

Hove Station

Help Point Works

Telecoms Design

23-12501\_GTR\_HOV\_TD



**Client** Govia Thameslink Railway

**Date** 04 September 2023

**Revision** A01



Issued for	Prepared by			Checked by		
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A01	06/09/2022	all	For review	Steve Beardmore	[REDACTED]

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## 1.0 Name of design organisation

Trans Data Management Ltd  
12 Raleigh Court  
Priestley Way  
Crawley  
West Sussex  
RH10 9PD

## 2.0 Title of scheme

Hove Help Point Works – New Platform 1/2 Help Point

Project No. 23-12501

### **3.0 Description of portion of scheme for which approval is requested**

Hove station is to benefit from a new Help Point on Platform 1 and 2, to provide passengers with improved train service information.

#### **3.1 Scope of works**

To supply, install, test and commission 1no. GSM 2-button Help Point on Platform 1/2 at Hove station. Includes design, Network Rail Landlord's Consent and O&M documentation.

#### 4.0 Name of sponsor within Govia Thameslink Railway

Paul Cooper  
CIS Delivery Manager

+44 7711 149237



## 5.0 Proposed date of implementation including any phasing

Commencement of the works is scheduled for start of November 2023

## 6.0 Existing assets, equipment or services which are to be altered, ceased or recovered

The power provision for the station is as follows:

The existing Distribution Board is full and obsolete – GTR electrical maintainer to change and provide a spur for the Help Points



*Figure 6-1: DB-GP1*

## 6.1 Pre-Installation Activities

Prior to any works, the current system shall be inspected, and any faults shall be notified to the TOC.

Check required preparatory electrical works have been satisfactorily carried out prior to starting installation of Help Point

## 7.0 Description of proposed works

### 7.1 System Overview

To provide passenger assistance on Platform 1 & 2, it is proposed to install 1no. TDM Standard GSM 2-button Help Point Wall Mounted proposed location Platform 1/2. Includes an AFIL system for hearing-aid users, 18VDC Power Supply Unit, GSM antennae, battery back-up. Power located in the CIS Equipment Room on Plt 1/2, Cable Route in mix of new conduit and existing Containment.

### 7.2 Help Point

The proposed Help Point and mounting position are as follows:

1no. TDM 218323-26000 Standard GSM Help Point on Platform 2  
Help Point to be fixed to wooden structure

## 7.2.1 Platform 2 Help Point

1no. TDM Standard GSM 2-button Help Point (HOV-PT1&2-HPT-001) shall be mounted on the wall below the CIS screen.



Figure 7-1: Proposed Platform 1&2 Help Point Position



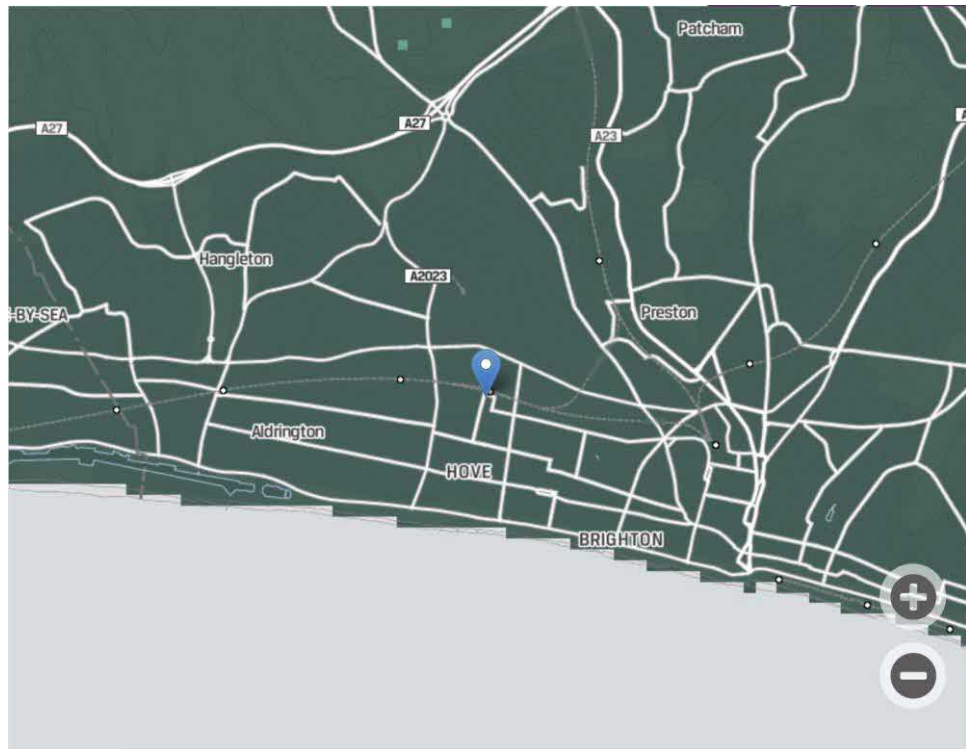
Figure 72: Proposed Platform 1&2 Help Point Equipment, Position of Fused spur and PSU with conduit route



