Request for Proposals

Type 3 Fire Appliance
Heavy Pumping Appliance

NP2418

RFP released: 27/08/20

Deadline for Questions: 17:00 05/10/20

Deadline for Proposals: 12:00 27/11/20

Fire and Emergency New Zealand
National Headquarters, Level 12, 80 The Terrace
Wellington 6140

Contents

This opportunity in a nutshell

How we are going to market

The Type 3 Appliance is a Heavy Pumping Appliance used predominantly in stations with high call volumes. The existing Type 3 can be configured to be a Pump or a Pump Rescue Tender (PRT). Our current fleet consists of 185 Type 3 appliances 39 of which are configured as PRTs.

Whilst the design of our current appliances has changed very little since the 1970s, the role of our service has. This now includes responding to more medical, rescue, and hazardous substances calls. As the role of the firefighter has changed and evolved over time, as has the environment in which we operate, there is a need to ensure our appliances remain fit for purpose. Crews now attend a broader range of incidents, consisting of less fires and an increased range of situations that require more specialist equipment.

With this new acquisition, Fire and Emergency New Zealand want to ensure that the next generation of appliances meet the current operational requirements, whilst retaining the flexibility required to scale for emerging needs. Because of this we have taken a different approach to gathering our requirements, how we will be working with Suppliers, and the way we will be establishing the supply arrangements for this Tender.

We are looking to appoint a small open panel of suppliers, who can supply Fire and Emergency New Zealand (FENZ) with appliances over the next 20 years, within this panel there will be a preferred list. We want to work closely with our selected supply partners to innovate and co-design the next generation of Type 3 appliances.

The information in this document is aimed at providing you with as much context possible so that you can put your best response forward.

What we need

We need a fire appliance that is fit for purpose, the solution needs to perform as an emergency response vehicle and perform the role of a heavy pump or PRT. Key considerations are the solution's ability to:

- Accelerate under emergency response conditions
- Perform under heavy braking
- Corner safely corners under response conditions
- Operate in adverse weather conditions
- Be at full operational weight at all times
- Operate in urban and residential environments, highways, narrow winding rural roads
- Operate on a variety of road surfaces both sealed and unsealed
- Accommodate the safe and rapid removal of equipment and egress of people
- Pump at full pump output for long duration - 5 hours

Our requirements outline key differences between a pump and a PRT, we would like your response to identify a solution/s that meets these requirements, if you are proposing more than one variant of your appliance to meet requirements we would like to see as much commonality as practical, particularly that they:

- Are built on a common platform
- Use the same make and model pump
- Share the same pump operational interface
- Use the same key systems for interoperability

What we don't want

We don't want to be the integrator of fire appliances anymore. The proposal should be for a turn-key solution from suppliers who can partner with our network of service agents for the ongoing support and maintenance of our Type 3 fleet of appliances. We are also asking that Respondents provide their own New Zealand based Expert Service Agent, who will provide warranty services, and assist in support and maintenance of our fleet as required.

We don't to want to be testing or trialling machinery that could compromise our quality of service, the safety of our firefighters or the New Zealand public that we serve, therefore we want to hear from those who have experience in manufacturing fire appliances or from those who are looking to partner with an experienced supplier.

This RFP is only looking at what we define as the Type 3 class of appliance in our fleet or a variant thereof, so at this stage we are only looking for solutions that meet these requirements.

What's important to us

We have two objectives, procure fire appliances that are **fit for purpose** and that have an acceptable **value-for-money** proposition to Fire and Emergency NZ over the whole of the asset's life.

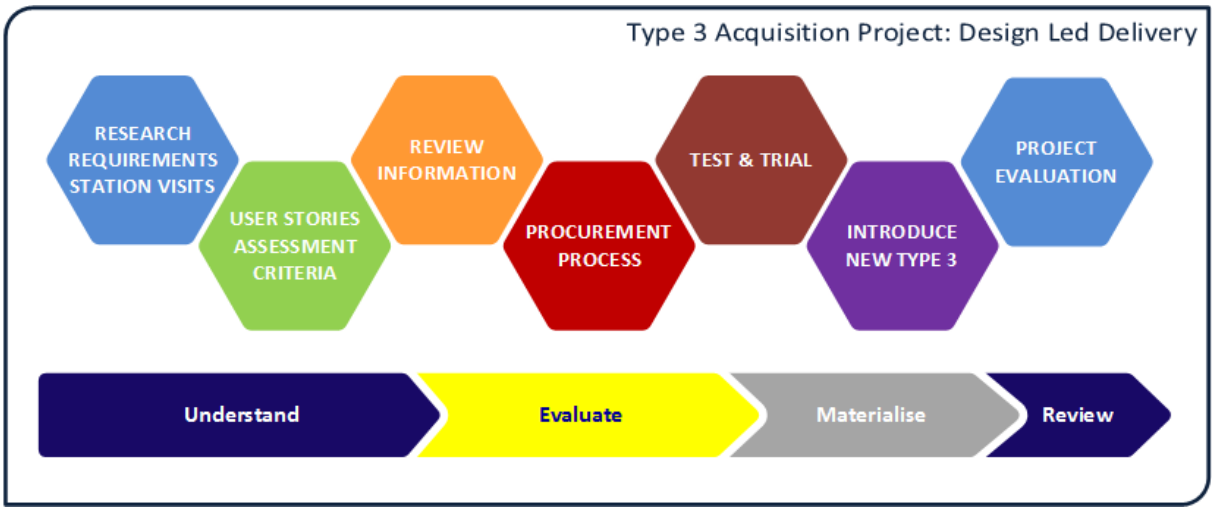
Fire and Emergency NZ is the most trusted public sector agency in New Zealand. We value the work our suppliers do for us to enable us to assist our communities. We are seeking suppliers:

- Whose business is engineering and manufacturing with suitable experience in heavy pumping appliances.
- Who can provide a reliable service with experienced, trade qualified employees to a high standard.
- Who can work collaboratively with our users during the testing phase to ensure the best possible solution for Fire and Emergency NZ.
- Who can engage and manage subcontractors (if required) such as a New Zealand based Expert Service Agent for the ongoing technical maintenance of the appliance.
- Who will form a working partnership with the Fire and Emergency NZ Fleet development team to produce a quality fit for purpose appliance. This will entail planned production meetings and quality assurance (QA) checks as the builds are in progress along with working collaboratively on improvements and development work over the term of the contract.

