

DFID armoured vehicles framework specifications

NOTE: These were the specifications used in our 2011 framework tender, based on our operational requirements at the time. Some of these are no longer current, and specifications are generally tweaked for every requirement.

Lot 1 specification – Toyota LC 105 uparmouring:

Description
Toyota LandCruiser 105 STD Station Wagon 4.2 Diesel integrated armour (for all surfaces) certified to B6 standard and for all lesser tests including protection against SS109 5.56 with the following specification:
Test certificates/Qinetiq approval report for vehicle design
Production certificates for armoured material (steel and glass)
Statement of fitness for purpose to include: Road and handling test report Tilt test report Qinetiq review report or equivalent Safety case/risk assessment report Turning circle report Functionality trials test report Water test report
Fully armoured rear cargo area with armoured steel floor throughout the vehicle
TJM front and rear replacement bumpers - SUPPLIED
HF fitting – UNIT SUPPLIED
VHF fitting – UNIT SUPPLIED
UHF fitting – UNIT SUPPLIED
Sat-phone (TT3062D) fitting – UNIT SUPPLIED
Sat-tracking fitting and wiring direct to battery – UNIT SUPPLIED
All communications equipment wired to secondary battery
Intelligent twin battery system linking battery link
Primary and secondary batteries replaced and protected by armoured case
Fire suppressant system fitted under bonnet
Heavy duty mechanical battery isolators fitted to both batteries, wired to negative
Protected fuel tank/s – minimum 120 litres
Fire extinguisher mounted inside car - SUPPLIED
Sump and steering mechanism protection - SUPPLIED
Spare whole wheel assembly suitable for load and speed fitted with runflat system rated 50km at 50km/h (priced separately)
Tool kit
5 Tonne hydraulic bottle jack and 3 Tonne trolley jack, which must both fit under axle when tyre deflated
Electric window lifter on driver window only
Exhaust pipe end grill
Central locking
Alarm siren – two tone as standard
Intercom as standard
Towbar and electrics – fitted below TJM bumper, with re-inforced tow-bar mounting
Spot lamps – Hella - SUPPLIED
Tinted glass – varied across vehicle, see clause below
Upgraded braking system

Upgraded suspension system
Re-enforced door hinges and suitable strength mountings in door pillars
Re-enforced lashing point mountings in rear cargo area floor
Handle on rear cargo opening door, for closing from inside
Door stays on both rear cargo doors
Check straps fitted to all doors
Recovery strop to be mounted outside of both rear doors on bumper
Turbo and intercooler
Heated front and rear windows including illuminated toggle switch
Modification of front passenger seat – See clause below
Fitting comms box
Armouring cap on roof – See clause below
Fuel line conduit
Warning triangle
Detailed instruction manual per vehicle
Technical data pack listing all communications serial numbers against each vehicle
Fuses for all of vehicle fit must be accessible

** Please note the “Additional specification information” for all lots, below. **

Lot 2 specification – Toyota LC 200 uparmouring:

Description
Toyota LandCruiser 200 STD Station Wagon 4.5 Diesel integrated armour (for all surfaces) certified to B6 standard and for all lesser tests including protection against SS109 5.56 with the following specification:
Keyless engine start system must be suitable for use with ECM and vice-versa, and shall not interfere with any other vehicle or communications systems
Test certificates/Qinetiq approval report for vehicle design
Production certificates for armoured material (steel and glass)
Statement of fitness for purpose to include: Road and handling test report Tilt test report Qinetiq review report or equivalent Safety case/risk assessment report Turning circle report Functionality trials test report Water test report
Fully armoured rear cargo area with armoured steel floor throughout the vehicle
Vehicle front protection options (See below for price options to be detailed)
HF fitting – UNIT SUPPLIED
VHF fitting – UNIT SUPPLIED
UHF fitting – UNIT SUPPLIED
Iridium car kit fitting – UNIT SUPPLIED
Diagram and written description of communications power wiring plan
Batteries protected by armoured case
Fire suppressant system fitted under bonnet
Heavy duty mechanical battery isolators fitted to both batteries, wired to negative
Protected fuel tank/s – minimum 120 litres
Fire extinguisher mounted inside car - SUPPLIED
Sump and steering mechanism protection - SUPPLIED
Spare whole wheel assembly suitable for load and speed fitted with runflat system rated 50km at 50km/h (priced separately)
Tool kit
5 Tonne hydraulic bottle jack and 3 Tonne trolley jack, which must both fit under vehicle when tyre deflated
Electric window lifter on driver window only
Exhaust pipe end grill
Front protection, price options for Bullbars with Codan mount & Reinforced existing front bumper with Codan mount
Alarm siren – two tone as standard
Intercom as standard
Towbar and electrics fitted
Tinted glass – varied across vehicle, see clause below
Braking system sufficient for finished vehicle weight
Upgraded suspension system
Re-enforced door hinges and suitable strength mountings in door pillars. Rear door hinges and dampers to support fully-armoured door weight.
Re-enforced lashing point mountings in rear cargo area floor
Check straps fitted to all doors
Recovery strop to be mounted outside of rear doors on bumper
Heated front and rear windows including illuminated toggle switch

