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NR/L2/OHS/501

Module W4

Geofencing Device

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- Red requirements are monitored for compliance.
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Issue record

Issue	Date	Comments
1	September 2022	First issue

Reference documentation

Railways group standards

GERT 8000 RSSB Rule Book

Network Rail company standards

NR/L1/OHS/051 Drugs and Alcohol policy

NR/L2/OHS/00124 Medical Fitness

NR/L2/OHS/019 Safety of people at work on or near the line

NR/L2/OHS/501 Trackworker protection and warning

systems

NR/L2/OHS/401/Form G Geofence Site Application Form

NR/L2/RSE/02009 Engineering Management for Projects

NR/L2/RSE/100/05 Product acceptance and change to Network

Rail operational infrastructure

NR/L2/TEL/30034 Radio Mast Lightning Protection and

Earthing System

NR/L2/TEL/30066 Signal and Telecommunications Telecoms

clearance for fixed transmitters

Other relevant internal Network Rail publications

Track Worker Safety (TWS) Programme – Engineering Management Plan

External Publications

BS EN 62479:2010 Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300GHz).

BS EN 62311:2020 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz).

2014/53/EU Radio Equipment Directive

GDPR/DPA2018 Data Protection Regulations

The Waste Electrical and Electronic Equipment Regulations 2013

The Control of Noise at Work Regulations 2005

Common Safety Method – Risk Assessment (CSM-RA)

User manuals for Track Tracker equipment are available from the manufacturer

User manuals for Onwave equipment are available from the manufacturer

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User manuals for Tended equipment are available from the manufacturer

Product acceptance certificates (the up-to-date version can be found on the Network Rail system)

PA05/07400 for the Onwave OWL System PA05/07418 for the Track Tracker System PA05/07419 for the Tended System

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1 Purpose

This module mandates the requirements for the use of geofence wearable device, which addresses the loss of situational awareness.

2 Scope

This module mandates the requirements for the use of geofencing on Network Rail Managed Infrastructure.

It provides details of:

- a) technical requirements;
- b) competence requirements;
- c) planning;
- d) and its use.

This module applies to all geofencing systems used on Network Rail Managed Infrastructure.

3 Definitions and abbreviations

coss	Controller of Site Safety
Common Safety Method Risk Assessment (CSM-RA)	Common Safety Method Risk Assessment
DRACAS	Data Reporting Analysis and Corrective Action System
DU	Delivery Unit
ELR	Engineers Line Reference
GNSS	Global Navigation Satellite System
IP66 and IP67	Ingress Protection Code guidelines to the degree of protection provided by mechanical casings and electrical enclosures against intrusion, dust, accidental contact, and water.
NRMI	Network Rail Managed Infrastructure
NTRIP	Networked Transport of RTCM via Internet Protocol is a RTK positioning correction transmission protocol
PDR	Plan Do Review

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PIC	Person in Charge
PPE	Personal Protective Equipment
RTK	Real Time Kinematic positioning is the application of surveying to correct for common errors in current GNSS systems
RTCM	Radio Technical Commission for Maritime Services is a non-profit international standards organisation
SSOWP	Safe System of Work Pack
Safe zone	The defined area on a work site where a wearable safety device user is safe to access
Unsafe zone	The defined area on a work site where a wearable safety device user is not safe to access

4 Description of Geofence

Geofencing works by providing a real-time monitoring system that can identify if users accidentally move into unsafe zones on a work site, and to alert users when this occurs. The technology is deployed in addition to existing safety measures, so the system will provide an overlay to existing control measures deployed for a Safe System of Work i.e., providing secondary protection. The wearable safety device provides an audio, visual and vibrating alert when the worker strays outside a defined safe zone.

The RACI table in Appendix A shows the accountabilities of the parties involved with geofence.

5 Technical Specifications

5.1 Operating Provisions

The operating conditions or restrictions imposed by Network Rail on the use of geofence, including the general operating conditions and restrictions, are:

- a) the system can only be used for planned works;
- b) the system cannot be used in warning SSoWP, with other warning systems, in unplanned or changing works, or outside of pre-planned limits; and
- c) as detailed in the product acceptance certificate.

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5.2 System Level Requirements (general) - functional requirements

When positioned correctly on the user, the geofence improves the situational awareness of track workers through the provision of wearable safety devices that provides an alert when the worker strays outside the defined safe zone.

