Real Time Safety & Data Solutions

External Challenges

Internal Challenges

Unmanned side roads and access points

Annoyed and aggressive drivers

Work vehicle management and monitoring

Speeding errant vehicles and emergency services

Lone workers

Taper strikes

Overhead cables and structures

Human and vehicle interface

Safelane   Smart Taper   Exclusion Zones   SiteNAV

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Connecting Road Works and Work Sites to Deliver Real-Time Information and Alerts

Enable Safety Equipment & Mobile Phone Apps based on Intelligent Geo Zones
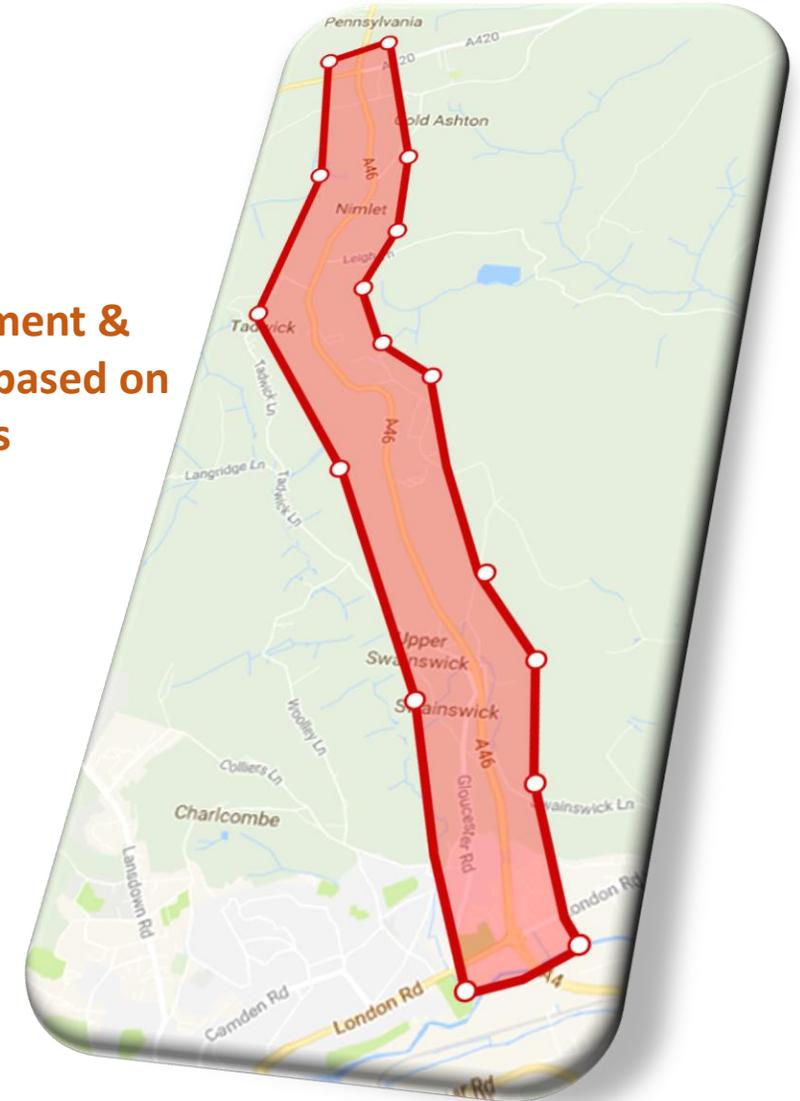
Real time road works information for road users

Real time deployment, alert and usage information for the workforce and management