*Figure 73: Proposed Platform 1&2 Conduit Route to existing containment*

### Voice Communications

The Help Point shall be connected to the operators at the Control Centre within the Three Bridges ROC via the EE GSM network. The coverage map from Ofcom's mobile checker tool is as follows:



*Figure 7-4: Ofcom Mobile Checker Coverage Map for Hove Station*

**Power**

To be supplied by the GTR electrical contractor

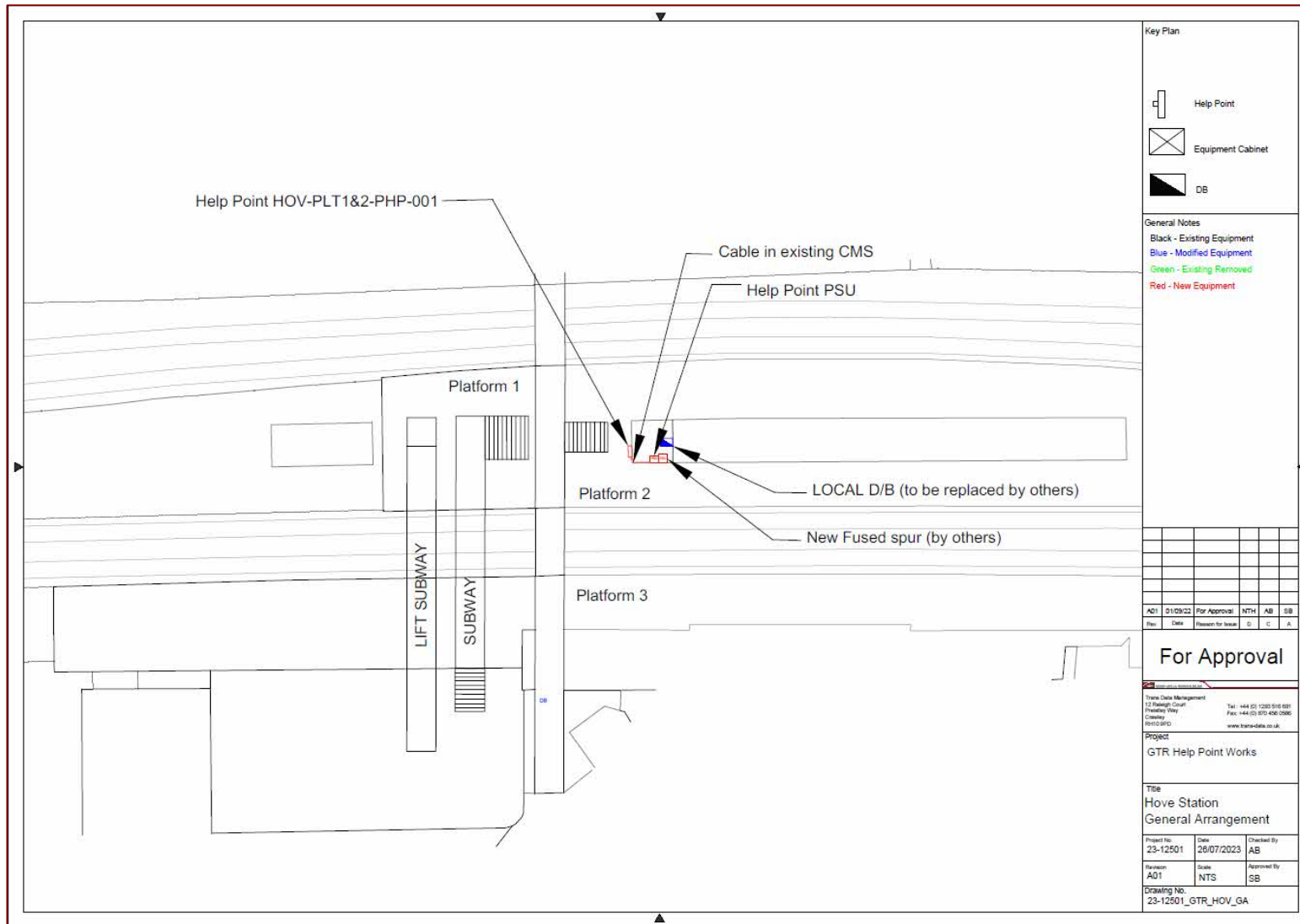


Figure 7-5: Hove General Arrangement Drawing – Proposed



### 7.3 Containment

Existing primary cable containment routes shall be utilised for the installation of the ELV power cabling between the CIS equipment room and the new Help Point position on Platform 2.

### 7.4 Cabling

New Belden 8760 LSOH shall be used for the 18VDC power connection to Help Point.

### 7.5 System Schematics

Please refer to:

*23-12501\_GTR\_HOV\_HPT\_SCH*

Help Point Schematic - Proposed

### 7.6 Equipment Mounting

The new Help Point shall be fixed to the wall using 4no. 6mm x 50mm wood screws.