The device shall be worn on the front of the user between the shoulder and waist.

The device may be clipped to the person's clothing or strapped to the person via an armband so long as it does not impact the tasks being undertaken. Both the clip and armband contain quick release feature in the event that the device becomes trapped, allowing the user to separate the device from their person.

The device shall not be deployed to the helmet of a user and shall not be covered by their PPE.

Once the defined safe zone is programmed, the alert shall warn the worker when they leave the defined safe zone.

The form of this alert may include audio, visual or vibrating feedback.

System faults shall be detected automatically by the system and made known to all the people relying on the system within the safe zone set up.

The system shall have redundancy and an effective fallback system, in case of loss of signal.

The system shall be capable of recording all actions of individuals using it and be retrievable from the supplier in a format understood by any person conducting investigations into any incident that may occur whilst the equipment is in use.

5.3 Situational Awareness

The system shall provide the capability to track user locations in real time, with a spatial accuracy of no less than 300mm.

The supplier will provide a software platform for all users to take pre-planned safe and unsafe zones at a worksite compiled as part of the NR safe systems of work and translating these into defined zones that the wearable safety devices will react to.

In addition to providing a user alert if exiting the safe zone, a graduated series of alerts or notifications are provided as the user approaches the limits of the safe working environment.

5.4 Warning Function

5.4.1 Warning Function Functional Requirements

The system shall be capable of warning people on or near the boundaries of the safe zone, either collectively or individually, that an individual is about the exit the safe zone until the user moves back into a safe zone.

5.4.2 Warning Function Technical Requirements

5.4.2.1 General

The device shall be capable of issuing a vibrating, audio, and visual warning signal.

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Wearable safety devices shall be capable of issuing these warning signals:

- a) low level vibrating feedback when encroaching the boundary of the safe zone;
- b) escalating to a full, high intensity audio-visual and vibrating feedback if the user crosses the boundary of the safe zone.

The wearable safety devices shall be of a fail-safe design such that they issue a fault alarm in the event of a failure.

All devices provide an alert when loss of GNSS /telecoms signal occurs for any reason (e.g., the wearer moves outside the telecoms coverage area).

The wearable safety device shall monitor the condition of its battery or batteries. A battery condition that will impair the ability of the device shall cause the device to emit a fault alarm.

5.5 Software Platform Function

5.5.1 Software Platform Functional Requirements

The design of the platform shall enable the supplier to set warning initiation criteria as appropriate within pre-determined limits and to monitor system condition.

Systems shall be designed to facilitate correct and safe operation.

5.5.2 Software Platform Technical Requirements

5.5.2.1 General

The software platform shall be provided with all the following indication and alarm features:

- a) a system working indication (optical);
- b) fault alarms (acoustic and/or optical);
- c) battery condition (optical); and
- d) signal strength (optical).

5.5.2.2 System Controls

The controls for the wearable safety device shall be visible in varying weather conditions. Where the system is used in adverse light conditions (e.g., poor light caused by fog, rain, and twilight conditions), means shall be provided to enable the controls to be seen and distinguished clearly (e.g., illuminated buttons for use in darkness).

The controls shall be designed to minimise the possibility of an individual:

- a) failing to activate or cancel a function when required; or
- b) unintentionally activating or cancelling a function.

5.5.2.3 Cancellation of Warnings

Warnings can only be cancelled when the device user moves back into the safe zone.

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5.5.2.4 Data Logging

Suppliers will use multiple methods such as satellites and system data to locate the wearable safety devices, this data is held by the supplier in their secure servers held in the UK and in conjunction with UK Data Protection Principals.

Data shall only be accessible by the supplier and historic data requests shall be strictly controlled and time limited in line with GDPR/DPA2018 Data Protection Regulations.

Information search shall not be accessible by line managers to review historic movements, work patterns or locations of individuals.

Trawling shall not be permitted under any circumstance.

NOTE: Trawling is the practice of searching arbitrarily and outside of normal assurances, safety, or maintenance duties with the purpose of finding fault.

5.6 Transmission Function

5.6.1 Transmission Function Functional Requirements

The geofence equipment shall automatically perform self-checks on system integrity and its ability to transmit information between all relevant components reliability at start up and continuously during its operation.