We are interested in hearing how your solution can meet our users' needs. There are preconditions that reflect the constraints your solution will need to work within, such as driving on the left-hand side of the road in New Zealand, but our focus is on how different ideas can help our firefighters do their job.

We aren't just buying a fire appliance; we are asking you to help us design our firefighter's workplace.

We've used design thinking in our approach and want to continue to do so through our testing and evaluation stage. Our evaluation process will include us purchasing some trial appliances off the short-listed suppliers to test in fire stations around New Zealand. At the end of the testing phase, we will work with the short-listed suppliers to give feedback into the final design of our new Type 3 appliance.



Why should you bid?

Fire and Emergency NZ is one of the most trusted organisations in New Zealand and we take a partnership approach with our key suppliers.

This is a unique opportunity to help us design the next generation Type 3 appliance. We are looking at:

- a long-term partnership with a potential contract life of 20 years (10+5+5)
- we want to work with partners, using our design-thinking, to help us get the right appliance
- our panel will have two tiers, with the preferred supplier getting the majority of our business.

We aim to have 90% of our Type 3 fleet under 20 years old, to meet this target we look to update approximately 10 appliances per year, every year. We are open to innovation to meet our requirements, which is why we have focused on outcomes in our RFP rather than a document that is heavy on technical specifications; instead we want you to help us to make our firefighters' workplace safe and comfortable to work in.

A bit about us

Fire and Emergency NZ is one of the world's few national fire services.

The role of Fire and Emergency NZ has evolved to include a wide variety of operations such as fires, motor vehicle accidents/rescues, medical responses, natural disasters, hazardous substances and wildfires. We also conduct risk management for communities and businesses, public education including home fire safety visits, pre-incident planning, post-incident fire investigations and emergency evacuations.

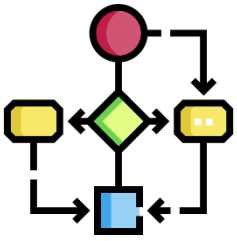
We care about our users and their experience in their workplace, so we've used design thinking to ensure we design this procurement around their needs. The project has the following key design principles:

The user is at heart of key decisions

The next generation of large pumping appliance needs to fit the requirements that the end-user needs to do their job. The users will be heavily involved in the decision-making process and will be the key to the appliance's success.

Build a modern appliance for a modern workforce

The new appliance will need to be able to respond to the changing demographics of our workforce, as well as the changing nature of the firefighters' work. This approach will allow Fire and Emergency NZ to deliver a solution that is scalable to meet future needs.



One locker, one job (Optimising storage space)

We are looking at ways we can optimise storage space and create efficiencies through logical storage depending on the type of incident being attended i.e. medical, fire or rescue. Ideally, we are looking for a "one locker one job" set-up that uses job call out data, workflow analysis and ergonomics to determine the design and layout of the appliance, to reduce inefficiencies and improve health and safety outcomes.

Delivering a solution not just replacing an appliance

The appliance is our people's workplace. We want to ensure that we are delivering an effective and ergonomic workplace for our people to use to do their job. All aspects of the appliance need to be considered together to ensure that they work together to give the best outcome and the consistent integration into the appliance network.

Use modern techniques and technology

To deliver the new 'Type 3' we want to explore new design and delivery methodologies as well as new technology, tools and techniques (e.g. the use of digital models or rapid prototyping to test concepts with users). This project is the perfect opportunity to challenge the status quo of how things are usually done.

SECTION 1: Key information

1.1 Context

a. This Request for Proposal (RFP) is an invitation to suitably qualified suppliers to submit a Proposal for the Type 3 Heavy Pumping Appliance contract opportunity.

b. This RFP is a single-step procurement process to establish an Open Panel of Suppliers.

c. Words and phrases that have a special meaning are shown using capitals e.g. Respondent, which means '*a person, organisation, business or other entity that submits a Proposal in response to the RFP. The term Respondent includes its officers, employees, contractors, consultants, agents and representatives. The term Respondent differs from a supplier, which is any other business in the market place that does not submit a Proposal*. Definitions are at the end of Section 6.

1.2 Our timeline

a. Here is our timeline for this RFP.

Steps in RFP process:	
Release Date:	27 August **2020**
Deadline for Questions from suppliers:	01 October 20
Deadline for the Buyer to answer suppliers' questions:	05 October20
Deadline to register for supplier briefing session:	10 September 20
Date of the supplier briefing session:	week beginning14 September20
Deadline for Supplier to indicate that will be responding	21 October 20
Deadline for Proposals:	**12:00** 27 November 20
Shortlisted Respondents' stage 3 assessment:	March -April 2021
Unsuccessful Respondents notified of award of Contract:	July 2021
Respondents' debriefs	March 2021
Anticipated Contract start date:	August 2021

b. All dates and times are dates and times in New Zealand.

1.3 How to contact us

a. All enquiries must be directed to our Point of Contact. We will manage all external communications through this Point of Contact.

b. If you would like to attend our supplier briefing session, please email our Point of Contact to register.

c. **Our Point of Contact**

Name: newtype3@fireandemergency.nz

1.4 Developing and submitting your Proposal

a. This is an open, competitive tender process. It is a Syndicated Open Panel Agreement. The RFP sets out the step-by-step process and conditions that apply.

b. Take time to read and understand the RFP. In particular:

i. develop a strong understanding of our Requirements detailed in Section 2.

ii. in structuring your Proposal consider how it will be evaluated. Section 3 describes our Evaluation Approach.

c. For resources on tendering visit www.procurement.govt.nz/suppliers.

d. If anything is unclear or you have a question, ask us to explain. Please do so before the Deadline for Questions. Email our Point of Contact.

e. In submitting your Proposal, you must use the Response Form provided. This is a Microsoft Word document that you can download.

f. You must also complete and sign the declaration at the end of the Response Form.

g. You must use the pricing schedule template for your pricing information and not contain any pricing information in your Response Form.

h. This is a 2-envelope system, so please submit your pricing response separately.

i. Check you have provided all information requested, and in the format and order asked for.

j. Having done the work don't be late – please ensure you get your Proposal to us before the Deadline for Proposals!