### 7.7 Post Installation Testing and Hand Back

Fully test the completed installation and issue certificates in compliance with the relevant industry standards. GTR shall be given the opportunity to witness all testing.

The installation shall be tested and commissioned upon completion and relevant certification (if applicable) shall be produced prior to handover.

All cabling shall be fully labelled at both ends of the cable, and at regular intervals including at access points (access chambers, conduit boxes, etc.), or at changes in direction. Labelling shall be fixed by suitable cable fixing methods such as cable ties, or equal and approved. Labels shall be LSZH type. Please see the cable schedule for labelling scheme. Note self-adhesive labels are not acceptable for cabling.

All cables will be dead tested and signed off for continuity and test results recorded.

A full Integrated Test, Evaluation and Acceptance Plan (ITEAP) compliant with the following NR standards shall be produced and included with the handover documentation.

NR/L1/TEL/30092 Telecoms Testing and Commissioning Procedure

NR/L2/TEL/30098 Testing and Commissioning of Telecommunications Equipment and Systems

NR/L2/TEL/30184 Specification for Network Rail Telecoms Systems Architecture, Technical Design and Test Assurance

Testing on the SISS equipment shall be as following:

- Confirm that no faults are present on Help Point.
- Confirm correct Information button destination is reached.
- Confirm correct Emergency button destination is reached.
- Confirm the AFIL is functional.

Please refer to Section 8.4, Supporting Engineering Deliverables, for details of hand back documentation.

GTR shall be invited to attend any testing activities with a minimum of 2 weeks' notice of activities taking place.

Provide 3no. copies and 1no. CD/DVD-copy of O&M manual to NR standard at handover, including all test results and certificates. O&M manuals shall include a list of part numbers, contact details and website addresses for all manufacturers.

## **7.8 Earthing & Bonding**

The Help Point shall be earthed to the Distribution Board supplied by GTR electrical contractor.

## 7.9 Asset and Cable Schedules

### 7.9.1 Asset Schedule

The following table details the assets to be installed within the scope of works described in this document:

Asset ID	Description	Installation	Location	Manufacturer	Model	PADs
HOV-PT1& 2-HPT-001	Help Point	1.2m	Platform 1& 2	TDM	218323-26000	PA05/02892 087/037946

*Table 7-6: Asset Schedule*

### 7.9.2 Cable Schedule

Cable ID	Description	A end	B end	Approx. Length	Type
HOV-PT1& 2-HPT-001	18 VDC Power Feed	HOV-PT2-PSU-001	HOV-PT1& 2-HPT-001	6m	Belden 8760 LSOH

*Table 7-7: Cable Schedule*

## **7.10 Ownership of assets and demarcation of maintenance responsibility**

The assets will become the property of NR.

The assets will be maintained by the TOC under their existing SISS maintenance regime. All new assets are in locations accessible for maintenance purposes, and existing maintenance procedures shall apply.

## **7.11 Proof that the design is the best of a range of options considered**

The system has been selected to meet the TOC specifications and interoperability requirements. The system has been designed to be compliant to the NR standards listed in Section 8.2, Standards.

## **7.12 Proposed leased circuits and costs.**

The Help Point will require a SIM card for connection to the mobile network, (to be provided by GTR).

## **7.13 On-going maintenance and costs**

The TOC maintenance contract costs are not currently available as these are commercially confidential.

## **7.14 Asset recoveries**

No assets are to be recovered during these works.

## **7.15 Staging Requirements**

No staging is required for these works.

## **7.16 Alarm Management Strategy**

Call and fault alarms will be sent to the NIS system at Three Bridges ROC.

## **7.17 Proposed spares and test equipment provision**

GTR has spare Help Point equipment stored with its SISS maintainer.

## **7.18 Right of access agreed over 3rd party land to be retained for maintenance**

No right of access over 3<sup>rd</sup> party land is required for these works.

## 8.0 Final assets, equipment or services which are introduced altered or recovered

### 8.1 Design detail applied

The design is consistent with GTR's requirements for Help Point installation works.

The standards applied to the design are listed in Section 8.2.