Transmission of warning and system integrity check information may be by GNSS / telecoms means.

5.6.2 Transmission Function Technical Requirements

5.6.2.1 General

The software platform shall be connected by means of GNSS / Telecoms signal so that it:

- a) receives information about the location of the individual in the safe zone; and
- b) detects the integrity of the geofence wearable safety device and their connections.

The means of transmission shall be designed such that any failure, including loss of signal or a low battery, will result in an indication or alert.

5.6.2.2 Transmission via GNSS/Telecoms

The geofence system uses GNSS / Telecoms to transmit data from the geofence wearable safety device to the software platform for the purpose of prompting of situational awareness.

The system shall comply with the requirements of NR/L2/TEL/30034 and NR/L2/TEL/30066.

5.7 Power Supplies Requirements and Functional Requirements

Rechargeable batteries power the geofence wearable safety device equipment and enable it to respond as required.

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5.8 Maintenance

5.8.1 Functional Requirements

Geofence wearable safety device shall be capable of being maintained without adversely affecting the equipment's ability to meet its safety and reliability targets as per BS EN 62479:2010 and BS EN 62311:2020.

The supplier shall define and carry out any maintenance requirements for geofence devices.

5.9 Environmental Considerations

5.9.1 Functional Requirements

All geofence equipment shall be capable of being installed and operated in UK environmental conditions. The system shall be rated to a minimum of IP66 and IP67.

5.9.2 Technical Requirements

Environmental requirements for geofence wearable safety device are contained in BS EN 62479:2010, and BS EN 62311:2020.

The geofence shall operate and meet its safety and reliability targets as set in the Product Acceptance.

5.9.3 Disposal of Components

In the event of any components becoming damaged or at the end of their natural life they shall be disposed, by the supplier, in accordance with The Waste Electrical and Electronic Equipment Regulations 2013 relating to the disposal of electrical equipment. The suppliers shall be responsible for the provision of any replacement devices.

5.10 Health and Safety Requirements – functional requirements

5.10.1 Warning Systems

Geofence wearable safety device shall be capable of giving audio, visual and vibrating warnings.

Alarms, and acoustic or vibratory outputs shall be set at a level such that personal user exposure does not exceed the current statutory limits in excepted conditions of use as defined by The Control of Noise at Work Regulations 2005.

Acoustic and vibratory outputs shall include warnings, fault alarms and safe tones.

5.10.2 General

As part of a safety investigation, it might be necessary to access the geofence data and this will be documented in accordance with Network Rail Life Saving Rules and Fair Culture process.

The data shall be provided to investigators for the review of incidents and accidents.

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The site wardens whilst carrying out their duty shall identify any breaches of work site safety (i.e., stepping out of pre-determined safe zone) as described as part of their existing duties as site warden and set up by the PIC / COSS.

5.10.3 Manual Handling

Suppliers shall design geofence equipment to minimise the risk of injury arising from manual handling and shall provide the information necessary (e.g., weights of units) and enable installers to comply with Manual Handling of Loads Regulations 1992.

5.10.4 Electrical Safety

Units shall be designed to reduce the risk of injury through contact with energised geofence equipment so far as reasonably practicable and in accordance with BS EN 62479:2010 and BS EN 62311:2020.

Units shall be designed to prevent unauthorised access to electrically powered components.

Units for use in third and four rail environments should, so far as reasonably practicable, be insulated to reduce the risks to the user from accidental contact between the unit and a live conductor rail.

5.10.5 Noise and Vibration

Consistent with the need to give adequate warnings and alarms, any acoustic or vibratory outputs from geofence equipment shall be set at a level such that personal user exposure does not exceed the current statutory limits in excepted conditions of use aligned with The Control of Noise at Work Regulations 2005.

Acoustic and vibratory outputs shall include warnings, fault alarms, and safe tones as defined in the PA Summary Report.

6 Briefing and Active Learning

Briefings and demonstrations will be arranged and delivered for that area, route / local team with the Trade Union representatives where applicable.

Geofence wearable safety device users shall receive a simple briefing before using the device. The supplier shall record the users who have received the briefings.

