### tended

# Keep your track workers safe with powerful geofencing technology



Leading-edge safety solutions from satellite to trackside













# What is geofencing?

#### A geofence is a virtual perimeter, much like a physical fence but is instead defined by digital coordinates.

The virtual lines that join each of these points are combined to create a digital representation of a physical boundary. Geofences can then be used to trigger an event when a user enters, exits or changes distance from a boundary, such as issuing an alert or sending out a notification.



Geofencing can be used to:



Deliver safer projects by defining safe access points and routes for a planned worksite



Track and monitor the location of static, moving and temporary assets in real-time



Drive positive behavioural change by helping to improve situational awareness around hazards, such as open lines



Plan worksites in detail to ensure projects comply with infrastructure rule books and standards



Reduce the costs, time and errors associated with setting up and managing physical fences

## A **comprehensive** solution for **rail**

Create a safer working environment for track workers with Tended's innovative geofencing solution.

Comprising of an online Planning Dashboard and wearable device, Tended's solution allows you to plan worksite details so you can safely deliver scheduled maintenance, renewal and upgrade works.

Map out safe working zones, define designated access points and safe walkways, and plot where your critical protection assets need to be placed. Alerts notify workers if they leave the safe working zone, helping them regain situational awareness and maintain a safe distance from hazards.

Having received product acceptance, Tended's solution can help you to more easily maintain compliance with Network Rail's Safety Standards 019, 0130 and new geofencing standard (NR/L2/OHS/501, Module W4).

It's backed by behavioural science and includes a range of useful features, such as assisted possession and marker board placement and rail-specific overlays, so you can deliver safer, more efficient rail projects.



# A new approach to **project planning**

Use Tended's Planning Dashboard to plan every important detail of your worksite so everyone knows how to safely access and navigate the site.



#### Transform worksite safety

Ensure your teams know the exact location of the site and where to access it. Easily overlay virtual safe working zones of any shape and size onto your worksite and define safe walkways for your teams to follow.

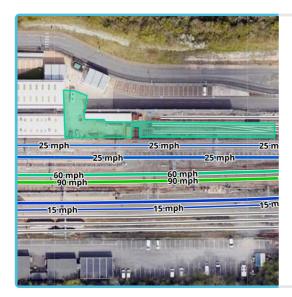


### Efficient possession management

Define important project details in accordance with the plan including dates, designated site access points, the location of protection equipment and more to help deliver work packages safely and efficiently.

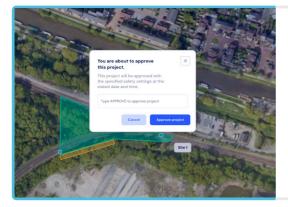
# Efficiency without compromising safety

Reduce the risk of error during the planning process with features that make time-consuming and safety-critical tasks more efficient.



#### Accurate project planning designed for the rail industry

Make better-informed planning decisions and with highresolution imagery of the rail network along with rail-specific overlays that include miles and chains, ELRs and line speeds. Measurement tools allow you to accurately measure onsite distances, such as the distance from the edge of an open line.



#### Reduce errors with approval workflows

Built-in workflows provide a complete approval and review process of planning activities. Easily inspect the change history of all plans and view audit trails and records.

## Designed for safetycritical projects

Once your worksite is set up within the Planning Dashboard, your teams simply collect their Wearables from the portable charging case. Wearables are updated automatically, eliminating confusion around the location of safe working zones.

### Get up and running fast

As Tended uses an established beacon network that has been in place for over 14 years, no onsite infrastructure is needed. This means you can start projects immediately, saving the time and costs associated with installing and maintaining infrastructure near the track.

## Incredible accuracy for peace of mind

Using the same technology found in autonomous vehicles and military applications, we're able to achieve typical positioning accuracy of 14mm. This level of precision is crucial for safety-critical situations.

## Improve situational awareness

Ensure your teams are notified the moment they leave a safe zone. With audible, visual and vibration alerts, we help your trackside workers regain situational awareness if they leave safe working limits.

### Protect your people and orevent accidents

Be sure your teams are always protected. Tended's Wearables are built for the toughest environments and have received official product acceptance for use on the rail network.

#### Stay connected wherever you are

Don't allow safety or critical works to be compromised by an unreliable connection. We use multi-carrier networks, ensuring your teams stay connected even in the most challenging environments.

#### Technology you can trust

We've been designing safety Wearables since 2017 and know just how important fail-safe systems are to safety-critical operations, which is why our Wearable has multiple fail-safe protections built in.

Comply with industry safety standards

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Tended's solution can help you maintain compliance with Network Rail's safety standards. It has been approved for use on rail infrastructure and is fully compliant with Network Rail's new geofencing standard.

# Full **visibility** over **your assets**

Tended's Planning Dashboard acts like a digital control centre, where you can plan and track the location of your critical assets in accordance with the project plan.



#### Ensure the precise placement of assets and equipment

Plot the exact location of fixed protection equipment, such as marker and possession limit boards within the Planning Dashboard.

Assign asset tags to your project and fix them to your equipment, ready to be installed on site.

Ensure all equipment is installed in the correct location before making the site live by checking their live location against the plan.

Check the Planning Dashboard to ensure all assets and equipment are removed from a worksite before handing back a possession.

### Check nothing is left behind

Upon the completion of works, a quick scan of the Planning Dashboard will support you with the line clear verification process by showing any assets left onsite.

As well as helping you account for all equipment, this also helps mitigate the risk of collisions and avoids delays in handing back possessions.

#### Manage runaway risk

Receive a notification if any assets, such as plant or trolleys, leave the safe working zone.

These early alerts of uncontrolled movements can help stop runaways causing severe incidents from collisions.

# Keep track of onsite safety

Monitor the location of plant and assets within the Planning Dashboard.

A real-time view reduces the reliance on paper-based diagrams and radio communications, improving efficiency and reducing the risk of miscommunication or misinterpretation. Unsafe events can be identified immediately and prevented before potential incidents occur.



Identify if vehicles enter site in the wrong direction or location



Check protection equipment is placed on the correct line and mileage



Be notified if equipment or plant leaves a safe working zone



See if plant is travelling on the wrong line





Tended is an award-winning safety technology startup. With over 5 years' experience developing safety Wearables, we have a record of deploying Wearables within industryleading organisations to make safety improvements.









HS2





"Tended allows us to better protect our teams in a way that hasn't been done before by using innovation in safety.

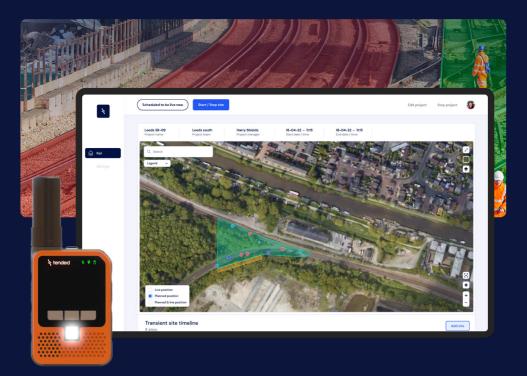
"Our commitment to keeping our track workers safe is absolute and uncompromising. Tended shares that commitment and what impressed me is that they have designed a product that puts the user first."

Andy Crowley Operations Director AMCO· GIFFEN

tended.co.uk

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## Ready to take your worksite to **the next level of health and safety?**



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