### 8.2 Details of standards identified to be applied

Network Rail Standards Reference List		
Standard	Issue/Date	Title
NR/L2/RSE/100/05	Issue 4 Sep 2021	Product Acceptance and Change to Network Rail Operational Infrastructure
NR/L2/MTC/089	Issue 2 Dec 2018	Arrangements for the Exchange of Asset Data and the Continuing Maintenance of Assets Undergoing Change
NR/L1/TEL/30029	Issue 4 Mar 2010	Telecoms Installation
NR/L1/TEL/30099	Issue 4 Mar 2010	Telecoms Asset Management
NR/L1/TEL/30100	Issue 3 Mar 2010	Telecoms Design
NR/L2/TEL/30022	Issue 8 March 2022	Engineering Assurance Arrangements for Communications Engineering Schemes and Services
NR/L2/TEL/30094	Issue 2 Mar 2010	Installation of Telecommunications Equipment and Systems
NR/L2/TEL/30098	Issue 3 Sep 2022	Testing and Commissioning of Telecommunications Equipment and Systems
NR/L2/TEL/30105	Issue 2 Dec 2010	Compliance with Fixed Telecoms Network Design Criteria
NR/L2/TEL/30130	Issue 3 Sep 2009	Electronic Visual Customer Information Systems
NR/L2/TEL/30132	Issue 1 Jun 2011	Asset Management of Station Information and Surveillance Systems (SISS)
NR/L2/TEL/30133	Issue 2 Jun 2018	Asset Condition Assessment for Telecommunications Equipment
NR/GN/TEL/30139	Issue 1 Mar 2010	The Survey and Design of Telecoms cable and Route
NR/L3/TEL/30175	Issue 1 Mar 2020	Ethernet Services Commissioning Tests
NR/GN/TEL/30140	Issue 1 Jun 2010	Telecommunications Cable Routes and Installation

*Table 8-1: Network Rail Standards Applied to the Design*

Railway Group Standards Reference List		
Standard	Issue/Date	Title
RS-1855-ENE	Issue 1 Mar 2017	Low Voltage Power Supplies in Electrified Areas
RS-7016-INS	Issue 1 Jun 2018	Interface between Station Platforms, Track, Trains and Buffer Stops

*Table 8-2: Railway Group Standards Applied to the Design*

Health & Safety Legislative and Regulatory Reference List	
Title and Issue	ISBN/SI
Provision and Use of Work Equipment Regulations 1998	ISBN 0717616266
Lifting Operations and Lifting Equipment Regulations 1998	ISBN 0717616282
Management of Health and Safety at Work Regulations 1999	ISBN 0717624889
Workplace Health, Safety and Welfare Workplace (Health, Safety and Welfare) Regulations 1992	ISBN 0717604136
Management of Health & Safety at Work Act 1974	ISBN 0105437743
First Aid at Work, The Health and Safety (First Aid) Regulations 1981 (amended 2013)	
Control of Substances Hazardous to Health Regulations 2002	ISBN 0110429192
The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013	1471
The Health and Safety (Consultation with Employees) Regulations 1996	ISBN 0110548396
The Control of Noise at Work Regulations 2005	ISBN 0110729846
The Control of Vibration at Work Regulations 2005	ISBN 0110727673
The Work at Height Regulations 2005	ISBN 0110725638
The Manual Handling Operations Regulations 1992	ISBN 0110259203
The Personal Protective Equipment at Work Regulations 1992	ISBN 0110258320
The Railways and Other Guided Transport Systems (Safety) Regulations 2006	
The Construction (Design and Management) Regulations 2015 (CDM 2015)	
The Electricity at Work Regulations 1989	ISBN 011096635
Control of Asbestos Regulations 2012	632

*Table 8-3: Health & Safety Legislative and Regulatory Standards Applied to the Design*

Environmental Legislative and Regulatory Reference List		
Title and Issue	ISBN	Ref
Environmental Protection Act 1990	ISBN 0105443905	
Control of Pollution Act 1974		
The List of Wastes (England) Regulations 2005	ISBN 0110726847	No 895
Wildlife and Countryside Act 1981	ISBN 0110493737	
Water Resources Act 1991		
The Landfill (England and Wales) (Amendment) Regulations 2005	ISBN 011 072982X	No 1640

Environmental Legislative and Regulatory Reference List		
Title and Issue	ISBN	Ref
The Hazardous Waste (England and Wales) Regulations 2005	ISBN 0110726855	No 894
The Waste Management Licensing Regulations 1994	ISBN 0110440560	No 1056
The Waste Management (England and Wales) Regulations 2006	ISBN 0110744128	No. 937
The Waste (England and Wales) Regulations 2011		

*Table 8-4: Environmental Legislative and Regulatory Standards Applied to the Design*

European & UK Legislative Standards		
Standard	Issue/Date	Title
BS 5760-0:2014	2014	Reliability of systems, equipment and components Guide to reliability and maintainability
BS 6701:2016 +A1:2017	2017	Telecommunications equipment and telecommunications cabling. Specification for installation, operation and maintenance - Specification for installation, operation and maintenance.
BS EN 60529:1992 +A2:2013	2019	Degrees of Protection Provided by Enclosures (IP Code).
BS 7430 +A1:2015	2011	Code of practice for protective earthing of electrical installations.
BS 7671:2018 +A2:2022	2022	Requirements for electrical installations. IET Wiring Regulations, 18 <sup>th</sup> Edition.
BS EN 50121-1:2017	2017	Railway applications – Electromagnetic compatibility – General.
BS EN 50121-4:2016 +A1:2019	2019	Railway applications. Electromagnetic compatibility. Emission and immunity of the signalling and telecommunications apparatus.

*Table 8-5: European & UK Legislative and Regulatory Standards Applied to the Design*

### 8.3 How interfaces with existing systems or services are to be managed

The new Help Point shall interface to the existing TDM NIS-3 system located at the Three Bridges ROC, where TDM shall be responsible for configuration of the system to ensure the correct station and platform information is presented to the operator.

