

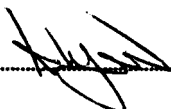
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| Ref   | NR/SP/ELP/27030 |
| Issue | 2               |
| Date  | April 2006      |

# Business Process Document

## Overhead line equipment as installed data records

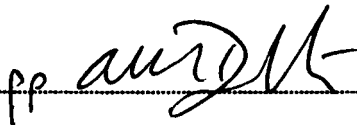
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## Issue record

| Issue | Date       | Comments                                                                       |
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| 2     | April 2006 | Re-issued as a SAF3 Business Process Document ( <i>formerly RT/E/C/27030</i> ) |

## Implementation

1 April 2006

## Compliance

This Network Rail specification is mandatory and must be complied with by Network Rail and its contractors from 1 April 2006

When this specification is implemented, it is permissible for all projects, which have formally completed GRIP Level 4 to continue to comply with the Issue of any relevant Network Rail standards current when GRIP Level 4 was reached and not to comply with requirements contained herein unless the head of electrification and plant has stipulated otherwise in the accompanying briefing note.

Where the head of electrification and plant has specified that all projects will comply with the requirements, specific authority not to comply can be sought in the usual manner using the appropriate non-compliance authority processes described in Network Rail standard, [NR/SP/STP/045](#) *Managing the process for non-compliance authority* (formerly RT/LS/P/045).

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The following records of Overhead Line Equipment shall be produced prior to energisation of any new electrified system.

It will also be beneficial to create Equipment Data Records of existing equipment, in the format shown to efficiently maintain electrification standards and to carry out design checks and calculations.

This document defines the record of parameters which need to be produced and kept up to date. The data records will form the basis of any future developments in automated checking of the electrified system parameters for acceptance and maintenance.

## **I Introduction**

"As Installed" data records shall consist of:

1. Layout Plans
2. Bonding Plans
3. Equipment data records
4. Dept. of Transport Schedules

The OSD documentation of data sheets and cross sections used for construction will be supplied to the Maintenance department for reference purposes only and no attempt will be made to revise them to an 'As Fitted' status. The Layout and Bonding plans will be revised where necessary to an 'As Fitted' status and supplied to the Maintenance department as part of the 'As Installed' data records.

The OSD documentation of data sheets and cross sections will only be modified during construction to encompass changes in OSD during the construction phase or as a material documentation control.

## **2 As installed equipment records**

### **2.1 Layout plans**

The layout plan shall be produced in CAD format. The drawing will be correct in showing all structures, equipments, switching arrangements and designated earthing points. Other infrastructure details such as signals overbridges, level crossings etc. shall be corrected to show a true pictorial representation of the OLE and related infrastructure detail. The equipment heights and staggers will be nominal OSD figures.

Additional notes of special design requirements relating to the equipment maintenance at specific locations will be shown on the layout plan.

The documentation format and standards will be maintained as current OSD practice.

## 2.2 Bonding plans

Bonding Plans shall show the installed track circuit locations and all installed bonding.

The documentation formats and standards will be maintained as current OSD practice.

## 2.3 Data records

The format of the data records (Appendix I) is designed for either manual records or storage on a computer system and will be supplied to the maintenance engineer in both formats.

This data must be maintained in a current up-to-date state.

## 2.4 Department of Transport schedules

The following schedules are to be submitted to the Department of Transport before energisation of any electrified system. The formats of these documents are shown in the following appendices:

|                                      |            |
|--------------------------------------|------------|
| Electrical clearances at overbridges | Appendix 3 |
| Level Crossing Schedule              | Appendix 4 |
| Positions of Warning Notices         | Appendix 5 |
| Electric Train Notices               | Appendix 6 |
| Anti-climbing guards                 | Appendix 7 |
| Minimum structure clearances         | Appendix 6 |

## 3 Sign conventions

All sign conventions are based on a person standing on a datum and facing the direction of increasing kilometerage.

- Measurement above the datum are +ve
- Measurement below the datum are -ve
- Kilometerage forward are +ve
- Kilometerage behind are -ve
- Dimensions to the right are +ve
- Dimensions to the left are -ve
- Counting of equipment or masts start from the left increasing to the right.

- Versines are quoted as positive for curves with centres on the right.
- Cant is positive for sloping of track down to the right.
- Wind blowing Left to Right is positive.
- Staggers and mid span offsets measured to the right of track centre line are positive.
- Deviation calculated to the right are positive.
- Registration arm with a positive sign indicate the pivot point is to right of track centre line.

#### 4 Data records

This record defines historical 'British Rail' "as installed" position and related data equipment at an overhead structure.

|   | Cols  | No. of Units | Description                                                                                                                                                              | Units              |
|---|-------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| A | 1-11  | 11           | Structure Number                                                                                                                                                         | -                  |
| B | 12    | 9            | -                                                                                                                                                                        | -                  |
| C | 13-21 | 9            | Structure location (for imperial location use the decimal point to separate miles and feet, i.e. mls 111.2222 ft) (This column is used to sort data in location order)   | km.m<br>Miles.Feet |
| D | 22-24 | 3            | Structure Type (see Section 5.1)                                                                                                                                         | -                  |
| E | 25    | 1            | -                                                                                                                                                                        | -                  |
| F | 26-31 | 6            | Contact Design Wind Speed                                                                                                                                                | m/sec              |
| G | 32-34 | 3            | S - Equipment position on structure counting left most wire as number 1 continuing to the right. (See Sign conventions section 3)<br>This data is used in sort commands. | -                  |
| H | 35-42 | 8            | Track name                                                                                                                                                               | -                  |