In order to mitigate hazards associated with the use of geofencing technology, the work site briefing and active learning shall comprise:

- a) a reminder to user not to depend on warning;
- b) what the worker should do when they receive a warning;
- c) a reminder that the device provides secondary protection only;
- d) a reminder that where the device provides a fault tone or stops working, they should escalate the issue to the PIC / COSS:
- e) a reminder to test the device before use to confirm the safe zone has been correctly set up.

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7 Planning and Use of Geofence

7.1 Work Site Survey and Mapping

The Resource Planner shall liaise with the supplier regarding the site of work. The supplier shall access Network Rail Geospatial Model and create the safe and unsafe zones.

A pre-site survey shall be undertaken to identify areas of poor or no cellular connectivity at the work site.

The supplier shall carry out a survey to identify where the RTK beacons should be located so they provide the most suitable cellular connectivity. Once installed, the beacons shall be maintained and repaired by the supplier.

7.2 Planning

Where Geofence is used to provide improved situational awareness, the Safe System of Work shall still be planned in accordance with NR/L2/OHS/019.

The wearable safety device is to provide a real-time monitoring system in the following proposed activities:

- a) inspections;
- b) patrolling;
- c) placing protection (boards, detonators, and isolations); and
- d) walking whilst safeguard / separated.

This technology would be deployed in addition to existing safety measures, so it will only ever be used as a secondary warning system.

The Section Manager / Originator shall specify which work site shall be supported with geofencing and complete the request using NR/L2/OHS/501/Form G. The request shall be sent to the Resource Planner.

The Resource Planner shall review the request form, identified number of wearable safety devices required, and send the request form to the supplier. After the supplier reviews the application with the originator, the supplier shall request a geospatial model from the Network Rail Geospatial Team and then create the geofences per the plan. The originator shall then review the geofence and approve it once satisfied.

Once specified all individuals shall use and wear a wearable safety device whilst on site for that task after receiving a site briefing.

The Weekly Planning meeting (i.e., PDR or equivalent) shall be used to record tasks where geofencing will be used.

The Planner shall create a SSOWP / Isolation Plan.

The Resource Planner shall liaise with supplier regarding worksite and tasks to be undertaken.

The section manager shall check and approve the submission of the request on NR/L2/OHS/501/Form G.

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7.3 General

Geofence technology shall be operated strictly in accordance with the Safe System of Work plan and:

- a) the manufacturer's operating instructions;
- b) any operational restrictions and conditions imposed by the Office of Rail and Road (ORR) or Network Rail in their product acceptance certificate;
- c) the RSSB Rule Book (GE/RT 8000);
- d) this module; and
- e) any telecom network restrictions highlighted seek guidance from the Network Rail Telecoms team.

7.4 Warning Area

The areas of the safe zone shall be briefed by the PIC / COSS as part of the SSOWP brief.

7.5 Warning Cancellations

Warnings can only be cancelled by the individual moving back into the safe zone of work.

If there is a warning in error, the user will move to a safe zone, inform the PIC / COSS of the warning, and the PIC / COSS will check the safe zone.

7.6 Equipment Protection

Once issued to the operative, the equipment shall be their responsibility to take care and position all equipment where it will not be damaged.

7.7 System set up and Operation

When setting up a Safe System of Work, the system shall be operated in accordance with Rule Book Handbook 7, General Duties of a Controller of Site Safety 4.3 Setting up a SSOWP.

The Resource Planner will liaise with supplier regarding worksite and tasks to be undertaken. The supplier will be provided with when and where the work is happening, what and how many wearable safety devices are required. The detail is provided through the request form NR/L2/OHS/501/Form G.

The supplier will work with the NR Geospatial Team to access the geospatial model and create the safe and unsafe zones.

Figure 1 shows an example of geofence safe and unsafe zone creation. The unsafe zones are defined in red.

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Figure 1 – Geofence safe and unsafe zone example



Figure 2 – Example of safe and unsafe zone creation

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7.8 Logistics, Storage and Maintenance of Equipment

Before the equipment arrives in the depot, the supplier shall:

- a) make arrangements to store the equipment in a dry, secure location in its case;
- b) arrange for suitable charging facilities to keep the equipment in its optimum operating condition; and
- c) identify a suitable quarantine area where the equipment can be isolated out of use when it is defective or involved in an incident.

When defects are identified by the user, the user shall identify and quarantine the faulty equipment by its serial number, and the supplier shall remove the equipment in question and restore the equipment to its operational condition or arrange replacement as necessary.