GTR will arrange provision of the SIM card required for the Help Point voice communications.



## **8.4 Supporting engineering deliverables**

The engineering deliverable for this scheme shall include:

- Health and Safety file,
- Operational and Maintenance Manuals,
- As built drawings,
- Technical product information and user manuals,
- Electrical and data test certificates,
- Spares to enable the Employer to operate and to carry out maintenance
- Configuration files and configuration data,
- Warranty details,
- Network Rail Form 005 and Works completion certificate

## **8.5 Justification for the use of products requiring product approval**

Not applicable; all products are approved or do not require approval.

## **8.6 Details of potential non-compliances to standards**

None.

## 8.7 Designers Risk Assessment

Project No: 22-15901		<b>Designer's Risk Assessment (DRA)</b>			Prepared by: NTH		
		Project: GTR Help Point Installations					
Drawing/Specification Reference & Description: 22-15901_GTR_HOV_RSK_REV-A01/22-15901_GTR_HOV_TD_REV-A01					Revision: A01 Date: 22/08/2022		
Persons at risk: (1) Construction workers (2) Members of the public/station (3) Maintenance workers				Action by: (1) Principal Designer - Include in pre-construction health and safety plan/ file (2) Principal Contractor – Manage risk during construction phase (3) Other designer – Take into consideration when preparing their designs (4) Client – Pass information to designers/Co-ordinator			
No.	Activity/Design	Hazard/Risk	Persons at Risk	Design measure taken, or being taken to eliminate or reduce hazard	Information on Residual Risk/Action	Date Issue Raised	Action Required by
1.	Help Point equipment falling into passenger flow.	Injury to passengers	2	Details of equipment and mounting brackets are shared with project team for load analysis.	Ensure equipment properly fixed at build time	22/08/2022	2
2.	Adverse weather effect on Equipment.	Performance of equipment will be affected by adverse weather condition.	4	IP 66, IP 65, IP 33 rated telecom equipment will be used to protect against adverse weather condition.	None	22/08/2022	1
3.	Electromagnetic interference to new comms equipment.	EMC Hazard	3	By using PADS / client approved equipment / components the risk can be mitigated. Use of shielded cable types where appropriate.	None	22/08/2022	1
4.	Electrical connection to equipment	Risk of electrocution/disruption to supplies	1	Ensure equipment is isolated before commencing work	Ensure equipment is isolated before commencing work	22/08/2022	2
5.	Civil works to platform area	Trip and falling hazard to passengers.	2	Design to not impact public areas where possible and appropriate.	Work areas to be barriered off for duration of works	22/08/2022	2

