

REPORT: Site Review & Inspection

08.10.2016

•Purpose

- In the last few months the statistics of Deer-Vehicle-Collisions (DVC) showed a clear drop of accidents on test-sections of the N787, N302 and N795 (~50% or more)

In August we got the information, that some of the devices were missing through theft or damage. Because of the probable influence in the statistics we informed the team of [REDACTED]

In September there was a significant increase of accidents. Further it was obvious, that there were some "hot-spots", where most of the accidents have happened.

So IPTE decided to examine the hot-spots that have been identified on the N302 and N795. Not all devices have been inspected but the examination on critical section should give a clear indication on the reason of the increased accident rate and what finally to do about it.

•Résumé

Most of the (remaining) devices are technically OK.

Nearly all accidents are related to missing / damaged or non-working devices.

Additionally, there have been accidents in sections, that are very dark (N795). New devices (2015+ from new founded IPTE Ltd.) remain fully charged and work without any problems. Some devices from 2013 and before (old company) went into power-save-mode (no warning, until battery is charged again).

Hotspot N302/2-4: Missing and / or damaged devices mainly cause the accidents hot spots.

Hotspot N795/1: There is a "very low-light" section where about 50% of the devices entered power save mode because of low energy. It turned out, that this was the case for some 1st / 2nd generation devices (manufactured in 2012).

All current devices (3rd generation), that were replaced by the new company IPTE Traffic Solutions (devices with major improvements in current consumption) were still fully charged.

Hotspot N795/2ff

At these hotspots, units were either missing and/or inactive.

N787: As there was no accident on N787 no examination was made there.

We got positive Feedback from a game-keeper along the N787. He told us, that there are much less accidents than there used since the units where installed there.

•Proposed action plan (October / November)

IPTE

Repair of broken devices

Hotspots N795: If the devices are reordered (all new 3rd generation devices should be placed in the low-light section, and the others are placed to standard-light sections) the whole section will work.

Provincie Gelderland:

Replace broken/missing devices, install new devices on median strip.

New DD430: ~15pcs.

Poles: 15 pcs.

Further improvement for N302: On N302 there is a section with a wide green median strip. To improve that section IPTE suggests that this section should additionally be protected with devices. 38 additional devices / poles are needed.

Work summary

1. General results (N302/N795)

There have been about 5-10% of all devices that have been found in a non-working condition. The cause can be deducted to 4 main points:

1) Theft

2) About 15 devices were missing on N302/N795

3) **Destruction / damage** through collision of cars or by vandalism

4) There were 3 devices, that have been knocked over and were damaged or filled with water

5) Low light section with 1st / 2nd generation devices

6) Some parts of the road are very dark. 1st generation devices have an overall higher power consumption and went into Low-Energy-Mode (non-alerting mode)

7) Failure of hardware components

8) Only very few devices went to Battery-Save-Mode (no operation to protect battery) due to hardware related high energy consumption

2. Details N302

All sections with accidents have been examined (see picture below).

case 1

Left side: 3 units missing

Right side: 1 device not working

case 2 / case 3

left side: 1 device knocked down, 1 device not working

right side: 3 devices missing, 1 not working

case 4

Road-section with wide green median strip

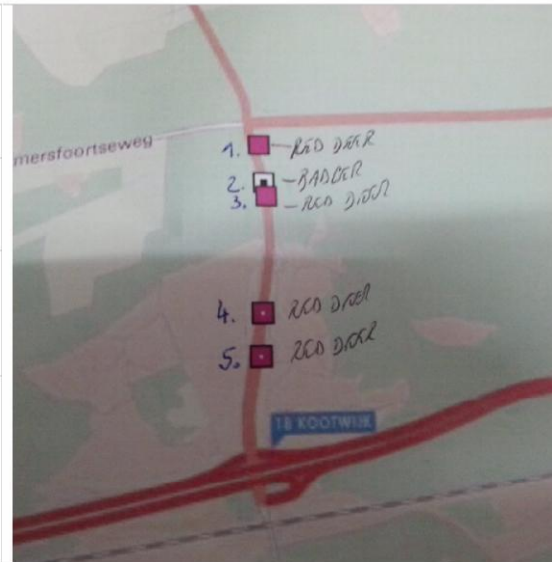
Remark: This section should be protected with additional devices to increase the protection

case 5

Left side: 2 devices missing

Road-section with wide green median strip

Remark: This section should be protected with additional devices to increase the protection



Summary N302: There is a clear connection between missing / non-working devices. Missing and non-working devices have to be replaced that full protection is achieved.

3. Details N795

case 1-4

some devices not working, but no obvious reason for accidents after the short inspection

possible reason: Many cars are driving with very high speed

case 5-9

section with very low light condition (low light conditions, many trees with still leaves on it)

All 3rd generation devices were working still fully charged

Problem for 1st and 2nd generation devices that need more energy, many of them were in low-power-mode on that section (non-warning). These non-working devices build "holes" in the virtual fence – this is the explanation, why figures have been good until August (high light season) and now dropped.

If all 3rd generation devices are placed at the low light section and 1st and 2nd generation devices are placed on lighter places the whole section will be working even in low-light season.