



Wheelchair Accessible Vehicle Converters Association (WAVCA)

Date: 26th August 2026

Mr. Andrew Bridgman,
HM Assistant Coroner,
Coroner's Court,
1, Mount Tabor Street,
Stockport,
SK1 3AG

WAVCA response to Regulation 28 report into the death of Susan Toft

Dear Mr Bridgman,

I write in response to your letter of the 14th of April this year to Peter Facenna, regarding the case of the late Mrs. Susan Toft. I am responding in my capacity as WAVCA Chief Engineer, representing the UK WAV industry in regulatory affairs. WAVCA is the Wheelchair Accessible Vehicle Converters Association, the trade association for UK Wheelchair Accessible Vehicle (WAV) converters. The chairmanship of WAVCA is a rotating position, occupied by one of its member companies, its current chair being Peter Facenna. I feel I must disclose that I am an employee of Allied Vehicles Ltd, a WAV manufacturer, of which Peter Facenna is managing director. I further disclose that the vehicle involved in this incident was manufactured by Sirius Automotive, also a WAVCA member, but subsequently acquired by Allied Vehicles Ltd on 24/10/2024.

I would like to start by extending my condolences to Mrs. Toft's family, on behalf of myself and the WAV industry as a whole. We are a small industry in the UK and we strive to improve the quality of life for wheelchair users seeking greater independent mobility. Clearly we are keen to do all we can to prevent a similar occurrence in the future.

Turning to your Regulation 28 report, I note that you raise two points for consideration. I respond to each of them, on behalf of the UK WAV industry, as follows:

CONCERN 1 - the seat cushion attachment

We note that Mrs Toft appears to have had the use of three different wheelchairs during this case:

- The one she was using in December 2024 when the vehicle was purchased;
- The Sunrise Q300 acquired in January/February 2025;
- The Invacare TDX SP2 acquired in May 2025.

According to the report, the Vicair cushion was transferred from the Sunrise to the Invacare wheelchair, but it is not known who applied the securing Velcro to the seat of the Invacare chair to accept the Vicair cushion from the Sunrise chair. We assume that she was traveling in the Invacare chair at the time of the incident. We note your reference to the Posture & Mobility Group's "International Best Practice Guidelines for the Transportation of People Seated in Wheelchairs". As wheelchair accessible vehicle (WAV) manufacturers, we have no control or influence over the design and manufacture of wheelchairs or any accessories such as cushions that are attached to them. Wheelchair manufacturers tend to regard themselves as manufacturers of medical devices and are regulated by medical devices regulations. WAVs are, of course, motor vehicles and are regulated as such. WAVCA members try to accommodate the broadest possible range of wheelchairs within their vehicles. We accept the advice regarding cushion attachment in the PMG best practice guidelines and would welcome any move to improve the safety of cushions used on wheelchairs. We are aware that there is an ISO standard (ISO 16840) for wheelchair seating systems and Part 4 of that standard deals with crashworthiness, but our understanding of that standard, is that the seating systems are tested on a surrogate wheelchair base, as it would not be viable to test every seating system with every wheelchair. We do not know how this would relate to a cushion used between a wheelchair occupant and a wheelchair seating system and as an industry, and do not possess the necessary expertise to feel competent to comment further.

CONCERN 2 - the position of the seat belt buckle

The report mentions that the seat belt buckle was higher than Mrs. Toft's lap. This seems unusual, as the vehicles are tested as part of their type approval, using a surrogate wheelchair with a sloping seat, the height of which is 472mm above the ground, at its lowest point and 490 mm at its highest. The technical data for the Invacare TDX SP2, suggests that there are a number of seat configurations available, but the lowest of these is 450mm above the ground and Mrs. Toft was sat on top of a cushion, placed on that seat. I have been in contact with [REDACTED], who have confirmed that the installed height of the top of the seat belt buckle, as designed, is 530mm above the floor of the WAV on which the wheelchair would rest. They estimate that when correctly worn, the seat belt webbing would therefore have been around 550mm above the floor of the vehicle, with the seat belt tongue engaged in its buckle. Even without the Vicair cushion, the height of Mrs. Toft's lap, assuming average stature, is estimated to be around 600mm above the WAV floor, comfortably above the height of the buckle - and this would only increase when the cushion was used. The data in the Sirius type approval documentation for that vehicle, suggests that the lap belt, when worn, would make an angle of 72 degrees with the horizontal, viewed from the side of the wheelchair, placing the buckle within the "preferred" zone suggested in ISO 10542-1 : 2012 for wheelchair tie-downs and occupant restraints, when assessed with the surrogate wheelchair used for testing. We would greatly appreciate any more information that could be provided on this point - perhaps photographs? Obviously, without seeing the vehicle, we have no way of knowing whether any modifications have taken place since it was built. Some users tend to fit seat belt extenders if they feel there is insufficient webbing on the seat belt, and we have no way of knowing whether this was the case in this instance. They are freely available from aftermarket online sellers.

