

NATIONAL HIGHWAYS

Specialist Vehicle & Equipment Conversion Specification ASSET DELIVERY VEHICLES



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1. INTRODUCTION

- **1.1.** This document outlines the requirements for the supply and conversion of a passenger vehicle, intended to meet all the operational requirements of the National Highways Asset delivery vehicle fleet.
- **1.2.** The specific contents of this document as detailed below may not be varied by suppliers without prior written confirmation from the National Highways National Fleet Team.
- **1.3.** The base vehicle will be acquired through the Government Crown Commercial Service (CCS) Framework RM6060.
- **1.4.** The Supplier will ensure the Customer is present during all meetings to discuss design specifics, Engineering changes, and final sign off.
- **1.5.** The Supplier will be responsible for the provision of all ancillary equipment, including the fitment of all lighting systems, but not parts provided by National Highways for fitment only. These parts are shown in Appendix 1
- 1.6. Suppliers are required to ensure that technical assistance is made available in the public domain so that any 3rd party working on manufacturer's vehicles has access to purchase subscriptions for technical information such as Workshop Manuals, Electrical Diagrams, Technical Bulletins, and Diagnostic Release Notes.



2. **DEFINITIONS**

2.1. A list of definitions referenced throughout this document can be found below;

Customer

National Highways Limited.

Supplier

Appointed supplier responsible for, supply and delivery of the base vehicle for Asset delivery use by National Highways Limited.

Convertor

Appointed supplier responsible for conversion and delivery of the base vehicle to National Highways Limited.

Operator

National Highways Limited.

National Highways National Fleet Team

The customer's team responsible for the delivery and management of vehicles on behalf of National Highways Limited.

Base vehicle

The vehicle supplied prior to being converted to a fully functional vehicle for National Highways Limited.



3. BASE VEHICLE REQUIREMENTS

Dual Burnoso hoavy duty
Dual Purpose – heavy duty
Estate type vehicle or small to mid-size SUV / cross-over.
Vehicle must seat via two body doors on each side of the vehicle, With access to the cargo area via a side opening rear door or split tailgate/fully opening rear door.
All considered dependent upon whole life cost comparison
>40 litres
Automatic gearbox.
100kgs
Radio/CD with radio codes; Bluetooth capability for all mobile telephone/ tablet configurations; PAS, ABS as a minimum Fully electronically adjustable driver's seat with lumber support; Remote central double locking controlled by key, card or both; Alarm and immobiliser system Category 2 Thatcham alarm system (or equivalent), Rubber floor mats front and rear, Manufacturer supplied air conditioning and/or climate control; Matching full size or space saver type spare wheel. Automatic dimmable rear-view mirror
50g/km
White (or vehicle wrapped as a minimum).
VED to be included, with cost identified
"Run Lock". (Dependent upon vehicle fuel type) a vehicle electronic interface system (Canbus or equivalent) must be capable of operating a device to allow vehicle to be left in "park" mode with the engine running and ignition keys removed. Any attempt to drive the vehicle away would result in the engine cutting out. For alternative fuel vehicles a solution to address the Run Lock demand will be required to enable the vehicle to function to the that of an ICE equivalent. Electronic Cruise Control Electric front windows and rear Satellite navigation system



	Reversing light fitted as standard High intensity fog lights fitted as standard Side impact protection and head restraints for all seats. Reversing sensors and camera.
	Factory fitted with 'Bluetooth' mobile telephone facility which can be used for any type of handset.
Rear boot area	Minimum of 310 Litres capacity.
	To include a suitable load guard solution to retain load area contents from the passenger area of the vehicle. This must allow clear visibility through it.
Door locking	Automatic door locking systems with the ability to be disabled for operational needs.
	This will include doors that that are designed to automatically lock in the event of the vehicle being left unlocked, and vehicle doors that are designed to automatically lock when the vehicle reaches a certain speed.
Rear cargo door	Rear cargo area door must have a facility to be secured in an open arrangement.
	Rear door / tailgate to have an external handle or button release mechanism on the outside of the vehicle.