1.5 Address for submitting your Proposal

a. Proposal must be delivered in both hard copy and electronically. We require 6 hard copies, 1 electronic copy/s on a memory stick and digital copy uploaded to secure web service. Due to the size of the expected response we will provide access to a secure web service to those respondents who have indicated that they will be responding and have contacted us via: newtype3@fireandemergency.nz

For Proposals delivered by hand or courier

Tender Box

Type 3 Appliance project

Fire and Emergency New Zealand
National Headquarters,
Level 12, 80 The Terrace
Wellington 6011

b. Proposals sent by fax will not be accepted.

1.6 Our RFP Process, Terms and Conditions

a. **Offer Validity Period**: In submitting a Proposal the Respondent agrees that their offer will remain open for acceptance by the Buyer for 18 calendar months from the Deadline for Proposals.

b. The RFP is subject to the RFP Process, Terms and Conditions (shortened to RFP-Terms) described in Section 6.

1.7 Later changes to the RFP or RFP process

a. If, after publishing the RFP, we need to change anything about the RFP, or RFP process, or want to provide suppliers with additional information we will let all suppliers know via GETS. Suppliers that download the RFP from GETS will automatically be sent notifications of any changes through GETS by email.

SECTION 2: Our Requirements

2.1 Background

Traditionally Fire and Emergency New Zealand (and its predecessor New Zealand Fire Service) have approached the market with a clearly defined specification for their Type 3 appliance. This specification has slowly evolved over time; however, its DNA can be largely traced back to the standardisation that occurred after the nationalisation of the Fire Service in 1976.

The historic approach to market has been to create a technical specification dictating what the core components of the solution should look like.

The lessons learnt from our previous approaches have been applied to this Type 3 acquisition project to ensure the requirements of all key stakeholders particularly end-users are balanced in the selection process. The end goal being an appliance that is **fit for purpose** with a sustainable **total cost of ownership** that meets the needs of stakeholders.

Because we have used design thinking to gather our requirements, we will also be using core elements of this within our RFP process. This includes a trialling phase, whereby we will acquire candidate Type 3 appliances from the short-listed suppliers to be tested by our user base in real world operational settings. The feedback from this stage of the process combined with other metrics will allow co-design of the final configuration of appliances that Fire and Emergency NZ will order from the successful panel members.

2.2 What we are buying and why

The key outcome that we want to achieve is the selection of panel providers that can supply Type 3 Appliances to meet our user stories and supporting requirements. Our focus is on safety, operational needs, and reliability. Our key objectives are:

- Identify a **fit for purpose** appliance – which is reliable and safe
- An appliance that is accepted/well received by users
- An appliance that is cost effective (has a sustainable **total cost of ownership**)
- A documented repeatable process for further rollouts
- A panel of suppliers who can meet the above requirements

The key outcomes of the RFP are:

- Selection of a small panel of suppliers to enter into supply arrangements for Type 3 Appliances for the next 10-20 years
- Panel suppliers will be split into two tiers, with the top tier receiving the majority of the opportunity to supply
- The panel will be an open panel, whereby Fire and Emergency NZ may occasionally re-open the panel to allow for new suppliers to join should they meet the assessment criteria
- Allowance for other fire services in the Australasian region, to purchase from the panel agreement through the resulting contracts[1].

We have selected this approach because we want to encourage innovation, achieve the streamlined assessment of new products coming to market, and enable a long-term partnership approach with the

[1] This is not a New Zealand Syndicated Procurement for the purposes of the New Zealand Government Rules of Sourcing, 3rd Edition, Rule 59.

preferred suppliers. The preferred supplier list approach means we can build a more collaborative relationship between a few key suppliers, our operational users, and our fleet management team.

Our current fleet allocation of Type 3 appliances is 185, with a number of these nearing the end of their service life. Fire and Emergency NZ wants to secure arrangements to replace those that exceed the recommended 20-year life expectancy and establish agreements to continually refresh the fleet over the coming years.

2.3 What we require: the solution

Type 3 Heavy Pumping Appliance will:

- Be crewed by four firefighters
- Pump a minimum of 3840 litres per minute (LPM)
- Carry a minimum of 1400 litres of usable firefighting water
- Be a frontline fire appliance dealing with high numbers of incident calls
- Be a 4 x 2 appliance, with a maximum gross weight that complies with NZTA axle weight limits
- Carry specialist firefighting equipment
- Be able to carry an extra cache of rescue and extrication equipment on the PRT variant.

We are seeking a turn-key solution that fully meets our technical specifications whilst providing a high level of safety to the end user. We want to ensure that for any appliance we buy we understand the cost drivers related to the ongoing maintenance and support of the appliance. For this reason, we are asking suppliers to identify if any of our user stories/requirements or specifications equate to a deviation from their standard configurable product offerings. Our preconditions are mandatory as and they include compliance and, Health and Safety related requirements, e.g. emissions standards as well as operational constraints. For other items, we will ask in the response form for suppliers to let us know, if providing these items will require a bespoke development for us, especially if our requirements are driving costs negatively (directly or indirectly).

Pump and PRT Variants[2]

We are looking for Respondents to respond with a solution that meets the needs of the two main roles our Type 3 performs. This may be an appliance that is a PRT variant to perform this specialist role in addition to their main offering, or may be a single appliance that performs both roles but with different configuration for each role[3]. Key points of difference may be a difference in tank size to offset the differing equipment payload requirements. More information regarding opportunities for variation are included in the user stories. We will be trialling the Pumping Appliance and a PRT variant from each short-listed supplier depending upon the responses received. A Respondent may provide an appliance that is configurable to meet both roles within one appliance.

2.4 What we require: capacity

We are seeking suppliers who, if successful in tendering, must be able to provide a trial candidate Pump and PRT[4] variant, for further testing by our operational users in the field. Following this we will work with

[2] A summary of the key differences between a Pump and PRT are outlined in the appendices

[3] If the proposed solution is one appliance that can be configured to perform two roles, we will look to trial two appliances.