Armouring cap on roof – See clause below
Warning triangle
Detailed instruction manual per vehicle
Technical data pack listing all communications serial numbers against each vehicle
Fuses for all of vehicle fit must be accessible

** Please note the “Additional specification information” for all lots, below. **

Lot 3 specification – Supply of complete armoured vehicle:

Description
Base vehicle specification:
Station wagon with the following specification:
Available in LHD and RHD
Four wheel drive
Export registration
5 doors
Minimum 5 seats, all with seatbelts
Air conditioning / heater
Manual gearbox
Diesel
Towing capacity minimum 2 Tonne
Colour: white
Steel wheel hubs
Power steering
12v power socket in front
Seat head restraints
Vehicle chassis suitable for finished armoured vehicle usable weight. Minimum GVW 3 Tonnes
Armouring requirements:
Integrated armour (for all surfaces) certified to B6 standard and for all lesser tests including protection against SS109 5.56 with the following specification:
Any keyless engine start system must be suitable for use with ECM and vice-versa, and shall not interfere with any other vehicle or communications systems
Test certificates/Qinetiq approval report for vehicle design
Production certificates for armoured material (steel and glass)
Statement of fitness for purpose to include: Road and handling test report Tilt test report Qinetiq review report or equivalent Safety case/risk assessment report Turning circle report Functionality trials test report Water test report
Fully armoured rear cargo area with armoured steel floor throughout the vehicle
Spare whole wheel assemblies suitable for load and speed fitted with runflat system rated 50km at 50km/h
Provide quotations for both of the following vehicle front protection options:
Bullbars with Codan mount
Reinforced existing front bumper with Codan mount
HF fitting – UNIT SUPPLIED
VHF fitting – UNIT SUPPLIED
UHF fitting – UNIT SUPPLIED
Sat-phone (TT3062D) fitting – UNIT SUPPLIED
Iridium car kit fitting – UNIT SUPPLIED
Diagram and written description of communications power wiring plan and vehicle battery charging system
Battery/ies protected by armoured case

Fire suppressant system fitted under bonnet
Heavy duty mechanical battery isolators fitted to both batteries, wired to negative
Protected fuel tank/s – minimum 120 litres
Fire extinguisher mounted inside car - SUPPLIED
Sump and steering mechanism protection
Spare whole wheel assembly suitable for load and speed fitted with runflat system rated 50km at 50km/h (priced separately)
Tool kit
5 Tonne hydraulic bottle jack and 3 Tonne trolley jack, which must both fit under vehicle when tyre deflated
Electric window lifter on driver window only
Front protection, price options for Bullbars with Codan mount & Reinforced existing front bumper with Codan mount
Exhaust pipe end grill
Central locking
Alarm siren – two tone as standard
Intercom as standard
Towbar and electrics fitted
Tinted glass – varied across vehicle, see clause below
Braking system sufficient for finished vehicle weight
Upgraded suspension system
Re-enforced door hinges and suitable strength mountings in door pillars. Rear door hinges and dampers to support fully-armoured door weight.
Re-enforced lashing point mountings in rear cargo area floor
Check straps fitted to all doors
Recovery strop to be mounted outside of rear doors on bumper
Heated front and rear windows including illuminated toggle switch
Armouring cap on roof – See clause below
Warning triangle
Detailed instruction manual per vehicle
Technical data pack listing all communications serial numbers against each vehicle
Fuses for all of vehicle fit must be accessible

** Please note the “Additional specification information” for all lots, below. **

Additional specification information

NB All of the following clauses apply to each of the Lots, unless stated otherwise.

