



Department for Transport

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21 March 2022

Dear Owen Jenkins, Jack Samler,

I refer to an application to operate on roads as part of a trial vehicles that do not comply in all aspects with the Road Vehicles (Construction and Use) Regulations 1986 (S.I. 1986/1078) (as amended) or with the provisions in the lighting regulations (Road Vehicle Lighting Regulations 1989 (S.I. 1989/1796) (as amended)).

I have pleasure in enclosing for your files **Vehicle Special Order No VS 127/2022**, which will cover movements of the vehicles as part of a trial in the area specified in the Order. Please check and make sure that the details of your Order are correct and that you understand the conditions attached to it. If any changes occur that will affect your Order, these must be notified to me as soon as possible.

Section 13 of the vehicle special order (VSO) requires that each e-scooter displays a manufacturer's label that includes a unique identification number (UIN). To help identify riders, and to assist the police and the public in differentiating between trial e-scooters and privately owned e-scooters, we recommend that this UIN (or a different UIN) also takes the form of a plate, stickers or paint and is placed where it is clearly visible – for example, on the steering column and/or at the side or rear of the vehicle.

The trial has been assessed against a range of published DfT requirements and policy objectives and we expect that these will be met consistently throughout the trial period. This includes the expectation that the Data Processing Agreement and the associated Schedule will be adhered to. Should these expectations not be met, the Department could take this into account in deciding whether to revoke the Vehicle Special Order.

I wish to draw your attention to the expiry date of your Order, which is the end of 30 November 2022.

As you are aware, you must ensure that the vehicles being operated as part of the Oxfordshire County Council E-scooter Trial are kept in a fit, serviceable and roadworthy condition at all times. You should also be aware that, if the vehicles being operated as part of the Oxfordshire County Council E-scooter Trial fail to comply in any way with the conditions in your Order, your Vehicle Special Order may become invalid and could be revoked.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Phil Earl', written in a cursive style.

Phil Earl
Deputy Director, International Vehicle Standards
Department for Transport

ROAD TRAFFIC ACT 1988

Oxfordshire County Council E-scooter Trial Order 2022

ORDER OF THE SECRETARY OF STATE UNDER SECTION 44 AND SECTION 63

The Secretary of State, in exercise of his powers under section 44 of the Road Traffic Act 1988, authorises the use on roads of the vehicles of Voi Technology UK Ltd. described in the attached Schedule notwithstanding that they do not meet all provisions of the **Road Vehicles (Construction and Use) Regulations 1986 (S.I. 1986/1078) (as amended)** and are exempted from all the provisions in the lighting regulations (**Road Vehicle Lighting Regulations 1989 (S.I. 1989/1796) (as amended)**).

The Secretary of State, in exercise of his powers under section 63(5) of the Road Traffic Act 1988, authorises the use on roads of the vehicles of Voi Technology UK Ltd. described in the attached Schedule, and exempts them from all the provisions in **The Motor Cycles etc. (Single Vehicle Approval) Regulations 2003 (S.I. 2003/1959) (as amended)**.

Citation, commencement and expiry

1. This Order may be cited as the Oxfordshire County Council E-scooter Trial Order 2022,
2. This Order comes into force on 01 April 2022 and will cease to have effect from the end of 30 November 2022.

Application

3. This authorisation shall only apply if:
 - (a) The vehicles to which this order applies are being used as part of a trial in the Oxfordshire County Council within the geographical boundaries as highlighted within the attached map in Appendix 2 to this order between 01 April 2022 and the end of 30 November 2022,
 - (b) The vehicles are being operated by or on behalf of "Voi Technology UK Ltd.",
 - (c) The vehicles are operated by a single user at all times,
 - (d) The vehicles are of model type(s) listed in the Schedule to this Order,
 - (e) The vehicles are limited in number to 1600 vehicles.
4. The vehicles shall comply with:
 - (a) The motor cycle provisions of the Road Vehicles (Construction and Use) Regulations 1986 (as amended) contained within the following Regulations: 29, 100, 109, 110, and,
 - (b) The below conditions as stated.

CONDITIONS APPLYING TO CONSTRUCTION AND USE AT ALL TIMES

5. Testing and inspection

- (a) Voi Technology UK Ltd. shall be obliged to submit sample vehicle(s), for which the order is granted, for testing and inspection upon request by the Department at any time during the trial period.