[4] If the proposed solution is one appliance that can be configured to perform two roles, we will look to procure two appliances.

the successful suppliers to configure the Type 3 appliance. This will be based on the feedback and data collected received during the trials, with the aim being to supply the future pipeline of appliances within the pre-agreed timeframes and volumes required. This is a crucial part of the service delivery requirements.

2.5 What we require: capability

We are seeking suppliers who have a proven track record of manufacturing within the heavy transport and emergency appliance industry. The ability to provide a turn-key solution is a requirement for this contract. It is a requirement to work in a partnership of cooperation and collaboration with our users and fleet management team in the spirit of continuous improvement. Respondents will be required to meet Fire and Emergency NZ timeframes and deadlines. For this reason, it is important that Respondents can make a commitment to prioritise the Fire and Emergency NZ service requirements in order that delivery deadlines are met. The ability to support the product over the duration of the vehicles lifespan of 20 years will be a key ongoing capability that the tenderer must be able to show a commitment to.

2.6 Contract term

We anticipate that the Contract will commence December 2020. The anticipated Contract term and options to extend are:

Description	Years
Initial term of the Contract	10 years
Options to extend the Contract	Two extensions of 5 years each
Maximum term of the Contract	20 years

2.7 Key outcomes

The following are the key outcomes that are to be delivered.

Description	Indicative date for delivery
Delivery of candidate appliances for user testing and trialling	Jan – Jul 2022
Co-design of final appliances with users and working group following trial period complete	Jan - Jul 2023
First batch of Type 3 Appliances delivered	Sep 2024 – Mar 2025

2.8 Other information

a. We estimate the quantity to be delivered is
    - Initially two candidate appliances for trialling
    - If successful on the panel, provision of an average of 9 appliances per year, with a greater volume expected to be required early in the contract
    - Provision of more appliances as a potential ‘one-off’, depending upon bulk discounts available. This is to meet Fire and Emergency NZ targets regarding service life of the current fleet.

b. We require the goods to be delivered as per the agreed contract, but as per the table above. Delivery must be to the agreed delivery points within New Zealand.

c. Payment will be on successful delivery of milestones.

d. New Intellectual Property arising as a result of the Contract will be the property of the Respondent, with Fire and Emergency NZ being given an ongoing licence to use.

2.9 Other tender documents

In addition to this RFP we refer to the following documents. These have been uploaded on GETS and are available for all interested suppliers. These documents form part of this RFP.

a. ANNEX Fire and Emergency NZ brand guidelines

b. ANNEX Mobility high level requirements

c. ANNEX ICT component installation requirements

d. Proposed Type 3 appliances supply agreement

e. Type 3 appliance - NP2418 response form

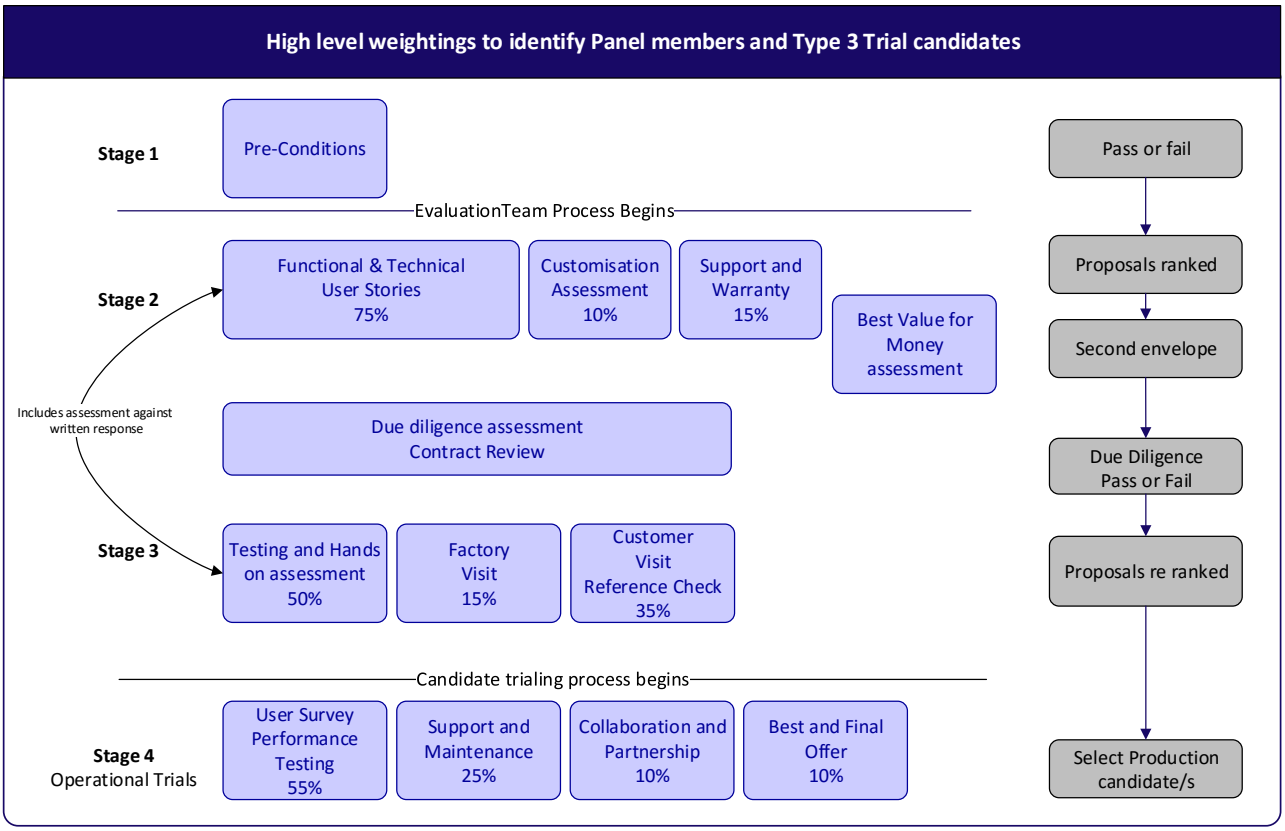
f. Type 3 appliance – NP2418 pricing sheets