Incursion Warning Systems

Safelane

Proven to enable safer & more cost effective road closures

Incursion Mitigation – Access Points

Features

- ✓ Enable Traffic Management Operatives to Instantly Warn workforce in case of **errant or emergency vehicle incursion**
- ✓ Incident triggered CCTV
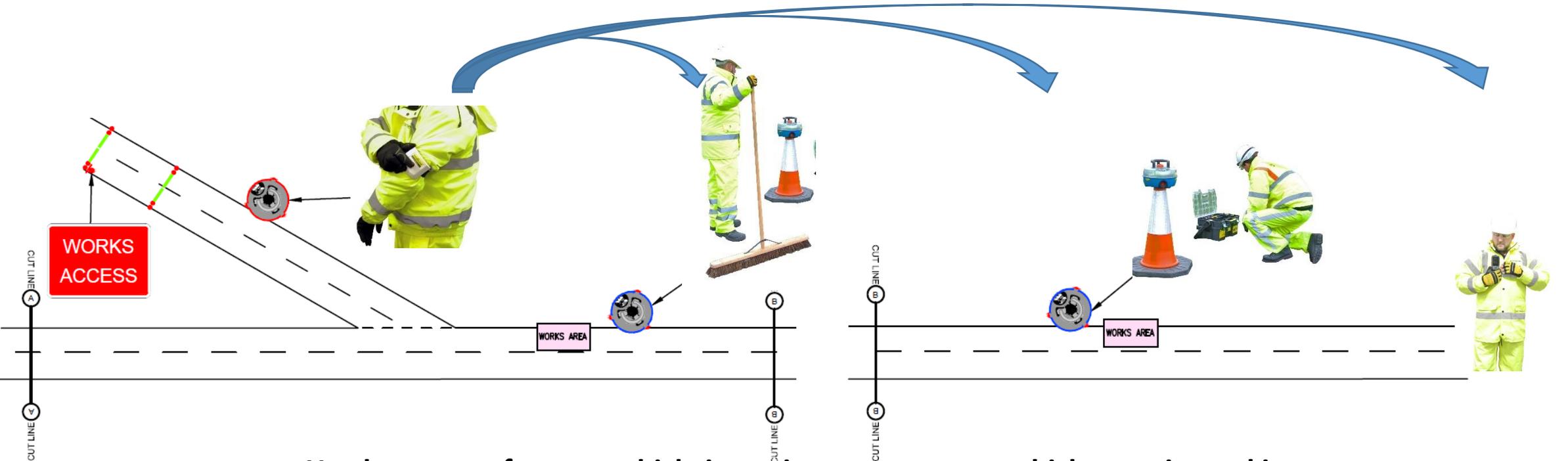- ✓ Audio-visual deterrent and call for help

"Safelane has proved its worth on more than one occasion!" **(Balfour Beatty Skanska JV)**

Instant Incursion Alert
Manned Works Access

Long range incident alarm

Instant Alert to Work Areas with no limitation in distance

WORKS ACCESS

WORKS AREA

WORKS AREA

CUT LINE A

CUT LINE B

CUT LINE B

CUT LINE B

CUT LINE B

Used to warn of errant vehicle incursions, emergency vehicles on site and in winter of gritters passing through

Incursion Mitigation – Full Closure Points

Features

- ✓ Electronically monitored Smart Closure
- ✓ Instant incursion alert
- ✓ Proven deterrent
- ✓ Checkpoints/air locks to enhance safety
- ✓ Remote site monitoring

"Intellicone® proved a great deterrent to people attempting to enter the closure" **(Kier Highways)**

Instant Incursion Alert
Closure Points and Checkpoints

Refer to TM Manual/Block/01
for block detail drawing

CHECKPOINT

WORKS AREA

ROAD CLOSED

"'It may just be on this occasion that the Safelane system has sent all contractors home safely to their families", Aone+

HRS
Safelane

Incursion Mitigation – Benefits

Benefits

- ✓ Reduce risk to workforce during incursion
- ✓ Reduce likelihood of incursion
- ✓ Remove Traffic Management Operatives from areas of potential confrontation
- ✓ Reduce overall staffing requirements
- ✓ Increase overall site safety
- ✓ Management control & accurate reporting

"In the month of July 2016 alone, we reduced incursions by 50%, which proves that by introducing Safelane, we were moving in the right direction to combat errant vehicles", Chevron Area 10
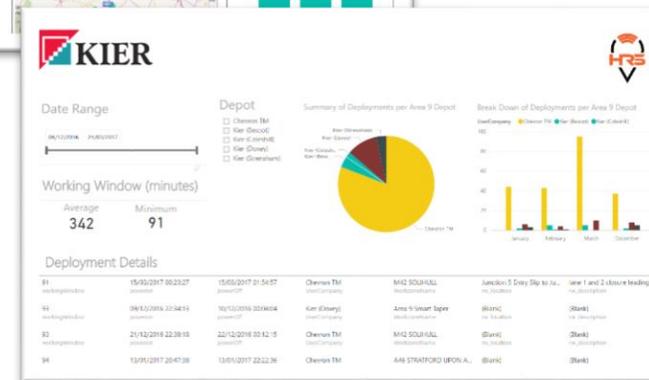
Real-time reporting

Real-time deployment & exception reporting
- Time on/off (working window info)
- Deviations
- Equipment deployment

Real-time incident reporting & footage
- Time & location of incident
- Type of breach
- Footage