6. General safety

- (a) All aspects of the design and construction of the vehicle which are not covered by other items shall be such that no danger is caused or likely to be caused to any person using the vehicle or other road users.

7. Anti-tampering

- (a) Measures shall be taken to prevent tampering of controls, maximum speed and power.

8. Audible warning

- (a) Each vehicle shall be fitted with a bell or horn suitable for giving audible warning of the approach or position of the vehicle.

9. Braking

- (a) Each vehicle shall have two independent braking systems each of which is capable of bringing the vehicle safely to a halt. Combined braking systems are allowed provided a failure in one system does not affect the performance of the other and each system must meet the given brake performance requirements below.
- (b) At least one brake must be hand operated.
- (c) If a kinetic energy recovery system is counted as one braking system, then the second braking system shall be a friction brake.
- (d) The braking systems shall meet the following requirements on a dry and level surface and when fully laden:
 - i. When all braking systems are used in combination, a minimum deceleration rate of 3.5 m/s^2 , or max stopping distance $\leq 7\text{m}$ from a speed of 15.5 mph.
 - ii. Each braking system shall independently be able to achieve a minimum deceleration 1.5 m/s^2 , or max stopping distance $\leq 15\text{m}$ from a speed of 15.5 mph.
- (e) If a mudguard brake is used, the following conditions shall be met:

- i. It shall be constructed of materials which limit wear of wheel and mudguard.
 - ii. It shall be possible to actuate the foot brake over its full travel without interference.
 - iii. Mudguard brake shall have a non-slip surface.
- (f) The braking force shall be progressive and graduated.
- (g) Where the e-scooter is fitted with brakes which are intended to be hand operated:
- i. The brake lever intended to be operated by the right hand must operate the front brake;
 - ii. The brake lever intended to be operated by the left hand must operate the rear brake;
- (h) A single lever operating both braking systems shall be permitted to be operated by either hand.
- (i) Means to operate brakes must be exclusive for braking.
- (j) Every part of every braking system and the means of operation shall be maintained in good and efficient working order and be properly adjusted.

10. Mass and dimensions of e-scooters

- (a) Minimum payload capacity: 100 kg.
- (b) Maximum mass without rider: 55 kg.
- (c) Maximum length: 1.5 metres.
- (d) Maximum width: 0.7 metres.
- (e) Maximum height: 1.5 metres.

11. Electrical safety

- (a) The vehicle and its components of the electrical system including the battery, shall be so designed, constructed and fitted as to minimise and protect against the risk of electrolyte leakage, fire, explosion, electric shock and to ensure electromagnetic compatibility.

12. Lighting and reflectors

- (a) Obligatory lamps
 - i. The vehicle shall be fitted with a front position lamp meeting the following requirements:

Colour: white; Visibility: easily visible for other road users from a reasonable distance, but not to dazzle the oncoming road users.

- ii. The vehicle shall be fitted with a rear position lamp meeting the following requirements:

Colour: red; Alignment: at or near the rear; Visibility: easily visible for other road users from a reasonable distance, but not to dazzle the oncoming road users.

- iii. Flashing lamps are permitted with a flashing frequency of 1-4 Hz (60-240 times per minute)

(b) Optional lamps

- i. The vehicle may be fitted with direction indicators. If fitted, the colour of the direction indicators shall be amber.
- ii. The vehicle may be fitted with a stop lamp. If fitted, the stop lamp shall meet the following requirements:
Colour: red; Alignment: to the rear

(c) Obligatory retro reflectors

- i. The vehicle shall be fitted with a red reflector to the rear;
- ii. The vehicle shall be fitted with reflectors which are capable of reflecting light to each side of the vehicle and shall be of colour either amber or white;
- iii. Reflective materials (e.g. reflective tapes) shall be allowed.

(d) Optional retro reflectors

- i. The vehicle may be fitted with a reflector to the front. If fitted, the colour of the reflector shall be white;
- ii. Reflective materials (e.g. reflective tapes) shall be allowed.

(d) Use

- i. No person shall use/cause/permit to be used, on a road any light to cause undue dazzle or discomfort to other persons using the road.
- ii. Obligatory lamps are required to be kept lit and unobscured when the vehicle is: used between sunset and sunrise, or in seriously reduced visibility between sunrise and sunset; allowed to remain at rest on a road between sunset and sunrise.
- iii. Lamps and reflectors must be clean and maintained in good working order.