4. QUALITY, SUPPORT & FITTING REQUIREMENTS

- **4.1.** All parts to be used in the conversion will be new and to original equipment manufacturers (OEM) standards, except for items being given a second life; such items will be confirmed by the Customer.
- **4.2.** The Supplier shall be entirely responsible for delivering a fit for purpose and defect free vehicle to the Customer.
- **4.3.** All work practises and installation methods shall be in line with Crown Commercial Service Framework standards.
- **4.4.** The Supplier shall cover all works forming part of this conversion with a 3-year warranty; parts and labour during year 1 and parts on an exchange basis in years 2 and 3. The warranty period shall not commence until the vehicle is delivered and accepted as fit for normal service.
- **4.5.** The Supplier shall attend all incidents whereby a vehicle is off the road due to a conversion related defect, within 24 hours of notification (or fund a third-party agent who is competent to provide that service).
- **4.6.** The Customer must be kept informed of all such activities and outcomes.



- **4.7.** The Supplier will hold a European Quality accreditation such as EN29000, ISO 9000 series or BS 5750. Proof of this must be provided with any bid proposal for this conversion.
- **4.8.** No modifications shall be carried out by the Supplier or any of its subcontractors which could adversely affect the original vehicle safety ratings or type approval.
- **4.9.** No modifications shall be carried out by the Supplier or any of its subcontractors which could adversely affect or invalidate the vehicle manufacturer's warranty.
- 4.10. All additional wiring will be installed to maintain the original manufacturer's warranty and not have any adverse effect on the vehicle electronic systems. The wiring and positioning of components shall be consistent across all vehicles in any production batch, and furthermore across separate batches of otherwise similar vehicles. All wires must be clearly identifiable against a wiring diagram, either by permanently affixed labels/tabs at each end of the connection loom/cable run or by distinct colour coding. Connectors must be of the highest standard and must be of a permanent nature.
- **4.11.** Component positioning, especially around dashboard and seating ergonomics will be paramount and subject to consultation with the Customer.
- **4.12.** To facilitate the use by either dual or single crew occupancy, each will have the light bar controller / switch in a location which is easily accessible by either front seat occupant.
- **4.13.** All equipment fitted as part of the conversion shall not obstruct or interfere with the operation of any of the essential vehicle equipment or controls, this is inclusive of airbag deployment zones.

5. MANUALS & DOCUMENTATION

5.1. The Supplier shall create a Specialist Equipment Installation Procedure (SEIP) manual and submit it to the Customer for approval.



- 5.2. A draft will be provided to the Customer by the Supplier prior to build commencement and the full production version of the SEIP after the completion, review and sign off the first of any new vehicle type build. Final versions are to be supplied prior to the completion of the batch of vehicles with clear index of any changes made by batch of vehicles if relevant.
- 5.3. The SEIP shall detail the make, model, and size or capacity etc of all Specialist Equipment, and the installation method, location, and fixing of the equipment into the vehicle, wiring diagrams and fuse type and ratings to ensure consistency of the conversion. No changes to build specification may then be made by the Supplier without written authority from the Customer.
- **5.4.** The Supplier shall provide the following documents;
- **5.5.** Full production version SEIP detailing fleet numbers within this build batch (from to). 1 off hardcopy submitted to the National Highways National Fleet Team. A further electronic indexed PDF document should be made available showing the following as applicable.
 - Position of all additional fixed components and method of installation
 - Function of each component, including relationship to other components
 - Fault diagnosis guide
 - Wiring diagrams (schematic acceptable) showing:
 - Colours / ID markings
 - Connector types
 - Current loading
 - Fuse ratings (where applicable) and location
 - Livery guides
 - Photographs showing interior and exterior images to the front, rear and side and dashboard / cabin area showing all major component fittings.
- 5.6. The Conversion User Guide is to be provided by the Supplier with every vehicle in an A5 format, capable of being incorporated into the manufacturers' issued handbook. This guide must provide simple instruction, including illustrations on the use of all controls within the vehicle and guidance in the event of an emergency system failure. This guide must be printed in a durable format and capable of being replaced if required.
- **5.7.** A build quality control sheet must be sent to the Customer prior to vehicle delivery.
- **5.8.** A final delivery inspection document to be used to confirm compliance with specifications and functional testing and circulate as indicated on the document. To be signed on receipt of vehicle by the Customer.