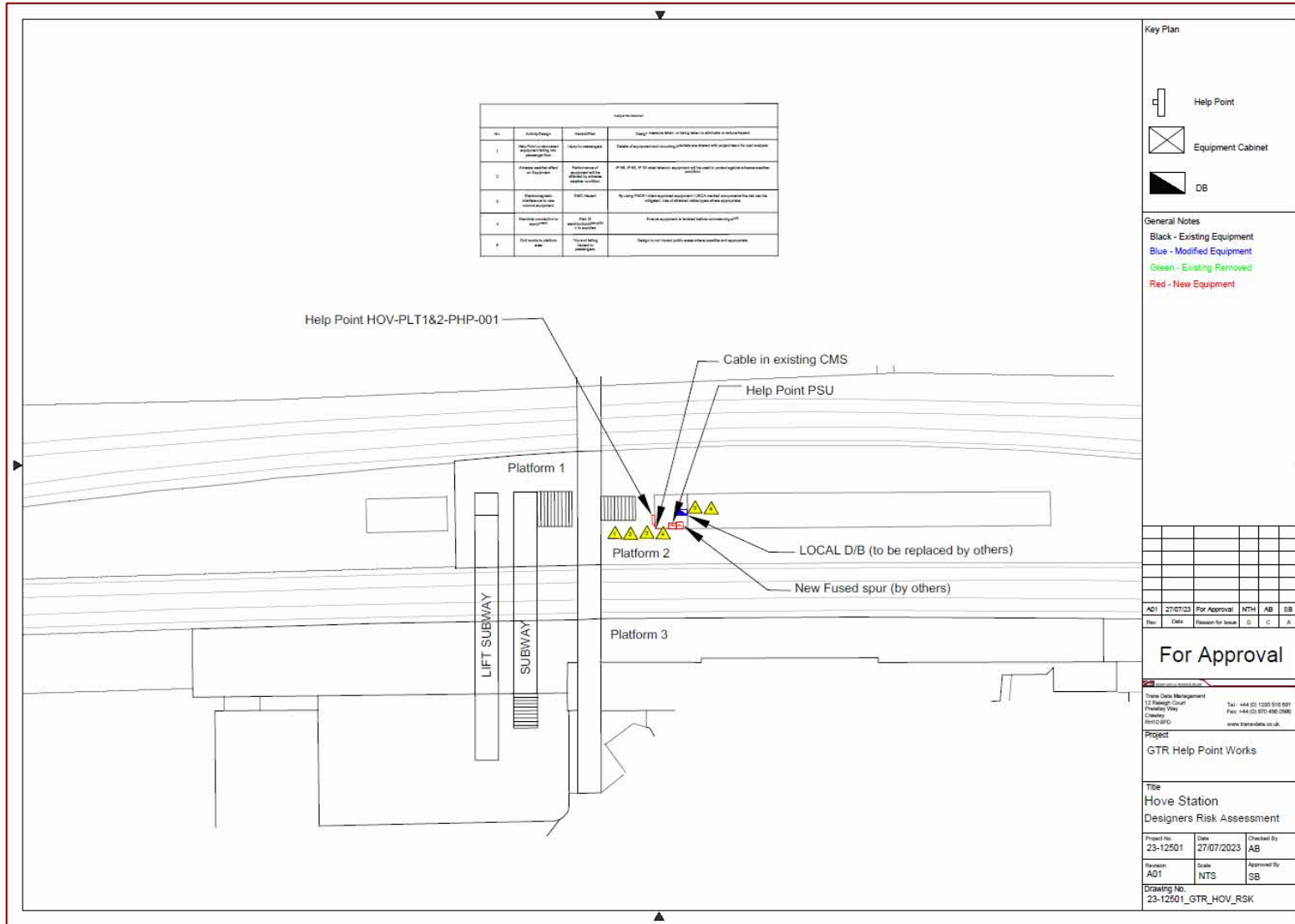


Figure 8-6: Designer's Risk Assessment – Hove

## 9.0 Inter-disciplinary Check Certificate

Not applicable.

## 10.0 Appendix A – Ancillary Information

### 10.1 List of buildings and civil engineering assets affected by the proposal

The following buildings/civil engineering assets have been affected by proposals within this submission:

Hove Station			
ELR	BL11	Mileage	1m 35ch
OS Grid Reference	TQ289055	Structure Number	N/A

Description	Wall of the wooden structure used to mount Help Point
Location	Platform 1

*Table 10-1: Hove Station Details*

## 10.2 Drawings of proposals

The following drawings have been submitted with this document:

Drawing No.	Rev	Drawing Title
23-12501_GTR_HOV_GA	A01	General Arrangement drawing
23-12501_GTR_HOV_RSK	A01	Designer's Risk Assessment drawing
23-12501_GTR_HOV_PHP_SCH	A01	Help Point Schematic - Proposed
23-12501_GTR_HOV_ELE_SCH	A01	Electrical Schematic