SECTION 3: Our Evaluation Approach

3.1 Evaluation Approach

The evaluation approach consists of:

a) the preconditions need to be met before proceeding to the next stage.
b) weighted-attribute model which consists of criteria with weighted percentages to assess both the functional user stories and the technical user stories.
c) non-compliance will be reviewed and assessed in respect of the level of non-compliance, complexity and/or impact on the overall outcome.
d) price will be managed via a two-envelope system described below so that Fire and Emergency NZ can obtain the **best value-for-money** over the whole of life of the Contract.
e) for shortlisted Respondents identified after the evaluation process, but prior to final moderation, there will be site visits (or equivalent depending on COVID -19 restrictions) to the Respondents' premises and to customer reference sites by the Evaluation panel. The site visits will be an opportunity to discuss and review the response to the RFP, conduct testing of the candidate appliances and/or key features, and assess the safety, health and wellbeing criteria
f) complete due diligence; including customer reference checks
g) prior to final panel selection, run an operational trial phase whereby candidate appliances are tested by users in the field for a minimum of nine months.



A '2-envelope' system will be used for the evaluation of price. This means that Respondents must provide all financial information relating to unit price, ongoing costs and expenses in a separate sealed envelope/soft copy folder. The evaluation panel will firstly score each Proposal based on the weighted criteria listed below. Proposals will then be ranked according to their scores. Following completion of the scoring the sealed envelopes containing financial information will be presented to the panel.

The panel will then assess which Proposals to shortlist based on best value-for-money over the whole-of-life **(total cost of ownership)** of the Appliance i.e. the scores and the total costs over the whole-of-life of the Contract.

Movement from Stage Two to Stage Three

Following the best value for money assessment, the scores will be tallied and up to five of the top ranked proposals will have due diligence conducted before moving through to Stage Three (due diligence consists of standard financial and company checks). If any proposal is eliminated during due diligence the sixth placed proposal may have Due Diligence conducted with a view to taking them through to Stage Three.

Moving from Stage Three to Stage Four

Stage Three scores are then applied to the Stage Two results on a 25% Stage Three and 75% Stage Two split. This may alter the rank.

We will take the top two suppliers through to Stage Four - Appliance Testing and relevant contract negotiation with each supplier contracting for a pump and PRT appliance i.e. four appliances in total.

3.2 Pre-conditions (Stage One)

Each Proposal must meet all the following pre-conditions. Proposals which fail to meet one or more will be eliminated from further consideration.

Respondents who are unable to meet all pre-conditions should conclude that they will not benefit from submitting a Proposal.

The purpose of the preconditions is to outline the legal requirements and standards that the appliance must meet. The stage one pre-conditions are a pass/fail and a Proposal will be excluded from further assessment if it doesn't meet the pre-conditions.

Please state whether your solution complies with the preconditions, describe your solution and if applicable provide evidence of compliance.

REF	Precondition detail[5]	Information Required
PC001	Right-hand drive appliance which needs to meet NZ Driving Licence Class Two requirements:[6] https://www.nzta.govt.nz/driver-licences/getting-a-licence/licences-by-vehicle-type/what-you-can-drive/	Comply (Y/N)
PC002	The cab chassis is to comply with all relevant statutory requirements applicable in New Zealand including NZ Transport Agency compliance and heavy vehicle statutory requirements.	Comply (Y/N)
PC003	Cab Occupant Protection – the cab chassis and finished appliance must comply with ECE Regulation 29-03 (or a similar recognised standard in the view of Fire and Emergency NZ).	Comply (Y/N)
PC004	The appliance must comply with Euro VIc, Japan pPNLT or US 2010 vehicle emission standards. The appliance must also not derate the engine power or torque in the event of a failure with the emissions treatment system.	Comply (Y/N)
PC005	Electronic Stability Control must be fitted.	Comply (Y/N)
PC006	the 230V wiring must comply with NZ Wiring Rules and Standards at the time, and the appliance must be supplied with a New Zealand Warrant of Electrical Fitness[7]	Comply (Y/N)
PC007	The appliance must have a parking brake that acts on rear wheels only and must hold on a 20% (1 in 5) gradient at maximum vehicle operating weight. The parking brake must not act on the transmission.	Comply (Y/N)

[5] Please note: Operational weight is defined as the weight of the completed appliance with all fluids full, carrying an occupant in each seat (minimum five occupants) @ 100kg each, and the equipment specified in the Appendices

[6] Please note that some of our requirements exceed NZTA minimum standards for this class of vehicle. It is up to the respondent to identify where this is the case.

[7] https://worksafe.govt.nz/topic-and-industry/electricity/installations-and-networks/low-voltage-electrical-installations/inspection-and-periodic-verification/

REF	Precondition detail[5]	Information Required
PC008	The appliance must be fitted with vehicle securing points in accordance with Part 2 of NZ Standard 5444:2005 at the front and rear of the vehicle.	Comply (Y/N)
PC009	The appliance must be fitted with vehicle towing points front and rear, rated to at least 125% of the vehicle's Operational Weight. (These may be combined with the vehicle securing points.)	Comply (Y/N)
PC010	The appliance must be supplied road registered and ready for legally compliant road use.	Comply (Y/N)
PC011	A broadband directional reversing alarm must be fitted	Comply (Y/N)
PC012	The appliance emergency response beacons and lighting must be compliant with NZ vehicle regulations especially the Vehicle Lighting Rule, and NFPA1901 requirements. The appliance must be fitted with a siren system compliant with SAE J1849 Emergency Vehicle Sirens Apr 2008 or a recognised European equivalent standard.	Comply (Y/N)
PC013	The fuel tank filler must be designed to provide for easy access and allow filling of the tank at the maximum fill rate provided by standard New Zealand service station fuel pump nozzles (compliant with ISO 9159:1988) without blow back.	Comply (Y/N)
PC014	From a lift of 3 metres in accordance with NFPA1901 requirements the appliance's pump[8] must be able to: • source enough water to support full pump operating range from both an open water supply or a hydrant supply, • pump a minimum 3840 LPM at 1000 kPa, • be capable of outputting a minimum of 3840 LPM at 1000 kPa through the low-pressure outlets, • be capable of outputting a minimum of 3840 LPM at 700 kPa from the roof mounted monitor, • any/all hose/booster reel/s fitted must support a 2600 kPa high pressure delivery capability at a minimum of 240 LPM • support a controlled 2500 kPa high pressure delivery outlet fitted with forestry couplings	Comply (Y/N)
PC015	The appliance must have a minimum of one hose/booster reel fitted that is capable of: • supporting a quick "get to work" • being manoeuvrable, robust and easily deployed, around the appliance without damaging the body work, • carrying 90m of high-pressure hose, and • being deployed by 1 person to 60m and 2 people to maximum length.	