6. VEHICLE DELIVERY

- **6.1.** The Supplier is to ensure that all vehicles are delivered complete with the User Guide to a delivery address provided by the National Highways National Fleet Team.
- **6.2.** The Supplier shall ensure that all vehicle manufacturer pre-delivery inspections, supply and fitting of number plates are carried out on all vehicles provided. Including all handbooks, service logbook (provided and correctly stamped by the supplying dealer).
- **6.3.** The Supplier must notify National Highways at least 2 weeks prior to intended delivery that the vehicle will be ready.
- **6.4.** The Supplier shall ensure that all vehicles are delivered to a high standard of cleanliness (i.e. clean, polished and smear-free) when delivered to National Highways and must meet the following requirements;
 - Minimum of 2 gallons of fuel / Full charge if Electric propulsion type.
 - A spare set of keys
 - Fit for purpose and without defects
- 6.5. The Supplier shall ensure a professional handover of all vehicles delivered to National Highways and meet's the employer's duty of care, in relation to the operation of the vehicle, as follows:
 - ➤ A full explanation of the controls and features of the vehicle.
 - A signed delivery sheet including checks and confirmation that operating instructions have been given to National Highways.
 - ➤ An A5 size simple User Guide included within the Pool Car logbook.
- 6.6. The Supplier shall deliver the vehicle to an address as agreed by the nominated National Highways National Fleet Team. A delivery window of 4 hours is to be provided to National Highways. Any delivery outside of the preagreed window must be communicated at the earliest opportunity. National Highways will confirm a contact point, telephone number and delivery address no later than 2 weeks before delivery.



ANNEXES



ANNEX A - AD Fleet Specification

A number of staff have transferred across to National Highways and include highway inspectors and construction site supervisors. An inspection is carried out by a team consisting of a highway's inspector and a driver.

The role requires each team to;

- Drive along the network and inspect the condition of highways assets,
- · Record any defects including taking photographs,
- Inspect off road drainage, geotechnical and soft estate assets,
- Inspect the quality of reactive repairs,
- Attend incidents to inspect any damage to assets,
- Severe weather patrols,
- Site visits,
- · Night time patrols to check for street lighting outages,

Which will need to meet the following minimum specification is required.



ANNEX B - 4x4 Double Cab Pick-up

Specification	Detail	Supplier Selection	Essential	Desirable
Туре	Double Cab pickup truck with 4X4 wheel drive capability		\boxtimes	
Fuel Type	Diesel, Petrol or Hybrid			
Ground Clearance	To lowest part of vehicle - 127mm		\boxtimes	
Fuel Capacity / Range	>40 litres or >250 miles	\boxtimes	\boxtimes	
Vehicle Security	Run lock compatible		\boxtimes	
000	<130g/km	\boxtimes		\boxtimes
C02	<150g/km	\boxtimes		
Emissions	>151g/km	\boxtimes		
	Automatic gearbox		\boxtimes	
Transmission	Permanent 4-wheel drive			
& Gearbox	featuring front/rear split and lockable differentials	\boxtimes	\boxtimes	
Seating	Minimum of 4 seats		\boxtimes	
	Minimum 4 doors		\boxtimes	
	Radio/CD with radio codes		\boxtimes	
	Power Steering		\boxtimes	
Specification	Anti-lock braking system		\boxtimes	
Specification	Driver and passenger side airbags		\boxtimes	
	Remote Central Double Locking,		\boxtimes	
	Alarm and Immobiliser system CAT2 Thatcham alarm (or equivalent),		\boxtimes	
	Floor mats front and rear.		\bowtie	