13. Manufacturer's label

- (a) A tamper-resistant, weather-proof label, shall be firmly affixed, legible and located in a conspicuous place displaying: Manufacturer's name, Model identifier, unique identification number, maximum payload, maximum speed, maximum continuous rated power.

- (b) The unique identification number may be located on a separate label positioned elsewhere on the vehicle.

(c) If removed, a new label shall be put in its place.

14. Stands

(a) The vehicle must be fitted with a stand which can support the e-scooter when left unattended. In addition, stand once retracted, shall remain in the retracted position whilst driving so as not to disturb the vehicle whilst in motion.

15. Towing

(a) Towing is prohibited.

(b) The use of side-cars is prohibited.

16. Tyres

(a) Tyres may be of either pneumatic or non-pneumatic construction.

(b) The tyre shall be suitable having regard to the use to which the e-scooter is being put.

(c) Any pneumatic tyre shall be so inflated as to make it fit for the use to which the vehicle is being put.

(d) The tyre shall be maintained in such condition as to be fit for the use to which the vehicle is being put and shall not have any defect which might in any way cause damage to the surface of the road or damage to the rider or to other persons using the road.

17. Stability

(a) The vehicle shall be so designed and constructed as to pass the stability tests outlined in Appendix 1 to this order.

Signed by the authority of the Secretary of State on 21 March 2022.



Phil Earl - Deputy Director, International Vehicle Standards, Department for Transport

SCHEDULE

Item	Model Name	Model Number	Number of vehicles
1.	Voi – Voyager 3	SNSC 2.3	1600 (total maximum)
2.	Voi – Voyager 4	SNSC 2.3.2	
3.	Voi – Voyager 5	SNSC 2.3.3	

Appendix 1 (Stability test)

In the following stability tests, the vehicle is to be operated on the carriageway elements at 20 km/h (or at the maximum design speed if this is lower), and at a speed of 8 ± 2 km/h. In addition, the carriageway elements in tests 1 and 2 (in both cases only on the up ramp) and 4 (where the front wheel in the direction of travel is in direct contact with the up ramp/kerb) are in both cases to be approached from a standstill.

In each test, the vehicle must be ridden over the complete carriageway elements and the rider must be able to control it at all times. The direction of travel in which the rider wishes to head must be retained, with a maximum deviation between the target and actual trajectory of 20 degrees being permissible.

Test conditions

The tests are to be performed on a dry, level, non-slip concrete or asphalt surface. The longitudinal gradient of the test track shall not exceed 1% and its transverse gradient shall not exceed 3%.

The ambient temperature must be between 0°C and 45°C and wind conditions shall be such that they do not affect the testing.

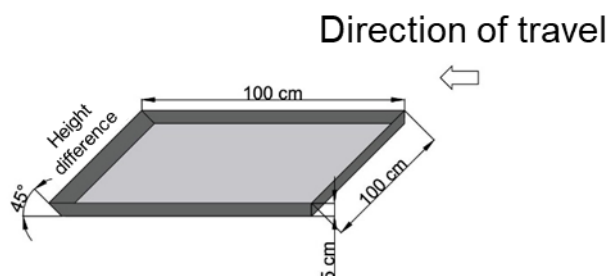
The battery state of charge shall be at least 75%

In the case of pneumatic tyres, the pressure shall be set in accordance with manufacturer's instructions.

The mass of the vehicle shall be equivalent to its 'ready-to-ride' state and the tests are to be performed with a rider of mass between 70 kg and 100 kg.

Test 1 - Depression

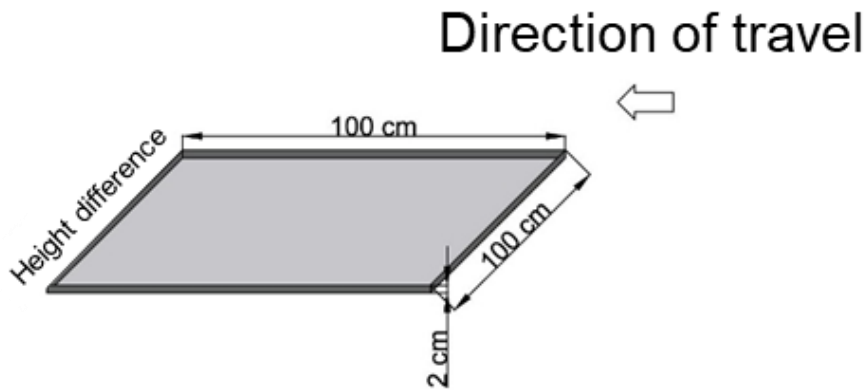
Structure of the carriageway element: a depression in relation to the riding level measuring at least 100cm x 100cm x 5cm (L x W x H) with vertical walls and an exit ramp at an angle of 45 degrees (see picture below).