The supplier shall keep maintenance records for the equipment and maintain the inspection / test / calibration frequencies recommended in the operating instructions.

7.9 Pre use Geofence Equipment depot checks and tests

Before geofence equipment is taken to site, the user shall make the following visual and physical test to check the geofence equipment is fully functional:

- a) visual examination for signs of damage;
- b) check calibration date validity;
- switch on and function test all geofence units intended for use (i.e., checking battery strength, all components are present, and perform depot system set up);
- d) check battery strength of designated mobile telephones or open communications devices which will be used is sufficient for the shift. If any defect is identified, it shall either be:
 - 1) corrected before the geofence equipment is put into use at site; or
 - quarantined until such time as it can be repaired and either an alternative geofence wearable safety device obtained, or the geofence controller / COSS consult the responsible manager.

The user shall be briefed by the supplier to carry out the above checks A to D to confirm fit for purpose as part of their initial briefing for use of geofence devices.

7.10 Geofence set up and Operation

All work shall be planned in accordance with NR/L2/OHS/019.

The supplier shall meet the team at pre-arranged location / site access point / DU to issue the geofence wearable safety devices and to validate the safe and unsafe zones.

The supplier provides on-site support for early deployments.

The PIC / COSS:

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- a) reviews the geofence ELR limits against SSOWP;
- b) confirms site warden details and briefs site warden on the supplementary warning i.e., geofence (where appropriate).

Users sign out the wearable safety device via their sentinel number and receive a briefing.

Register completed of which devices issued to which user.

The PIC / COSS provides a mobile number with supplier.

Individuals proceed to test zone prior to entering the work site.

If an alert goes off when an individual believes they are in a safe zone, they should report it to the PIC / COSS.

The supplier manages the dashboard with all data held securely on their server in the UK.

Site warden whilst carrying out their duty will identify any breaches of site safety i.e., stepping out of pre-determined safe zone as described and set up by the PIC / COSS.

Devices only record location whilst in the infrastructure limits.

The wearable safety device will not operate within a tunnel or indoor environment.

For extreme weather conditions, consideration will be made for the suitability of the wearable safety device to confirm that the visible, audible, vibrating alerts are still appropriate to provide secondary warning i.e., strong winds, and torrential rain.

7.11 Geofence device troubleshooting

7.11.1 Loss of Signal Detection

Should the wearable safety device not be able to provide the required level of geospatial accuracy, the device shall provide a visual, audible, and vibrating warning to the user, and the device should not be used.

Should the device fail to provide the required level of geospatial accuracy, these degraded working processes shall be followed:

- a) device fails to switch on:
- b) unintentionally the wearable safety device switches off;
- c) device provides error tone due to insufficient geospatial accuracy;
- d) device provides alert in safe work area (false-positive detection);
- e) device fails to provide alert during test (false-negative detection);
- f) device fails to provide alert during work when user stray outside geofence (false-negative detection).

In the event of a system failure, all failure shall be reported via the DRACAS system.

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All hardware has built in redundancy and is designed to maintain operation when subject to multiple points of failure. Remote monitoring is used to enable early identification of failures and allows the supplier to notify the originator.

7.11.2 Prior to Accessing Work Site

Should the wearable safety device fail to function prior to accessing the work site (including during the access point test), the following process shall be followed:

- a) try restarting the device;
- b) request a new device from the supplier or responsible manager;
- c) should a new device not be available, highlight issue to PIC / COSS;
- d) PIC / COSS should then review the SSoWP process and determine whether another wearable safety device should be redeployed from a different team member undertaking a lower risk activity;

NOTE: E.g. standard geofence vs. placing protection), where necessary the wearable safety device will be reassigned.

e) where workers are not using a wearable safety device, the workers shall be re-briefed by the PIC / COSS on the primary control measure and revert to primary control measure only.

7.11.3 Device Ceases Functioning During Works

Should the wearable safety device cease functioning during works, the following steps shall be followed:

- a) the worker shall move to a position of safety and inform the PIC / COSS:
- b) PIC / COSS should then review the SSoWP process and determine whether another wearable safety device should be redeployed from a different team member undertaking a lower risk activity;

NOTE: E.g. standard geofence vs. placing protection), where necessary the wearable safety device will be reassigned.

c) where workers are not using a wearable safety device, the workers shall be re-briefed by the PIC / COSS on the primary control measure and revert to primary control measure only.