The report also mentions that there was no assessment of the fit of the occupant restraint on Mrs. Toft. This is indeed surprising and disappointing. As I have mentioned, the type approval requirements for WAVs are set by government regulators, either in the UK or the EU. The regulations applicable at the time this vehicle was type approved (2012), contain requirements for wheelchair occupant restraints and their anchorages. We know that the vehicle concerned complied with the applicable regulations at the time of manufacture, and was covered by a UK National Small Series Type Approval e11*NKS*0653.

In addition, in conjunction with the British Standards Institute, WAVCA developed a UK standard for the design and manufacture of WAVs, PAS 2012-1. As a British Standards Institute publication, we are required to review it every 2-3 years and since its original publication in 2012, we have amended it several times, as new improvements have come to light. The Sirius vehicle involved in this incident was

developed to be compliant with that standard, bearing PAS 2012 accreditation number 0069. PAS 2012-1: 2012 contains positional requirements for wheelchair occupant restraint anchorages, intended to fill some of the gaps in the type approval regulations that were in force at the time. Whilst the testing is done with a standardised surrogate wheelchair, and it is impossible to predict the fit of the restraints for every occupant in every model of wheelchair available, and in every position that the wheelchair could be placed within the vehicle, I believe that if correctly fitted, the occupant restraint should have been capable of adequately restraining Mrs. Toft in her Invacare chair. One common failing when fitting a wheelchair occupant's seat belt, is to run the lap belt over the arms of the wheelchair, thereby preventing a good fit across the wearer's pelvis. It is one of the most common errors that we see users make in an occupant restraint installation assessment, but having mentioned that, the design of the Invacare TDX SP2 arm rests does not look like it would present any great difficulties in allowing the belt to fit correctly. I am therefore at a loss to explain the poor fitment of the lap belt of Mrs. Toft's occupant restraint.

Having checked with Sirius, it has always been their practice to include the wheelchair tie-down and occupant restraint manufacturer's user instructions in every vehicle. They confirmed that this would have been the case for this vehicle too. The user instructions are required (under ISO 10542-1) to specifically include the advice not to route the occupant's lap belt over the arms of the wheelchair, and to ensure that it rests snugly on the wearer's pelvis.

From the account of the sale of the vehicle in the report, I believe there has been a significant failure in the retail of the WAV to Mrs. Toft and her husband. At the same time that PAS 2012-1 was developed, we also developed a second part to the standard. PAS 2012-2, which deals specifically with the retail requirements for WAVs. By their nature, and that of their users, WAVs have never been suitable for simply placing in a "showroom" environment and sold without a detailed assessment of the wheelchair user's needs and capabilities. Retail of WAVs has always needed specialist training, as there is so much more variation in shape and size and capability of a seated wheelchair occupant compared to a conventionally seated occupant – and indeed, the capability of the wheelchair user's assistant, who is often also the driver. Part 2 of PAS 2012 therefore requires an in-person demonstration to the customer, (usually carried out at the wheelchair user's home for private WAV sales), including an assessment of their needs and capabilities. Part of this would have included an assessment of not only the fit of the seat belt around Mrs. Toft in her own wheelchair, but also an assessment of the fit of the wheelchair tie-downs on her particular wheelchair, and an assessment of the ability of her assistant to fit the restraint equipment correctly. Clearly, this did not happen in this instance.

Compliance with both Parts 1 and 2 of PAS 2012 are (and were, at the time this WAV was built and retailed), independently assessed by the UK government's Vehicle Certification Agency. We were informed by the family that the WAV was purchased from a company called "Wheelchair Cars" in Eccles, Manchester. This WAV retailer is not a WAVCA member and appears not to have complied with the provisions of Part 2 of PAS 2012. However, PAS 2012, is a voluntary standard and compliance is not a legal requirement. Part 2 of PAS 2012, at the time that this vehicle was sold by Wheelchair Cars in Eccles, would have required the retailer to:

- (a) provide the user with certain technical data on the vehicle, (make, model, technical specification of its accessibility features, and warranty terms);
- (b) have a documented process for demonstrating the WAV to the user, including the operation of the ramp, any specialist seating, and the wheelchair tie-down and occupant restraint system;
- (c) complete a "suitability assessment report" on the users' ability to operate all the necessary features, (including securing the wheelchair and occupant and driving the WAV),
- (d) keep the records of that assessment for at least 7 years.

We do not believe that these things were done in the course of retailing this WAV.