	control,		\boxtimes	
	Electric Driver Seat (fully adjustable)		\boxtimes	
	Electric Front Windows.		\boxtimes	
	Reversing light fitted as standard.		\boxtimes	
	Front fog lights		\boxtimes	
	Rear parking sensors		\boxtimes	
	Reversing camera			\boxtimes
				<u>, </u>
	70mph speed limiter			
	Collision avoidance system.			\boxtimes
Specification	Factory fitted with 'Bluetooth' hands-free mobile telephone facilit which can be used for any type of handset.	у		
'	12v/auxiliary/USB Power Supply		\boxtimes	
	Factory fit satellite navigation system.	\boxtimes		
	Running board or footboard fitted t each side of the vehicle.	О П	\boxtimes	
		•	'	
	Run Flat	\boxtimes		
Tyres	Spare Wheel	\boxtimes		
i yies	Space Saving Tyre	\boxtimes		
	Tyre Inflation System	\boxtimes		
Minimum Euro NCAP rating (or equivalent)	4 Star		\boxtimes	
Minimum Load Space.	>350 litres		\boxtimes	
Minimum Payload	440kgs			
Colour	White			
VED	VED is to be included.		\boxtimes	
Lead Time	To meet required timelines within the IfT		\boxtimes	
Lease / purchased	Purchased		\boxtimes	



Warranty	Warranty for a minimum of 3 years and 60,000 miles. (See commercial model for 4 and	\boxtimes	
	5 year warranty options)		

And also requires the following conversion specification;

Conversion Specification	Supplier deliver
Chapter 8 livery as per National Highways visual identity guidelines	Yes / No
Roof Box with the ability to securely fit lightbar (see below).	Yes / No
Entry / Exit from rear of vehicle via 1 x rear secure opening and 1 x nearside secure opening	Yes / No
Boot conversion to include aluminium or plastic constructed racking system. Construction to be as robust and light as is reasonably practicable	Yes / No
Drawer or restrictive strip solution within racking, that extends to avoid injury to employees to provide the most secure and ergonomic solution for our operational needs.	Yes / No
Hardwired Lightbar system conforming to Chapter 8 requirements including a dash mounted control panel to operate lights.	Yes / No
Vehicle run-lock capability	Yes / No



ANNEX C -- SUV Vehicles

Specification	Detail	Supplier Selection	Essential	Desirable
Туре	Sports Utility Vehicle with selectable 4X4 wheel drive capability		\boxtimes	
Fuel Type	Diesel, Petrol or Hybrid			
Ground Clearance	To lowest part of vehicle - 127mm		\boxtimes	
Fuel Capacity / Range	>40 litres or >250 miles		\boxtimes	
Vehicle Security	Run lock compatible		\boxtimes	
000	<130g/km	\boxtimes		\boxtimes
C02 Emissions	<150g/km	\boxtimes		
LITIISSIOTIS	>151g/km	\boxtimes		
Seating	Minimum of 4 seats		\boxtimes	
Transmission	Automatic gearbox		\boxtimes	
& Gearbox	Variable 4x4 drive featuring high/low range with front/rear split and lockable differentials			\boxtimes
	Minimum 5 doors		\boxtimes	
	Minimum 5 doors		\boxtimes	
	Radio/CD with radio codes		\boxtimes	
	Power Steering		\boxtimes	
	Anti-lock braking system		\boxtimes	
Specification	Driver and passenger side airbags		\boxtimes	
	Remote Central Double Locking,		\boxtimes	
	Alarm and Immobiliser system CAT2 Thatcham alarm (or equivalent),		\boxtimes	
	Floor mats front and rear,		\boxtimes	
	Standard fit AC or climate control,		\boxtimes	
Specification	Electric Driver Seat (fully adjustable)		\boxtimes	
'	Electric Front Windows.		\boxtimes	



	Reversing light fitted as standard.		\boxtimes	
	Front fog lights		\boxtimes	
	Rear parking sensors		\boxtimes	
	Reversing camera			\boxtimes
	70mph speed limiter			\boxtimes
	Collision avoidance system.			\boxtimes
	Factory fitted with 'Bluetooth' hands-free mobile telephone facility which can be used for any type of handset.		\boxtimes	
	12v/auxiliary/USB Power Supply		\boxtimes	
	Factory fit satellite navigation system.			
	Roof bar to allow Lightbar system to be fitted		×	
	Full or Half Load guard dependent upon boot conversion solution		\boxtimes	
		T		T
	Run Flat	\boxtimes		
Tyres	Spare Wheel			
1,100	Space Saving Tyre			
B A	Tyre Inflation System	\boxtimes		
Minimum Euro NCAP rating	4 Star			
Minimum Load Space.	>450 Litres		\boxtimes	
Minimum Payload	440kgs		\boxtimes	
Colour	White			
VED	VED is to be included.		\boxtimes	
Lead Time	To meet required timelines within the IfT		\boxtimes	
Lease / purchased	Purchased		\boxtimes	
Warranty	Warranty for a minimum of 3 years and 60,000 miles. (See commercial model for 4 and 5 year warranty options)		\boxtimes	