[8] all of these items will be tested individually

REF	Precondition detail[5]	Information Required
	• have an assisted (powered) method of rewinding the reel, with manual back up	
PC016	The pump must be able to prime in accordance with NFPA1901 requirements.	Comply (Y/N)
PC017	The appliance must be able to carry a minimum useable water supply of 1400 litres.	Comply (Y/N)
PC018	The appliance couplings must conform with SNS PAS4505:2007. The inlets and outlets must be angled down	Comply (Y/N)
PC019	The water tank must be baffled in compliance with NFPA1901:2016 section 18.26 and subparts or fitted with baffle balls approved by FENZ.	Comply (Y/N)
PC020	Pump, water tank and waterway must be able to handle a range of incoming reticulated pressures between 500 kPa and 1,700 kPa. The system must also be capable of handling incoming spikes up to 1900 kPa.	Comply (Y/N)
PC021	The appliance must be able to supply Class A foam system to a minimum of two low pressure outlets, a high-pressure hose/booster reel and roof mounted monitor.	Comply (Y/N)
PC022	Any driving assistance or safety features that would prevent legitimate and necessary emergency response driving procedures (e.g. travelling on the 'wrong' side of the road, lane departure) must be able to be disabled when the appliance is responding to an emergency (i.e. the emergency beacons are switched on).	Comply (Y/N)
PC023	Automatic transmission must be fitted, capable of fast response and configured for Emergency response driving.	Comply (Y/N)
PC024	The appliance must be interoperable with the appliance bay systems outlined in Appliance Bay Requirements, outlined in the Appendices	Comply (Y/N)
PC025	The appliance must have an on-board 230V battery charger to charge the appliance battery when parked at a fire station[9]. The charging inlet must be on the rear of the right-hand side of the appliance cab with an indicator light to indicate that there is power to the battery.	Comply (Y/N)
PC026	Dimensions: Maximum height 3.3 metres Maximum length 8.5 Metres. Maximum width as per NZTA rules.	Comply (Y/N)
PC027	The appliance must have a minimum 12-degree entry and exit angles	Comply (Y/N)
PC028	The appliance should be fitted with N150 MF 1000CCA batteries to standardise with other appliances in our fleet.	Comply (Y/N)

[9] The on-appliance charging should not damage the battery

REF	Precondition detail[5]	Information Required
PC029	The appliance must have an automatic battery isolation system to prevent the appliance battery from discharging to the point that the appliance is unable to start when electrical equipment is operating, and the appliance's engine is off.	Comply (Y/N)
PC030	The appliance must be compliant with Fire and Emergency NZ's Radio Frequency Interference requirements as described in Appendices.	Comply (Y/N)
PC031	The officer (front passenger) and two rear crew seats must be capable of incorporating self-contained breathing apparatus. The seats must be compatible with the Draeger PSS 5000 (Standard and Telemetry) breathing apparatus fitted with 300-bar 9 litre cylinder (3M Scott safety Air-Pak) and Draeger mask and must be adjustable to allow for other manufacturers' cylinders to be used.	Comply (Y/N)
PC032	The appliance must be able to safely carry five occupants. • A crew of 4 (driver, an officer in front of cab passenger seat, and two crew seated in the rear of the cab). • Fifth occupant (passenger or observer) seated in the rear of the cab	Comply (Y/N)
PC033	Three point (lap diagonal) retractable seat belts must be fitted to all seating positions.	Comply (Y/N)
PC034	The appliance must have a design life of at least 20 years. All parts of the appliance will be designed to achieve this life apart from specified consumable items. All components and fasteners will be made from corrosion resistant materials appropriate for the design life.	Comply (Y/N)
PC035	The appliance design and stowage capability must • Support carrying equipment outlined in Equipment list in Appendices with the ability to be reconfigured[10] to accommodate future changes • Support locker/compartment space for regional or tactical equipment stowage of up to an additional 100 kg and 0.5 m^3	Comply (Y/N)
PC036	The checks carried out by the crew outlined in the Appendix must be able to be conducted without lifting appliance's cab or requiring specialist tools or access.	Comply (Y/N)
PC037	The appliance build must comply with the OEM requirements for all fittings, parts and components.	Comply (Y/N)
PC038	Body must comply with the OEM cab chassis vehicle modification/body builder guidelines.	Comply (Y/N)
PC039	The appliance must be built on a cab chassis supported by the OEM's NZ agent (either existing or established for this contract). Cab chassis warranty, parts and on-going service support must be provided by the cab chassis OEM's NZ agent directly to FENZ.	Comply (Y/N)

[10] The equipment stowage should be able allow for changes in equipment dimensions or future developments e.g. battery powered extrication tools.