Works access
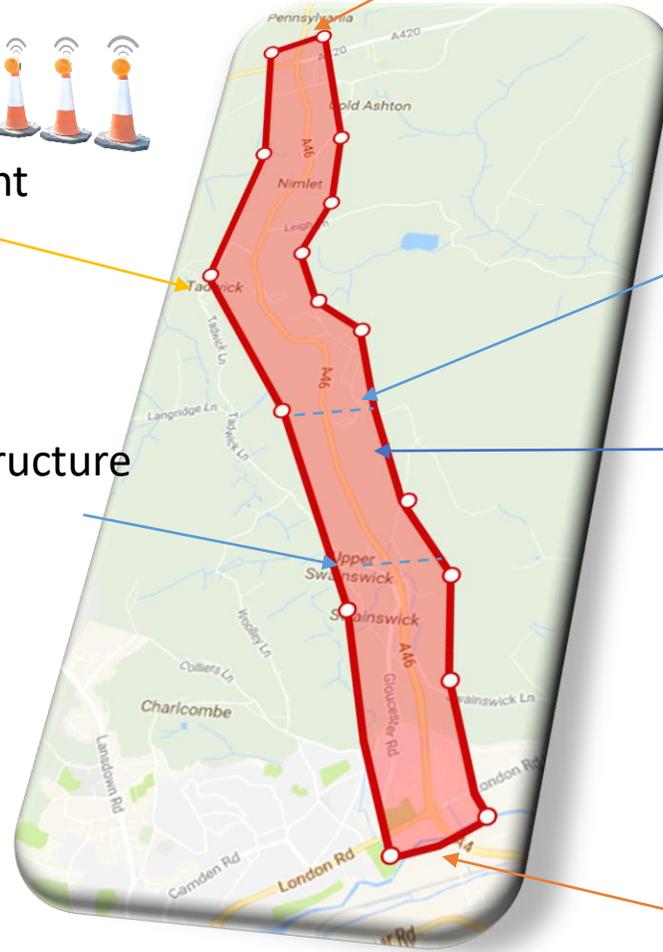
Full closure point

Overhead cable

Overhead Structure

Work Area

Works access

Smartphone Alarm Application

Intellicone® **Safelane**

Proven to create safer road closure & provide net cost savings

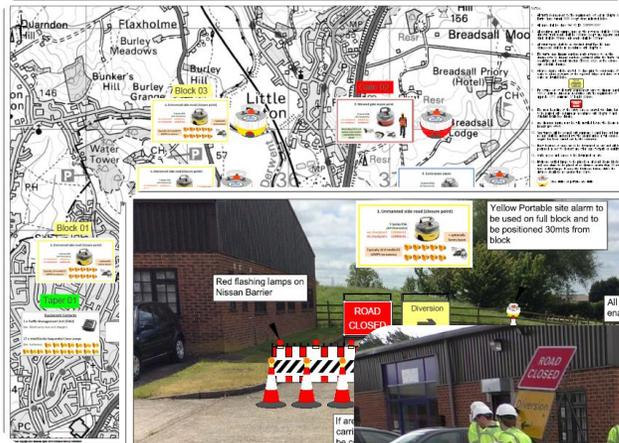

Deterrent

Over 25,000 deployments since 2015

Mitigation

HRS
Safelane

Training & Deployment Support

- Incursions greatest risk to workforce
- Risk assessments considering real time incursion warning systems must be undertaken
- Enhanced technology such as panic alarms, incursion alarms and motion sensors should be seriously considered

Praise - Safety

"Without Safelane, who knows what would have happened with regards to injuries or even fatalities", Balfour Beatty Skanska JV, M25 J30/A13Major Project

"In the month of July 2016 alone, we reduced incursions by 50%, which proves that by introducing Safelane, we were moving in the right direction to combat errant vehicles", Chevron Area 10

"The system is easy to set up and gives greater confidence when working inside the closure", Aone+ Area 12

"It may just be on this occasion that the system sent all contractors home safety to their families", Aone+ Area 7

"The system proved a great deterrent to people attempting to enter the closure", Kier Highways Area 13

Feedback - Efficiency

"There was a saving of about 25% after the hire cost of the equipment", Chevron @ Balfour Beatty Thorley Lane M56

"Using Safelane we were able to reduce resource requirements from 18 operatives and 9 vehicles to 8 operatives and 4 vehicles, a major saving", HW Martin Area 2

"Using Safelane reduced the number of TM lads on site, removing them from harms way and creating a safer site", Aone+ Area 7

Smart Taper

Situation

- Taper strikes pose a serious risk to road workers & road users

- Current industry practice is to inspect integrity of TM on a cyclic basis

- Road Space Booking system(SRW) currently relies on a large number of phone calls to update road works status

