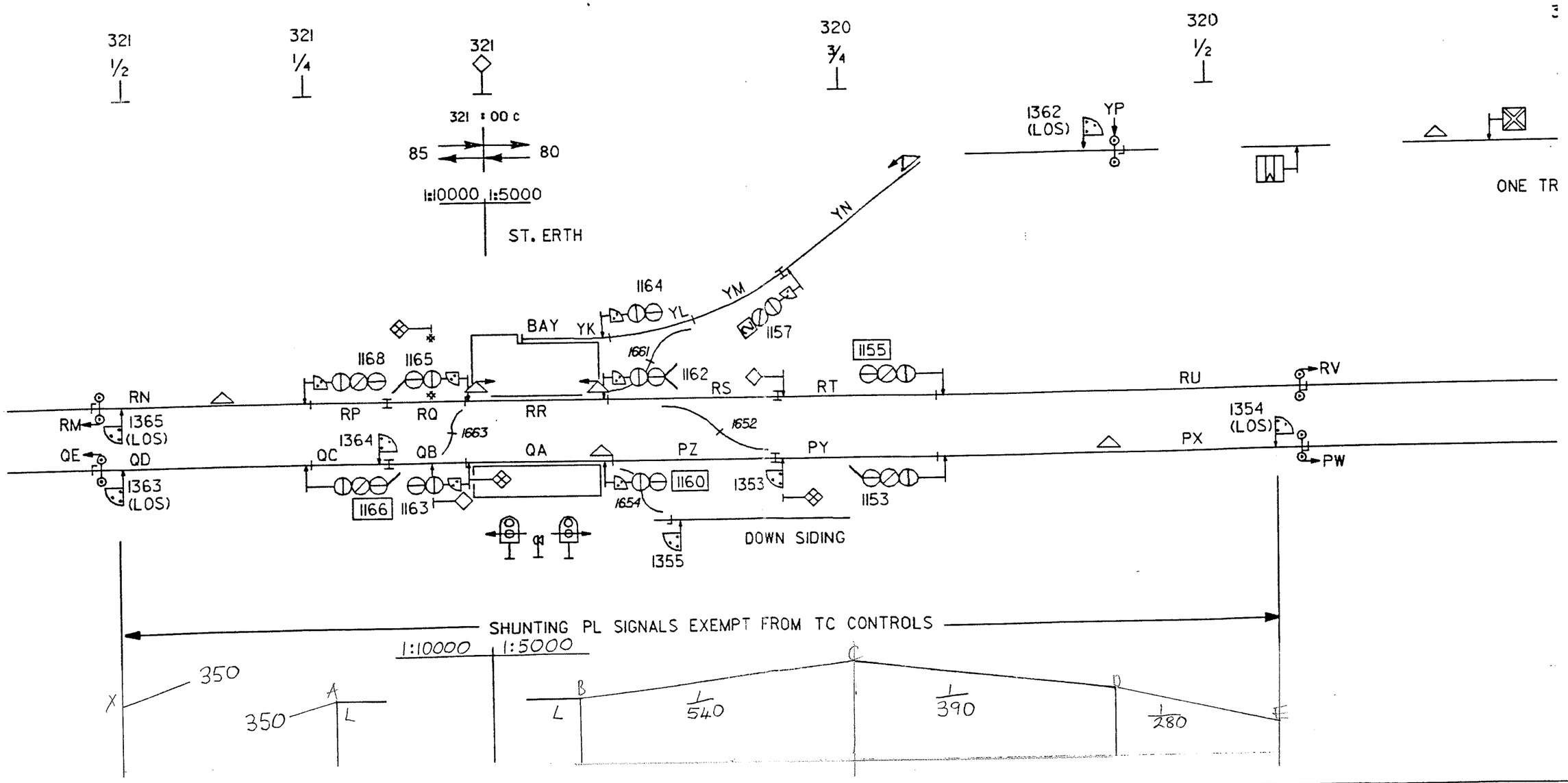
CHIEF S&T ENGINEERS REF

DIVISIONAL S&T ENGINEERS REF

# WHALEY BRIDGE

PRODUCED BY
CHECKED BY
APPROVED BY

PLAN N°
PLAN DATE
DATE ISSUED

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| Revisions Serial | | | | | | | | | | | | | |
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| Checked | | | | | | | | | | | | | |
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| Produced | Date |
| Checked | Approved |
| Scale | |
| Issued | |

Director of S&T Engineering

British Rail

# CORNWALL RESIGNALLING

EXTRACT OF SIGNALLING SCHEME PLAN

Signal Engineer (Wo[illegible]s) READING

FIG. 2