REF	Precondition detail[5]	Information Required
PC040	The supplier must be able to provide full in-country warrant and complex fault support for the complete appliance for the design life of the appliance (20 years). This support must include in-country, expert technical support to resolve any complex or difficult faults, and a supply of commonly used and critical parts.	Comply (Y/N)
PC041	All measurements and displays need to be displayed in English and use metric units	Comply (Y/N)
PC042	A speed limiter is required and must be able to be set between 90km/h and 110km/h. Limiter to be adjustable by an NZ based technician and not by the driver.	Comply (Y/N)
Special Items		
PC043	The Pump variant must be able to be configured to carry an AS 464 model 13.5m Triple Extension Rescue Ladder[11] in place of the 10.5m listed in the equipment list	

3.3 Mandatory response requirement

It is a mandatory response requirement that you review the Proposed Contract in the Section 5 of the RFP. After the Contract review, please confirm one of the following:

1. Having read and understood the Proposed Contract (RFP Section 5), I confirm that these terms and conditions are acceptable. If successful I agree to sign a Contract based on the Proposed Contract, or such amended terms and conditions of Contract as are agreed with the Buyer following negotiations

OR

2. Having read and understood the Proposed Contract (RFP Section 5), I have the following suggestions to make. If successful, I agree to sign a Contract based on the Proposed Contract subject to the following clauses:

Clause	Concern	Proposed solution
[insert number]	[briefly describe your concern about this clause]	[describe your suggested alternative wording for the clause or your solution]
[insert number]	[briefly describe your concern about this clause]	[describe your suggested alternative wording for the clause or your solution]

3.4 Stage Two: Response Assessment

Stage Two involves scoring responses against the weighted assessment criteria by the evaluation panel for all proposals that pass Stage One. After individual panel members have evaluated the proposals, the panel will be brought together for a moderation meeting.

[11] If your response only includes one appliance variant for both roles it must be able to be configured to carry the AS 464 model 13.5m triple extension ladder

There are five components to Stage Two:

- Functional User Stories
- Technical User Stories
- Support and Warranty Requirements
- Customisation Assessment
- Best Value for Money Assessment

Functional User Stories

Each User Story has a relative weighting determined by one or more Assessment Criteria. The User Stories are mostly outcome focused and there may be numerous suitable solutions that Respondents can put forward to meet these outcomes. The User Stories have been crafted so that Respondents know what success looks like for each User Story and understand how their response will be evaluated. Some User Stories contain assessment criteria which will be assessed in Stage Three during site visits and hands-on assessment.

Technical User Stories

These include more detailed features which often determine the inner workings of the appliance impacting on supportability, maintainability, capability, durability, etc. of the appliance. These are the technical parameters within which the Type 3 Appliances will be assessed.

Support and Warranty Requirements

Due to Fire and Emergency NZ requiring a 20-year design life of the proposed appliances the certain support and warranty provisions will be assessed so as to give us confidence that any proposals are designed to meet this standard.

Customisation Assessment

Fire and Emergency NZ recognises that there may be multiple ways in which Respondent's design their appliance to meet our requirements. We understand that the design could include features that are customised or configured to meet a particular user story. This balance between configuration and customisation is crucial to understand as it is assumed that customisation may increase the **Total Cost of Ownership** and/or complexity of an appliance. We wish to avoid a situation that may lead to a Respondent proposing a solution that is overly customised. Whilst sometimes customisation is beneficial, oftentimes it can lead to greater overall ongoing support costs for customers and suppliers alike. To address this concern Fire and Emergency NZ requires Respondents to tell us if in order to meet a requirement (User Story) the proposed solution requires changes to a product in a manner that would:

- Detrimentally modify a product outside of the manufacturers original operating parameters
- Be detrimental to our overall principle of wanting a repeatable and configurable product
- Impact on the supportability of a product
- Be the only such implementation of a product

In the response form Respondents will need to note, based on two parameters, whether any requirements or user stories, requires them to offer a solution that requires customisation as opposed to configuration. This information will form the basis of our Customisation Assessment, the results of which will also be assessed with the notion: that some customisation may not have a detrimental impact or lead to an ongoing supportability consequence, but where it does, the customisation assessment score will negatively impact a Respondent's overall score.

Please note that Fire and Emergency NZ will be considering the relativity between the Respondents for the customisation assessment. For example, if multiple suppliers note that in order to achieve an

outcome stated in a user story customisation must be used, then Fire and Emergency NZ will consider this as part of the scoring and moderation process.

Best Value for Money

The outcome of Stage Two will be ranked proposals from high to low. Upon conclusion of the paper-based assessment the second envelope will be opened for all proposals. The second envelope will include the **total cost of ownership** (TCO) including on-costs for support and costs for both Pump and PRT variants.

We wish to obtain the best value-for-money over the whole-of-life of the Contract. This means achieving the right combination of **fit for purpose**, quality, on time delivery, quantity and price.

If a Respondent offers a price that is substantially lower than other Proposals (an abnormally low bid), the Buyer may seek to verify with the Respondent that the Respondent is capable of fully delivering all the Requirements and meeting all the conditions of the Proposed Contract for the price quoted.

Movement from Stage Two to Stage Three

Following the best value for money assessment, the scores will be tallied and up to five of the top ranked proposals will have Due Diligence conducted before moving through to Stage Three (Due Diligence consists of standard financial and company checks). If any proposal is eliminated during Due Diligence the sixth placed proposal may have Due Diligence conducted with a view to taking them through to Stage Three.

3.5 Stage 2: Weighted criteria for paper-based assessment

3.5.1 User Stories, Assessment Criteria, Criteria Weighting

Requirements structure

Area	Description	Features
ID	Requirement identifier	Unique identifier used for each requirement
User Stories	The user and some non-functional requirements have been structured with an outcome as the focus. These should be read as: As a <role of either Driver, officer or firefighter> <user story> They describe an activity and a desired outcome	There may be several potential solutions to each user story and it is up to the supplier to identify a solution that they think will be fit for purpose
Weighting	This is the overall importance of the user story or requirement in the context of the assessment.	Allows the supplier to understand what matters most and what are nice to haves
Information required	This is the information that is required for us to complete the assessment of the proposed appliance.	Usability as well as technical specification
Assessment Criteria	The assessment criteria are the user stories will be assessed against. They have been defined as what good would look like.	Removes any ambiguity from the user stories and requirements
Criteria Weighting	The assessment criteria have been assigned a value that allows the supplier to focus on what matters most	• Most important 4 • Important 3 • Good 2 • To be considered 1

Requirements Structure – Example Technical focus

ID	User Story	Weight	Information required	Assessment ID	Assessment Criteria	Criteria Weight
UST001	As a <role i.e. driver, officer or firefighter> I want to be able to <action> so that I can <rationale>	**25**	• Provide as much detail as you think necessary to demonstrate that your proposed appliance can achieve or exceed the desired outcome stated.	TFL001A	Detail of how the proposed solution will be assessed e.g. The proposed solution should achieve this	4