- Records of taper on/off and taper strikes are manual hence prone to error

- No real-time road works data available
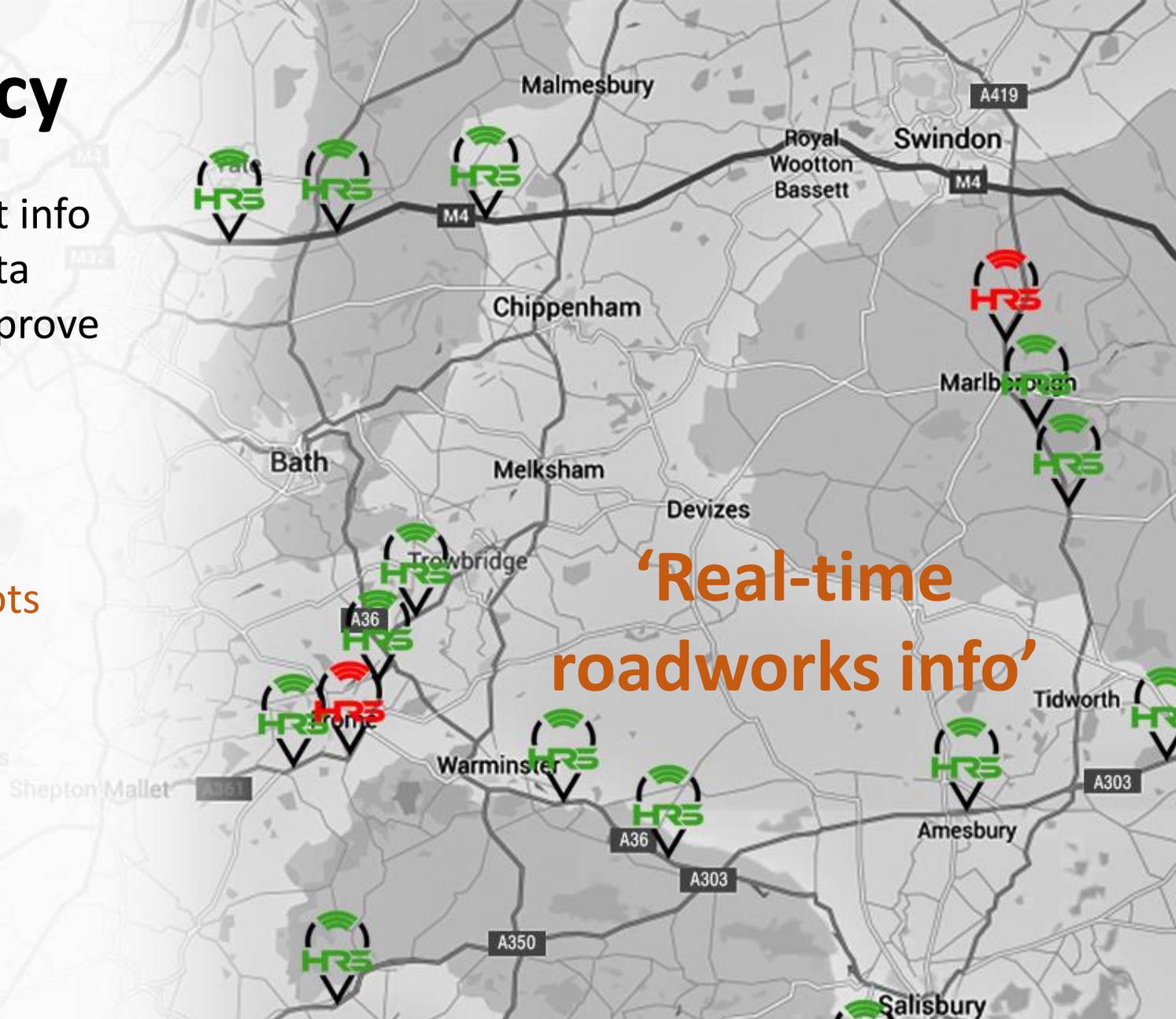
Smart Taper – Safety

- Instant taper strike alerts will significantly reduce risks to road workers

- Immediate strike response will significantly reduce risks to road users exposed to debris and incomplete TM

- Potential for reducing number of phone calls required to update control centre will reduce exposure time of TM staff

'Make existing assets Smart'

Smart Taper – Efficiency

- Accurate & real time taper deployment info will reduce phone call handling and data entry processed by control centers, improve KPI reporting and quality/ speed of information fed to general public

- Automated record of taper strikes and severity will help analyse strike hot spots

- Real-time deployment data enables improved visibility of TM status across Network and potential optimization of working windows

'Real-time roadworks info'