And also requires the following conversion specification;

Conversion Specification	Supplier deliver
Chapter 8 livery as per National Highways visual identity guidelines	Yes / No
Boot conversion to include aluminium or plastic constructed system that provides security for items held within the boot. Construction to be as robust and light as is reasonably practicable.	Yes / No
Hardwired Lightbar system conforming to Chapter 8 requirements including a dash mounted control panel to operate lights	Yes / No
Vehicle run-lock capability	Yes / No



ANNEX D - Estate Vehicles

Specification	Detail	Supplier Selection	Essential	Desirable
Туре	Estate Vehicle		\boxtimes	
Fuel Type	Diesel, Petrol or Hybrid	\boxtimes		
Fuel Capacity / Range	>40 litres or >300 miles		\boxtimes	
Vehicle Security	Run lock compatible		\boxtimes	
000	<130g/km	\boxtimes		\boxtimes
C02 Emissions	<150g/km	\boxtimes		
EIIIISSIUIIS	>151g/km	\boxtimes		
Transmission & Gearbox	Manual or Automatic gearbox	\boxtimes		
Seating	Minimum of 4 seats		\boxtimes	
	Minimum 5 doors		\boxtimes	
	Radio/CD with radio codes		\boxtimes	
	Power Steering		\boxtimes	
	Anti-lock braking system		\boxtimes	
Constitution	Driver and passenger side airbags		\boxtimes	
Specification	Remote Central Double Locking,		\boxtimes	
	Alarm and Immobiliser system CAT2 Thatcham alarm (or equivalent),		\boxtimes	
	Floor mats front and rear,		\boxtimes	
	Standard fit AC or climate control,		\boxtimes	
	Electric Driver Seat		\boxtimes	

	Electric Front Windows.		\boxtimes	
	Reversing light fitted as standard.		\boxtimes	
	Front fog lights		\boxtimes	
	Rear parking sensors		\boxtimes	
	Reversing camera			\boxtimes
	70mph speed limiter			\boxtimes
	Collision avoidance system.			\boxtimes
Specification	Factory fitted with 'Bluetooth' hands-free mobile telephone facility which can be used for any type of handset.			
	12v/auxiliary/USB Power Supply		\boxtimes	
	Factory fit satellite navigation system.			\boxtimes
	Roof bar to allow Lightbar system to be fitted		\boxtimes	
	Full or Half Load guard dependent upon boot conversion solution		\boxtimes	
	Run Flat	\boxtimes		
_	Spare Wheel	\boxtimes		
Tyres	Space Saving Tyre	\boxtimes		
	Tyre Inflation System	\boxtimes		
Minimum Euro NCAP rating	4 Star			\boxtimes
Minimum Load Space.	Minimum 310 litres		\boxtimes	
Minimum Payload	400kgs		\boxtimes	
Colour	White			
VED	VED is to be included.		\boxtimes	
Lead Time	To meet required timelines within the IfT		\boxtimes	
Lease / purchased	Purchased		\boxtimes	
Warranty	Warranty for a minimum of 3 years, 60,000 miles. (See commercial model for 4 and 5 year warranty options).		\boxtimes	



And also requires the following conversion specification;

Conversion Specification	Supplier deliver
Chapter 8 livery as per National Highways visual identity guidelines	Yes / No
Boot conversion to include aluminium or plastic constructed system that provides security for items held within the boot. Construction to be as robust and light as is reasonably practicable	Yes / No
Hardwired Lightbar system conforming to Chapter 8 requirements including a dash mounted control panel to operate lights	Yes / No
Vehicle run-lock capability	Yes / No