To be removed from base vehicle (Lot 1 only)

Winch – Returned to DFID warehouse for re-use

Ballistic blanket protection – Returned to DFID warehouse for re-use

Registration plates – To be put back onto finished vehicle

Brakes (components) - Returned to DFID warehouse for re-use

Wheels/Tyres - Returned to DFID warehouse for re-use

Suspension (components) - Returned to DFID warehouse for re-use

All parts removed from the softskin vehicles shall be listed and details of their onward movement whether returned to DFID, recycled, retained by the Armourer or disposed shall be provided to DFID one week prior to a contract being completed.

Front Bench Seat (for Lot 1 only. May apply to Lot 3 depending on model of base vehicle offered)

The bench seat should be replaced with a single seat, creating two single seats in the front compartment, and an aluminium box fitted in the space left between the driver and passenger seats. The HF transceiver should also be located in the centre console box as well as other communications equipment to be detailed in any resulting call-down contract.

Electronic Counter Measure (ECM) (All lots)

Although ECM will not be fitted to these vehicles by the armourer, the potential to retrofit ECM at a later stage must be built into the design of the vehicles. A conduit must be in place to allow power cable to pass from the front to the rear of the vehicle whilst maintaining the required level of armouring (B6 plus SS109).

Conduit for potential ECM cabling running from the engine bay should come through the centre of the car. Any conduit run through the front bulk head of the vehicle should be done so using a plug to prevent foreign objects entering the cabin via the pass through.

5 bar aluminium shall be put fixed to the floor of the cargo area. Lashing points need to be fixed through this aluminium onto the armour plate for strength.

Armoured Cap - Cable access through armoured roof (All lots)

Cable access is required for multiple roof-mounted applications through to vehicle cabin via a cap. The cap's fitting shall not deter from the overall armouring integrity of the vehicle and shall be made in a manner which retains the vehicles B-6 Level Protection for all vertical and horizontal planes.

The following gives guidance to requirement

- Access for terminated coax cable with outside diameter of 15mm and terminal of 24mm
- Cable numbers, six
- Ballistic protection to be equal to vehicle specification
- Weather protected, to eliminate rain ingress to roof cavity and cabin
- Be removable and replaceable with blanking plate, again with ballistic and weather defence
- Entry position through roof to be central longitudinally and rearward to clear rear seat back rest, on cargo side
- Not to present protrusions or fixings internally which may cause any risk of injury to rear seat passengers in the event of a road traffic accident or ballistics
- Ability to replace cable without special tools or damage to cable
- External profile not to exceed a maximum of 50mm above that of roof panel
- Finished to colour match roof
- Any external fixings to be stainless steel

Battery Maintenance

When in storage, batteries will be maintained by external CTEK chargers.

An override switch should be fitted on the dashboard to enable the driver to switch between the primary and secondary batteries, or link the battery in the event of the primary battery being flat/disconnected.

Fuel Lines (All lots)

The fuel lines should be protected using the preferred method of the Armourer to ensure that they are fully protected but are still accessible to a mechanic without removing the protection.

Ethical Procurement (All lots)

All waste materials produced during the build process should be removed, stored and disposed of in a way that minimises the environmental impact of such materials. Any waste electrical or electronic equipment should be disposed of in a manner which adheres to the WEEE directives (Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003). DFID shall pay a reasonable cost for the disposal of waste materials through an environmentally sound manner on a case by case basis. A decision on what other equipment removed from the vehicle should be shipped with them shall be made during the second inspection.

Colour (All lots)

Vehicles shall remain white.

Glass Tint (All lots)

The tint of glass will vary across the vehicle. From the front window to the B-pillar, all glass should have a light tint. Between the B and C-pillar should be medium tint level and the whole of the rear cargo area should have a dark tint.

Technical Data Pack (All lots)

This should include information linking the batch of steel and glass from source to the chassis number and throughout the production process at each inspection to the point at which DFID takes ownership of the vehicles under the contract.

The Data Pack shall include

- all information relating to the level of armouring (B-6)
- the weight and dimensions of the vehicle
- a list of equipment fitted to the vehicle both standard (to a non-armoured model) and additions as per the specification
- all information relating to the communications equipment fitted including the supplier, date of contract, serial numbers and any information relating to accounts held for use of the equipment
- the chassis number and engine number
- the sign off from the quality assurance manager at each phase of the build process
- a fitness for purpose statement relating to the armouring integrity of the vehicle.

Each vehicle ordered under a contract should have a spare technical data pack couriered to the Procurement Officer at DFID.