I must, however, also mention that in this particular case, it seems that Mrs. Toft changed her wheelchair (twice) from the time that the vehicle was purchased. This presents a real problem because a British Standard like PAS 2012 cannot impose requirements on the end user of a product. Mr and Mrs Toft were under no legal obligation to inform the retailer that they had changed their wheelchair or request a new suitability assessment. The same would be true for a WAV purchased as a private sale.

In section 7 of the report, you ask [REDACTED] to provide details of action taken or proposed to be taken, and a timetable for action - or to explain why no action is proposed. As an industry, we have given this a great deal of thought, as we are very keen to improve the safety of those who use our vehicles.

It may be helpful to explain how wheelchair accessible vehicles (WAVs) are supplied within the UK market and where opportunities exist to improve standards.

We estimate that approximately 70% of WAVs sold each year are new vehicles, with the remaining 30% being supplied through the used vehicle market. Of those new WAV sales, around 95% are supplied through the Motability Scheme.

The vast majority of these privately supplied WAVs are provided for the benefit of a specific wheelchair user and are typically used by that individual, together with their family members, carers or other regular drivers. In most cases there is a single wheelchair user whose needs have been assessed and for whom the vehicle has been selected. This differs significantly from the licensed taxi sector, where a wheelchair accessible vehicle may transport a wide range of wheelchair users with differing wheelchairs, needs and restraint requirements throughout its working life.

As a result, ensuring that the wheelchair user, their family members and carers receive a thorough demonstration and familiarisation with the vehicle, its wheelchair tie-down and occupant restraint system, plus all other features necessary to safely operate the vehicle at handover, is particularly important in the private WAV market.

Whilst it is difficult to control the practices of used WAV retailers and private sales and, in the absence of any means by which WAVCA can make compliance with PAS 2012 Part 2 a legal requirement, the industry feels there is an opportunity to improve standards across the majority of the market through the supply of new WAVs. Given that, to our knowledge, around 95% of new WAVs are supplied through the Motability Scheme, any measures adopted within that framework could have a significant effect on customer safety and help ensure a consistent standard of vehicle demonstrations and handovers.

For this reason, WAVCA wrote to Motability Operations in April 2026 recommending that adherence to PAS 2012 Part 2 should be made mandatory for all suppliers providing wheelchair accessible vehicles through the Motability Scheme. PAS 2012 Part 2 provides a recognised framework covering customer assessment, vehicle demonstration, user familiarisation, documentation and handover procedures. We believe these requirements represent best practice and should form part of the normal process when supplying a WAV.

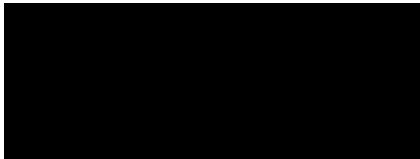
[PAS 2012-2:2025 | 31 Aug 2025 | BSI Knowledge](#)

Making compliance with PAS 2012 Part 2 a mandatory requirement for suppliers participating in the Motability Scheme would ensure that the vast majority of new WAV customers receive a consistent and comprehensive demonstration of their vehicle and its safety systems. Whilst this would not directly address the used vehicle market, we feel it would materially improve standards across the sector as a whole, by making more WAV purchasers familiar with the issues that are considered in a good demonstration, suitability assessment and handover process, in the hope that those expectations will be carried through into the part of the used and private sale network that is outside of WAVCA's control.

In summary:

- With regard to Concern 1, the seat cushion attachment, as a group of vehicle manufacturers, WAVCA does not possess the expertise to comment in any detail on this, but the PMG Best Practice Guidelines are well known within the industry, and the concern appears reasonable. The current version of PAS 2012-2 contains a specific reference to the PMG Best Practice Guidelines.
- With regard to Concern 2, the seat belt buckle position, I feel we have carried out as thorough an investigation as we can, without access to the original vehicle, wheelchair and belt arrangement. The buckle, as designed, would not have placed the lap belt webbing at a height greater than any occupant's lap. The two most likely scenarios to investigate further, would be whether the belt has been extended and whether the belt was inadvertently routed over the arms of the wheelchair.
- With regard to the retail of the vehicle, the retailer was not a WAVCA member and clearly did not demonstrate the vehicle in accordance with WAV industry best practice set out in PAS 2012-2.
- Mrs Toft changed her wheelchair twice before the accident. We cannot think of a suitable method to compel a re-assessment in situations where a wheelchair user changes their chair post-purchase.
- As an industry, we believe that the best chance we have to prevent similar tragic incidents to this one, would be to increase compliance with PAS 2012-2 for new WAV sales, over which we can exert more influence. In this way, we hope to raise awareness of the key issues with wheelchair users and their assistants, in the hope that best practice will trickle-down to operators in the used WAV market, which we are less able to influence.

Yours sincerely,



WAVCA Chief Engineer