

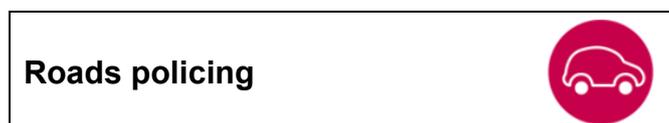
Case 4 Issue 38 – Roads policing		LEARNING THE LESSONS
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Collision involving an unmarked police vehicle with concealed lights

Use of nylon tights to modify covert lights on unmarked police vehicles, raising issues about:

- *Use of nylon covers to modify lights on unmarked vehicles*
- *Lack of national guidelines/policy*

This case is relevant to the following areas:



Overview of incident

At almost 8pm PC A responded to a single vehicle road traffic collision. He was accompanied by Ms B, a vehicle examiner from the Driver and Vehicle Standards Agency (DVSA). After arriving at the scene, PC A arrested a man and a woman who were verbally and physically abusive. Ms B said she pressed the 'Red 1' button in the police car to request assistance due to the behaviour of the man and woman.

PC C responded. PC C was an advanced driver, driving an unmarked police vehicle. He travelled to the scene using an A road, reaching speeds of more than 100mph (with a maximum speed of 154mph). He displayed blue lights, including some in the front grille of the vehicle, fog light clusters and wing mirrors.

In-car footage showed as PC C was travelling on the A road, he passed 12 vehicles and his headlights flashed occasionally during the journey. At one stage, the footage showed traffic ahead in lane one. PC C reduced his speed from 145mph to 142mph and the headlights flashed. A few seconds later, a Ford Transit light goods vehicle (LGV) driven by Mr D activated his indicator and moved into lane two. PC C reduced his speed to 122mph while continuing to flash his headlights.

Almost immediately, PC C reduced his speed to 101mph and moved into lane one. He reduced his speed further to 92mph. The footage showed a car was in lane one ahead of PC C. This caused PC C to immediately move from lane one into a layby at 85mph where a stationary HGV was parked. He reduced his speed to 65mph but collided with the back of the HGV.

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When interviewed by the police, Mr D said he first saw the police vehicle being driven by PC C when it was 400m away. He could not see any blue lights on the vehicle. He said as the vehicle got closer he saw the headlights flashing and blue lights. He explained that within seconds the police car was just behind him.

The following morning, PS E assumed responsibility for the investigation of the collision. She recorded that it was necessary to explore issues around the visibility of the police vehicle to the driver of the LGV before any interviews could take place. Later that day Mr F, a Forensic Collision Investigation Unit (FCIU) vehicle examiner, recorded he found no mechanical defects with any of the vehicles involved. He did record he found nylon covers placed over the blue lights in the front grille of the vehicle.

Separately, PC G, collision investigator, conducted visibility tests on a 'sister' vehicle. He said on dipped beam lights the front blue lights were visible but "not exactly dazzling"; when the headlights were flashed or turned onto main beam the blue lights could not be seen; and these tests were completed at varying distances up to 125m with the results the same.

Dr H, a cognitive psychologist specialising in visual perception and situation awareness, was asked by the force to evaluate the impact of nylon coverings. He concluded a nylon cover on the blue grille lights reduced the measured illuminance to approximately 14% of the uncovered level.

The head of the Roads Policing Unit (RPU) explained to the IOPC that when he took up the role the force's fleet of vehicles needed replacing. He stated he was aware the fleet department took the lead in respect of all current regulations and guidance for police vehicle build. He explained technical or scientific issues were not within his operational remit and he trusted the fleet department to provide the cars and the build to meet operational needs, while complying with all guidance. Mr J was the manager of the commissioning centre at the fleet department and was responsible for acquiring the vehicles.

Mr J explained Mr K was the most experienced technician the force had at that time. He was able to give advice on what was technically possible, and was aware of the relevant legislation and guidelines. Mr K explained he was instructed to begin a conversion on a fleet vehicle and the vehicle would need to be externally visually covert. Mr K said the following week, Mr J and the head of the RPU approached him and said the front grille lights on the converted vehicle were not fit for purpose as they were too visible.

Mr K explained he suggested the grille lights could be covered by black nylon material and stated he had seen women's tights used to tint rear car lights in the past. The head of the RPU agreed with this account and stated he asked how the use of tights would affect the brightness of the lights. He said Mr K explained to him he had done this many times before and it would be ok.

The head of the RPU sourced nylon tights and gave them to Mr K to fit to an unmarked vehicle. The head of the RPU said he did not have any involvement in assessing the suitability of the tights.

Mr K and Mr J assessed the use of the tights between 15 and 20m from the vehicle. They decided there were no issues. Mr K said he was asked to complete the same modification on three further unmarked vehicles.

There were no national guidelines, regulations or force policies and procedures about modifying emergency lighting on unmarked police vehicles, or the requirement to scientifically test and validate any modifications made as fit for purpose.

Type of investigation

IOPC independent investigation.

Findings and recommendations

National recommendations

Finding 1

1. There were no national guidelines or regulations about modifying covert lighting on unmarked vehicles.

National recommendation 1

2. “The National Police Chief’s Council should introduce national guidance and/or policy concerning any potential modifications to covert lights installed on unmarked police vehicles.”

National recommendation 2

3. “Any such guidance and/or policy on the modification to covert lights will be based on formalised research and analysis of any proposed method.”

Response to the recommendations

National recommendations

National recommendation 1

1. The NPCC fully recognises the need to develop national guidelines about the installation and modification of covert lighting. It has commissioned the development of a national working group to produce the required national guidance.

National recommendation 2

2. The new national working group will enlist the assistance of expertise and technical knowledge of:
 - police forces fleet personnel
 - subject matter experts from industry
 - defence science and technology laboratory
 - use formal research from academic institutions

Updates on work in progress nationally

Update from the National Association of Police Fleet Managers (NAPFM)

3. After the recommendation was issued all police fleet managers were contacted by the National Association of Police Fleet Managers (NAPFM), the representative and consultative body of the UK's police fleet professionals. NAPFM made contact to determine current working practices, remind fleet users of relevant standards, and advise that any camouflage that mitigates the effectiveness of warning lights should be removed with immediate effect. This was supported by an NPCC circular to Chief Officers and through engagement with the force and regional surveillance team forums.
4. The NAPFM technical committee has been working with the Defence Science and Technology Laboratory (DSTL), with the aim developing national guidance and standards in respect of fitting covert and overt warning light systems. This work is particularly relevant given the changes in technology (for example high intensity LED, as relates to light emission and human perception of flashing and reflective light). Progress is ongoing and will inform a national standard that will ensure police vehicles remain fit for purpose and operate safely.

Questions to consider

Questions for policy makers and managers

1. What does your force policy say about modifying lights on unmarked vehicles?

Questions for police officers and police staff

2. What other steps would you have taken to make other drivers aware of your presence as a police vehicle driving at high speed?