

18 December 2023

Heathrow Airport Limited
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W: [heathrow.com](https://www.heathrow.com)

Mr R Furniss
West London Coroner's Court
His Majesty's Assistant Coroner
25 Bagleys Lane
London
SW6 2QA

Dear Mr Furniss

**Re: Inquest touching the death of John Coles
Response to Prevention of Future Death ("PFD") report issued on 24 July 2023**

I am formally responding to the PFD report issued by you following the conclusion, on 21 July 2023, of the Inquest touching on the death of John Coles.

The report was addressed to me, as Head of Airside Operations, on the basis that you anticipated that I would be the person with the necessary understanding of the detail and also the necessary authority to address the matters concern raised in that report.

In drafting this response I have, where necessary and appropriate, sought input from colleagues within the business. HAL, as will be clear from what follows, has also sought external advice and input on the issues you raise so as to enable me to respond as fully as possible.

Matters of concern raised in the PFD report

The report highlighted two matters of concern requiring a response. These were that:

1. The phenomenon of background visual interference as a potential hazard to airside drivers at the airport should be considered; and that
2. HAL consider whether it ought to recommend to the wider Team Heathrow community the use of side profile lights on airside vehicles that need to cross uncontrolled crossings.

Commissioning of Assessment

As you will have learned from the evidence contained within my witness statement, as well as the testimony of witnesses called to give evidence at the Inquest, the operation of Heathrow Airport is highly complex and involves numerous third-party organisations. Furthermore, the airport's operations are subject to stringent global, European and national regulation by a number of different regulatory bodies. Any potential change requires very careful consideration of the impacts of that change, not least in connection with the regulatory regime in addition to the potential for creating a new risk for aircraft, passengers or workers where before there was none.

For that reason, the first action taken was to commission recognised experts to consider the above matters of concern and to make recommendations.

HAL commissioned Transport Research Laboratory ("TRL") to carry out an assessment of the airside environment.

TRL was instructed to: (1) ascertain whether background visual interference exists at Heathrow; (2) consider, if background visual interference does exist at Heathrow, how much of an issue it is for airside drivers; and (3) advise on what reasonably practicably can and should be done about it, including consideration as to the use of side profile lights on airside vehicles.

This was a lengthy and detailed process resulting in TRL providing its recommendations to HAL on 28 November 2023.

Background visual interference

TRL's research concluded that there is background visual interference when driving airside at Heathrow, making particular note of the lighting in and around the terminals. However, TRL concluded that the lighting in and around the terminals did not create a greater visual distraction than normal street lighting would do for persons driving outside the airport environment.

TRL also concluded that, while taxiways are generally visually cluttered for airside drivers, the result was again similar to a normal street scene that includes building lines, street furniture and vehicle movements.

TRL concluded that there is not a realistic or practicable intervention that could be introduced to influence the background visual interference. This conclusion was reached as, in practical terms, little or no change can be made to the visual vista.

TRL did identify enhancements which could be made to vehicle identification in order to mitigate against the effects of any background visual interference.

Recommendations for mitigation of background visual interference

TRL set out a number of measures that it recommended HAL consider (in conjunction with and alongside its existing wider regulatory and operational requirements) as measures that could potentially mitigate the effects of background visual interference for airside drivers.

Several of these recommendations relate to the use of retro-reflective marking tape (to effectively act as side profile lights) on airside vehicles, and specifically to the importance of clearly defining the outer profiles and parameters of vehicles around the airport estate, with as little ambiguity as possible. It was recommended that:

- HAL should use its powers to mandate a more robust use of airside ground vehicle safety markings;
- a recommended minimum retro-reflective tape width for side markings be set at 50mm with the minimum width for certain large goods vehicles at 100mm;
- side markings should be required and should extend to cover as much of the vehicle's length as is practicable. Where possible, the horizontal marker should extend to the

foremost practical point along the side of the cabin, without risk of showing to the front of the vehicle;

- vertical markings should be required, where practicable, at the parameters of horizontal markings in order to assist with determining the length of a vehicle during low light conditions; and
- full-length horizontal livery should be required to airside vehicles such as cargo pod dollies where possible.

It was also recommended that:

- HAL mandates the fitting of rear-mounted amber obstruction beacon(s) to certain high-sided and long vehicles that have a vehicle structure which prevents the front-mounted beacon being seen from the rear.
- For HAL airside operations vehicles, the retro-reflective diagonal stripe decal should be applied in favour of the retro-reflective Battenburg livery.
- Airside driver training should be further enhanced to highlight the issues of change blindness and inattentive blindness in the context of the airside driven experience.
- Where vehicles without sufficient markings need to be granted temporary airside passes, these vehicles should be fitted with a temporary amber beacon or escorted by a fully marked vehicle at all times. Where possible, an alternative vehicle should be used.
- Activated four-way hazard lights should be considered for all vehicles operating airside within the taxiways and stands.

Progressing the recommendations

HAL is now considering the extent to which these recommendations can practicably be introduced. In some cases, this will require a period of consultation with the wider Team Heathrow community.

HAL aims to:

- Mandate the marking of all vehicles and equipment operating airside with end-to-end retro-reflective tape, with vertical markings at their periphery. The exact detail of this is currently being developed with the support of TRL and other experts in this area, including The Reflective Equipment Manufacturers Association (REMA). The requirement will be based on the recently developed REMA guide for Airport Airside Fleets (Nov 23), and will exceed the requirements already in place for landside vehicles.
- Mandate the fitting of rear-mounted amber obstruction beacons to high-sided and long vehicles where the vehicle structure masks the front-mounted obstruction beacon when viewed from the rear.
- Consider the use of activated four-way hazard lights with a full assessment of the feasibility of introducing them on stands. The requirement would be to use repeater lights instead of hazard lights on taxiways, which is already the case for Airside Operations vehicles.
- To have on all new Ops vehicles diagonal and not Battenburg livery. Replacement livery on existing vehicles will also be diagonal and not Battenburg.
- To continue to work with TRL to determine how best to further enhance the existing airside driver training materials to ensure that all airside drivers have appropriate knowledge of visual clutter, change blindness and inattentive blindness, while ensuring that the training materials remain compliant with the Civil Aviation Authority's requirements.

- Once the new training materials have been developed and shared with approved training providers, to embark on an awareness campaign to alert existing airside drivers of the changes to ensure that the benefit of the further enhanced training is not limited to new airside drivers or those completing the required refresher courses (every 3 years).
- Amend the existing Operational Safety Instruction relating to temporary vehicle permits to reflect the TRL's recommendation on vehicles without sufficient marking.

HAL intends to maintain an ongoing relationship with TRL, who are recognised experts in their field, to ensure that arrangements are subject to ongoing review. This approach is consistent with HAL's policy of continuous improvement.

Timescales

The changes set out above will be further developed over the next 3 months, with a target date of introducing the new requirements from 1 April 2024.

Third party operators will be given 12 months to comply with the new requirements, with potential exceptions granted for up to 24 months from the date of introduction if a vehicle is subject to a previously scheduled and documented replacement programme.

It is expected to take approximately 6 months to develop the supporting training materials, meaning a planned introduction during Q3 2024.

Please do not hesitate to contact me should you have any queries.

Yours faithfully

[Redacted signature]

[Redacted name]

Head of Airfield Operations