Exclusion Zones

People/plant interface – Exclusion zones

Features
- ✓ Detect people/plant entering exclusion zone
- ✓ Alert people on foot and plant operator
- ✓ Rapidly create no go areas

Benefits
- ✓ Reduce likelihood of accidents
- ✓ Deterrent effect
- ✓ Quick to deploy saving time

Dual Sentry Beams detect breaches and have on board sounders. They can also activate external alarms and devices
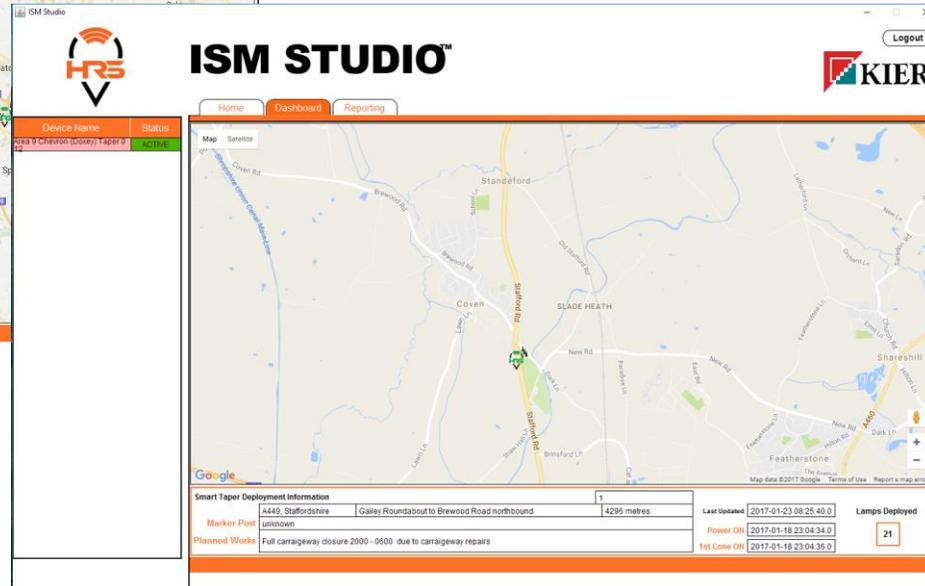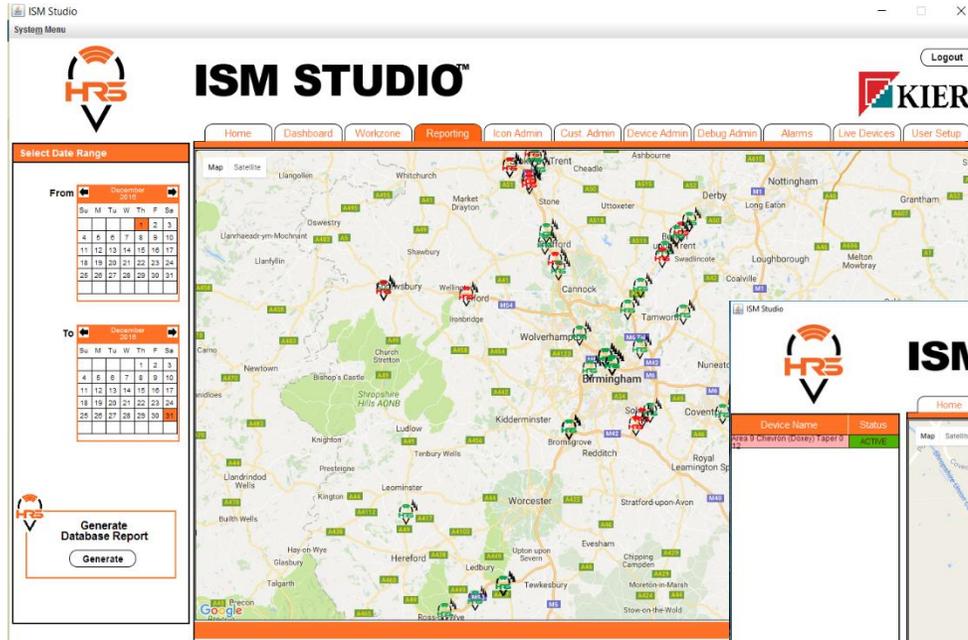
Accessories – wearable alarms

Smart VMS– Exclusion zones

Trigger MVIS VMS when beams are broken for Works Egress Warning

- ISM Studio will enable detailed reporting on Safelane, Smart Taper and SiteNAV deployments
- Instant reports based on location and scheme number
- Automated exception reports (i.e. incursion records, taper strikes, vehicle speeding)

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Integrated Safety Management