The vehicle to be tested is to be ridden through the depression in a straight line over the kerb towards the ramp parallel to the direction of travel shown.

Test 2 – Up and down ramps

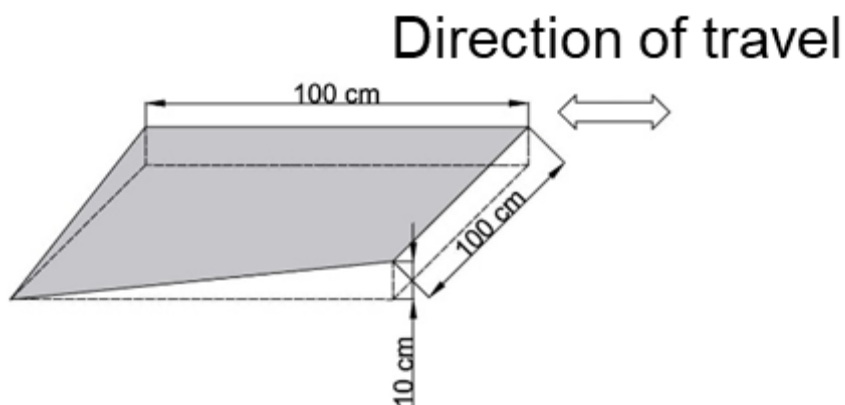
Structure of the carriageway element: a down and up ramp with a height difference of 2cm in relation to the riding level (size 100 cm x 100 cm) (see picture below).



The vehicle to be tested is to be ridden through the depression in a straight line over the kerb towards the up ramp parallel to the direction of travel shown.

Test 3 - Drop on one side

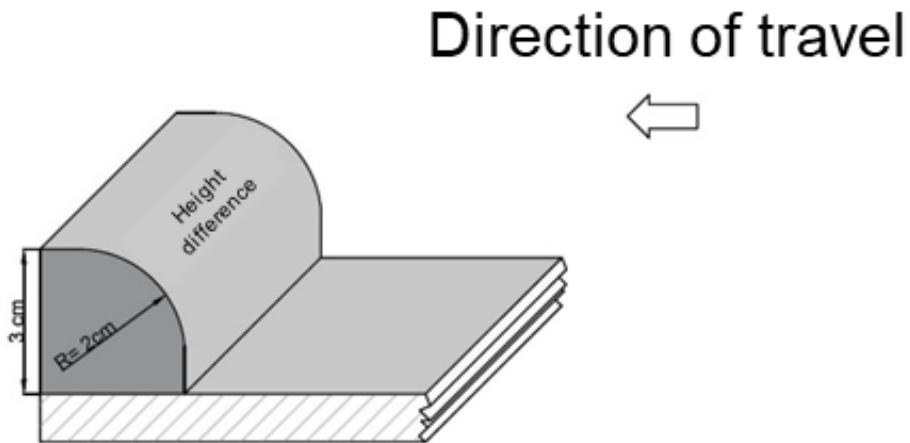
Structure of the carriageway element: a stretch on which the riding level, over a length of 100 cm, drops by 10 cm on the left-hand side in the direction of travel or rises by 10 cm on the right-hand in the direction of travel (drop or rise on one side) (see picture below).



The vehicle to be tested is to be ridden up and down on the stretch with a drop on one side parallel to the direction of travel shown. The vehicle must not be ridden over the edge of the carriageway element with a height of 10 cm.

Test 4 – Kerb

Structure of the carriageway element: a kerb with a profile as shown in the figure below, and a height difference between the carriageway level and the upper edge of the kerb of 3 cm.



The vehicle to be tested is to be ridden up over the kerb at an angle of 90 degrees and an angle of 45 degrees.

Appendix 2 (Geographical boundaries for the Oxfordshire County Council E-scooter Trial)