*Table 10-2: Design Drawings List*

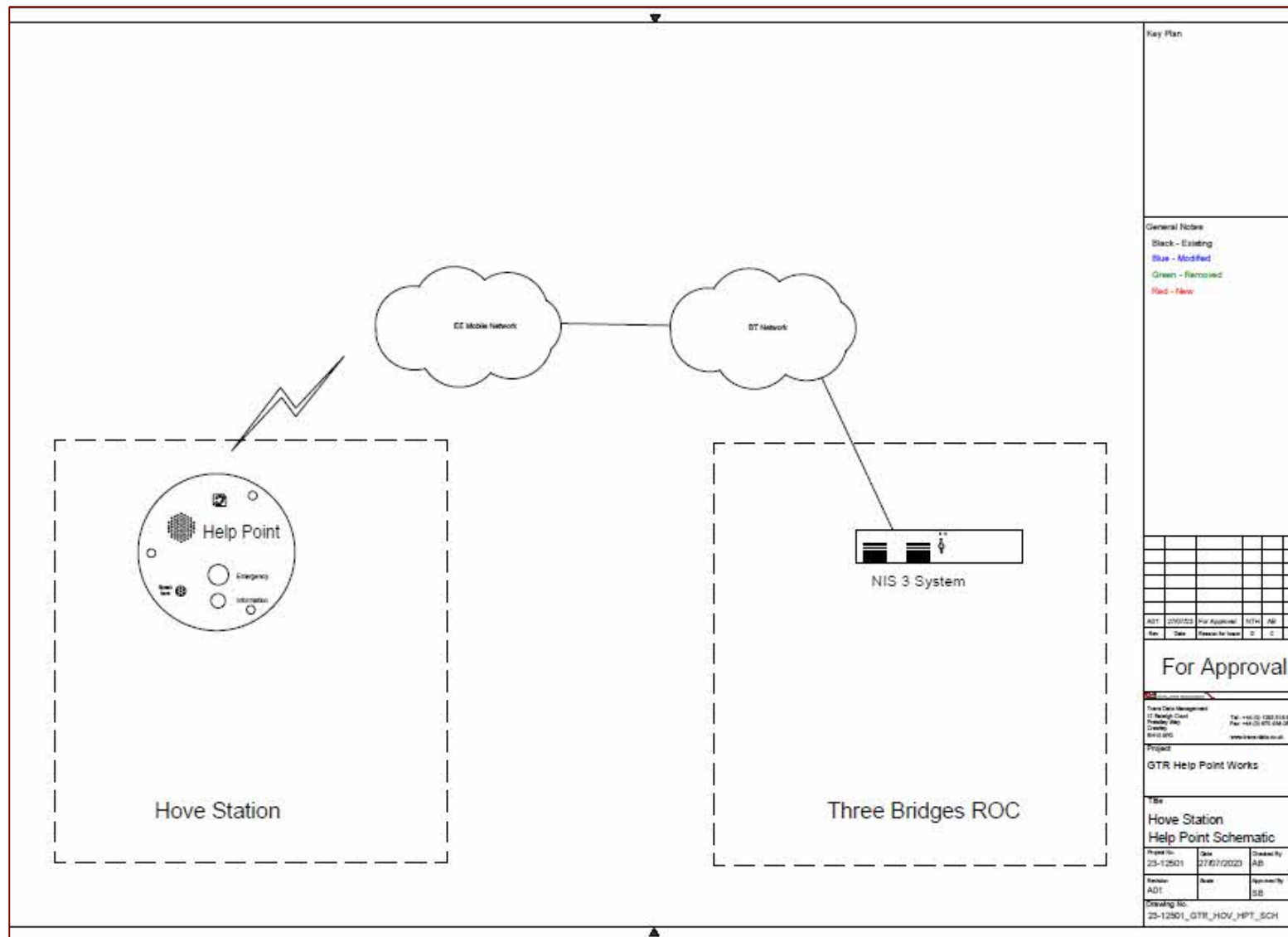


Figure 10-3 Help Point Schematic – Proposed

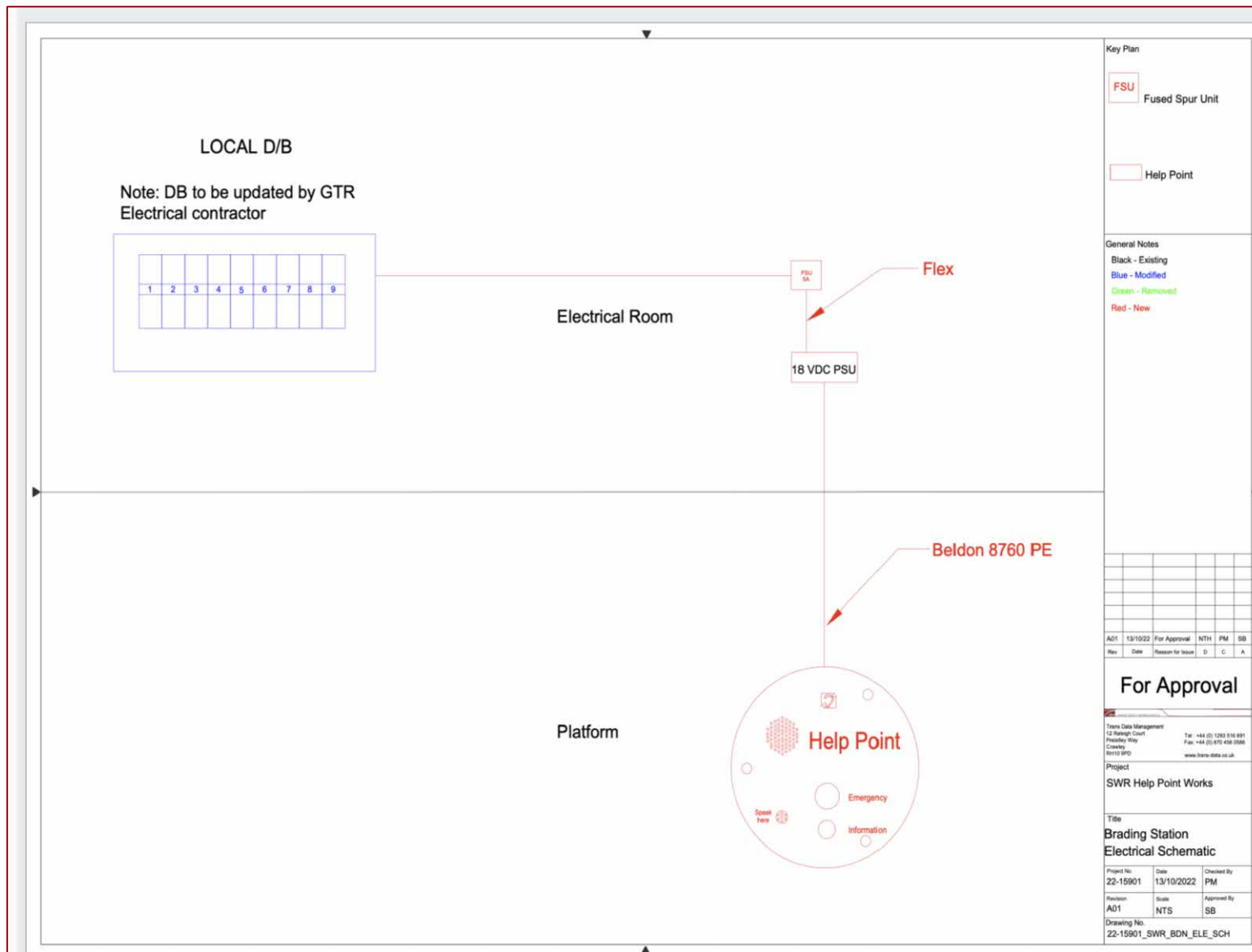


Figure 10-4: Electrical Schematic



### 10.3 Special access arrangements/requirements

## 10.4

None required.