7.12 Finishing Work

After the work is completed on work site and the worker is in a position of safety, the wearable safety device shall be signed back in when the task / shift is completed.

7.13 Managing Work Site Changes

If short notice work site changes are required, the wearable safety devices shall be removed, and the primary safe system of work will remain in place.

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8 RTK Beacons

8.1 General

As a requirement of NR/L2/TEL/30066 for devices under 10W, the RTK beacons shall comply with BS EN 62479 and BE EN 62311.

8.2 Location

The location of the RTK beacons shall be managed by the supplier in conjunction with Network Rail. The beacons shall be installed in both railway and non-railway locations in order to provide a maximum distance between beacons of 20km.

This distance has been set to provide sufficient RTK coverage, with redundancy in coverage should a RTK beacon fail or experience an error.

Where the RTK beacons are installed on non-Network Rail infrastructure, the relevant standards and regulations for these locations shall be followed.

Where the RTK beacons are installed on Network Rail infrastructure all relevant Network Rail standards shall be adhered to.

Where the beacons are installed on station building, consideration will be given to provide power supply, alternative power supply to the equipment and safe access to the system (in line with Working at Height legislation, etc.)

8.3 Installation

The RTK beacons will be installed by the supplier who will also maintain the beacons on an annual basis so there is no device handling required by the device user.

The beacons shall be installed in locations which do not require people to access the track to install or maintain as the only requirement is power.

8.4 Maintenance

RTK beacon locations will be selected to allow individual beacons to be maintained without impact on the overall service due to the effective operational area over which the beacons can provide correction data.

RTK beacon locations will also be selected on the basis of non-intrusive access to the railway, by this no need for access to the track by means of a line blockage.

An annual inspection will be undertaken during which time the supplier will check that the equipment is fit for purpose.

All hardware has built in redundancy and is designed to maintain operation when subject to multiple points of failure. Remote monitoring is used to enable early identification of failures and to allow rapid response if necessary.

8.5 Degraded Working

In the event that an RTK beacon experiences an error or failure, coverage will be provided by adjacent beacons.

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Where the geo-positional accuracy of the system is reduced, the wearable safety device shall alert users as to the reduced accuracy and the workers shall follow the degraded working practice listed in 7.11.1.

Where the RTK beacons experience an error or failure, the supplier will deploy engineers to repair or replace the beacons as per the relevant commercial service level agreement.

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Appendix A - Geofence RACI

The following RACI table shows the accountabilities of the parties involved:

Tasks	Section Manager / Supervisor	COSS / PIC	Resource Planner	Supplier	NR Geo Spatial	Site Warden	User
Define work and working limits	RA	С					
Complete geofence application and issue to Resource Planner	RA						
Application reviewed, resources allocated, and application sent to supplier		С	RA				
Review application with originator	С	С	С	RA	С		
Request up-to-date geospatial model				RA	С		
Supply up-to-date geospatial model				С	RA		
Create geofences as per plan				RA			
Geofence is reviewed and approved by originator	RA	С	С				
Geofence is reviewed and approved by originator	RA	С	С				
Site briefing to users and issue safety devices	I	I		RA		I	1
Register completed of safety devices issued to which worker and/or plant/equipment via Sentinel/TVP	А	R		А		I	I
Review geofencing ELR limits against safe system of work pack	А	R				С	I

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PIC/COSS confirms site warden details and briefs site warden on the supplementary warning	RC	RA	С		I	I
Complete and validate (test) 'safe zone' prior to entering work site	А	R			R	R
Go/No Go decision	А	R	1		С	С
User to report any issue if alert sounds whilst in the 'safe zone' to PIC/COSS	А	A			R	R
Option to revert to primary protection only in the event of failure / fault		RA				I
Site warden to identify any breaches of work site safety i.e., stepping out of predetermined safe zone as described and set up by the PIC/COSS	I	AI			R	R
Safety device is signed back in when task / shift is completed	R	RA			R	R
Feedback on the use of geofence reordered through weekly PDR process originator / Section Manager / Supervisor / COSS / PIC	RA	R	IC		С	С
Supplier managers the dashboard with all data held securely on their server in the UK	I	С		RA	С	С