## 10.5 Abbreviations

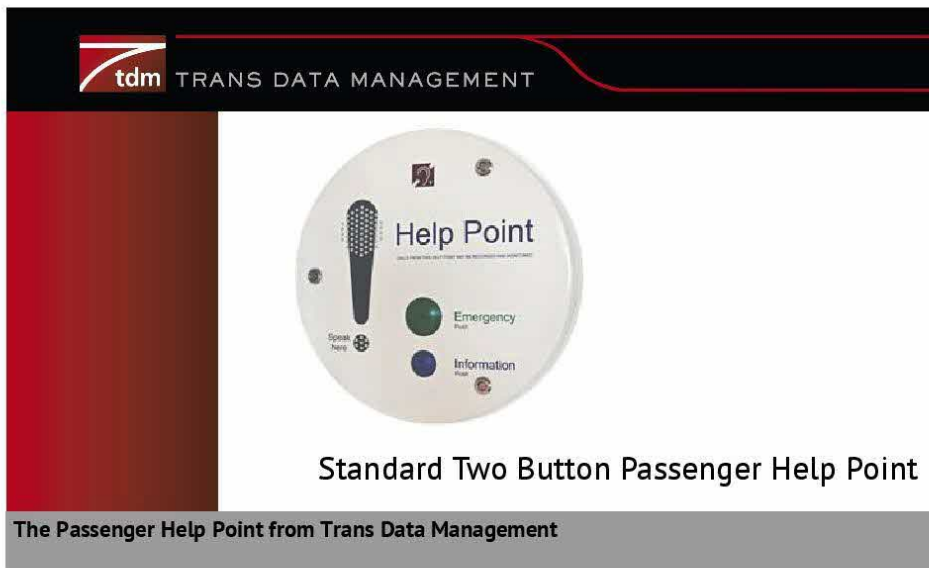
Abbreviation	Definition
AC	Alternating Current
AFFL	Above Finished Floor Level
CMS	Cable Management System
DB	Distribution Board
DC	Direct Current
ELV	Extra Low Voltage
FFL	Finished Floor Level
GSM	Global System for Mobile Communications
GTR	Govia Thameslink Railways
IP	Internet Protocol
IT	Information Technology
LAN	Local Area Network
LSZH	Low Smoke Zero Halogen
MCB	Miniature Circuit Breaker
NR	Network Rail
O&M	Operation and Maintenance
PE	Polyethylene
PDU	Power Distribution Unit
PHP	Passenger Help Point
PSU	Power Supply Unit
ROC	Rail Operating Centre
SISS	Station Information and Surveillance System
TBROC	Three Bridges Rail Operations Center
TOC	Train Operating Company
V	Volts
VLAN	Virtual Local Area Network
W	Watts
WAN	Wide Area Network

*Table 10-5: Abbreviations*

## 10.6 Data sheets

018_DS_Standard Help Point_en_01	TDM Standard Help Point Data Sheet
----------------------------------	------------------------------------

*Table 10-6: Datasheets*



TDM's Standard Two Button Help Point is available in GSM, PSTN, ISDN formats. These Help Points are able to provide information and assistance directly to the customer.

The Standard Two Button Help Point offers a reliable and high-quality solution, which able to be applicable across multiple industries.

**Features**

- Two buttons
- Robust and hard-wearing
- Integrated Speaker and Microphone
- Mountable on wall, post or existing structure
- Approved by Network Rail and widely used throughout UK
- Audio Frequency Induction loop (AFIL) system for the hearing impaired

**Benefits**

- Resilient and vandal resistant
- Recognisable and well proven design
- Hands free operation
- Disability Discrimination Act (DDA) Complaint
- Can be installed indoors and outdoors and in most locations
- Provide information and emergency assistance

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**APPLICATIONS:**

- Station platforms
- Car parks
- Public safety
- Emergency assistance
- Travel information
- Outdoor use, remote locations
- Providing information during disruptions
- Information about changes to scheduled services
- Disability Discrimination Act (DDA) compliant passenger provision

**SPECIFICATIONS:**

Specifications	
Dimensions	540 x 145mm
Weight	Approx. 20kg
Rating	IP65
Options	LED
	Third button
Approvals	Network Rail
	PADS No: 087/037946

**SPECIFICATIONS:**

Available Technologies
Voice over IP (VoIP)
GSM
GSM-R

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## 10.7 Cable Calculations

Electrical Circuit to be provided by others.



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