Requirements Structure – Example Functional focus

These requirements can apply to one or many of the fire appliance's crew and should be read as "As a <driver and/or officer and/or firefighter> <user story>

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
USF001	Yes	Yes	Yes	I want to be able to enter and exit the cab in all conditions and times of the day while wearing full fighter gear, so that I	7.9	Provide details (drawings, photos, diagrams or digital models) of: - the appliance's cab layout (USF001H) - images of the doorways including any protrusions which	USF001A	The design and layout of the cabin should leave the rear crew area aisle clear of protrusion or obstructions when fire fighters are alighting the	4
							USF001B	The cabin design should support 3 points of contact while entering and exiting doors	4

3.5.2 User Stories – Technical Elements

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
UST001	As a driver, I want the appliance to perform consistently so that I can respond to emergency situations.	**34**	• Provide information about the acceleration of the proposed appliance at operational weight: 0-20 km/h 0-60 km/h 0-90 km/h • Provide details of acceleration performance from stationary, the speed of reaction to driver inputs via the accelerator including throttle response and transmission gear changes. Describe any features that are provided to improve performance over that of a standard commercial vehicle, and any data available to support your response. Provide detail as per UST001A • Provide details of suspension type and controls. Provide detail as per UST001B and C. • Provide details of the proposed appliance's auxiliary braking system, capacity and its interfaces and adjustability by the driver as per UST001G • Provide detailed calculation of the proposed appliance's individual wheel weights, when both empty and at Operational Weight. • Provide a calculation of the proposed appliance's Static Rollover Threshold (SRT) in accordance with NZTA requirements[12] [ref]. Outline the details of the calculation and provide an explanation of the methodology used Provide detail as per UST001I • Provide details of the Electronic stability control systems UST001D • Provide details of appliance's safety features that assist the driver to avoid accidents as per UST001D • Provide details of the appliances ability to accelerate from a standing start on a one in five gradient as per UST001E, F.	UST001A	The appliance should meet minimum acceleration at operational weight: 0-20 km/h less than 4.5 seconds 0-60 km/h less than 20 seconds 0-90 km/h less than 55 seconds There should be a minimal level of lag between applying the accelerator and the appliance responding	4
				UST001B	The appliance should have measures to provide good handling, and adjustability is beneficial to allow the appliance to be tuned to the New Zealand environment. e.g. suspension type and anti-roll bar features and adjustability	4
				UST001C	The appliances suspension height should be adjustable when the appliance is stationary and moving at low speed to improve access to equipment and clear obstacles. The suspension should automatically reset to the correct ride height when travelling at road speed.	4
				UST001D	The appliance should have safety features to assist the driver to avoid accidents e.g. emergency brake assist, radar emergency braking, hill start assistance, Automatically Commanded Steering Functions (ACSF) etc.	3
				UST001E	The appliance should, (when at maximum operational weight) accelerate away on a one in five gradient from a standing start.	3
				UST001F	The appliance should, (when at maximum operational weight) be able to climb a one in five gradient from a standing start in reverse	3
				UST001G	The auxiliary braking system should be able to be adjusted enabled/disabled by the driver	4
				UST001H	The weight balance side to side of the appliance should be within 7% when both empty and fully stowed with equipment and full of water	4
				UST001I	The appliance should have the best Static Rollover Threshold (SRT) value as practicable.	4
UST002	As the Driver, I want to steer and control the appliance as easily as possible, so that I can ensure the safe operation of the appliance	34	• Provide details of the adjustability of the steering wheel. Provide detail as per UST002A • The appliance should have adequate ground clearance • Provide detail as per UST002B • Provide details of the proposed appliance turning circle. Include wall to wall and kerb to kerb measurements. Provide detail as per UST002C • Provide details of the proposed appliance's features that improve traction or prevent wheels from spinning on slippery surfaces (e.g. Differential lock) and the method of operation. Provide detail as per UST002D.	UST002A	The steering wheel should be adjustable for both rake and reach.	4
				UST002B	The appliance should have adequate ground clearance (excluding suspension components, exhaust tailpipe and axles) when appliance is at maximum operational weight	3
				UST002C	The appliance should have the smallest turning circle practicable	3
				UST002D	The appliance should minimise the amount of wheel spin when traction is lost on one or both rear wheels	4
UST003	As the fleet manager, I want the appliance design to	25		UST003A	The appliance design supports being under heavy acceleration and braking for short duration at speeds higher than normal sign posted speed.	4

[12] https://www.nzta.govt.nz/vehicles/vehicle-types/vehicle-classes-and-standards/vehicle-dimensions-and-mass/static-roll-thresholds/
Static Rollover Threshold Calculatorhttp://www.ternz.co.nz/SRT_Calculator/main.html

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
	accommodate the unique responses of an emergency response vehicle.		• Provide details of the proposed appliance's acceleration and braking systems and give details of emergency response specific as per UST003A, B • Provide details of how the appliance's support being at maximum operating weight for its operational life as per UST003C • Provide details component design and testing regimes that support a 20-year operating life as per UST003D • Provide details of how the appliance is built to meet UST003E	UST003B	Appliance is designed to support driving on both urban streets and narrow twisting rural roads.	4
				UST003C	Appliance is designed to always be fully loaded during its 20-year life	4
				UST003D	The design process and testing regimes should demonstrate that the appliance will survive the 20-year operating life target.	3
				UST003E	The appliance supports long duration (> 5 hours) pumping without overheating,	4
UST004	As a firefighter, I want the appliance to be designed and built in such a way as to reduce the potential for injury under normal operating conditions or in the event of an accident	13.6	• Provide details (drawings, photos, diagrams or digital models) of: (as per UST004 A, B, C, D, E, F) - The appliance's cab layout - features which are used to protect occupants in event of an accident or collision. - images of the doorways including any protrusions which firefighters may knock when entering or exiting the cab - If SRS airbags or curtains are fitted include details of how they will deploy - details of grab handles including construction material and fitting details - Door stays • Please detail all the safety features designed to prevent accidents and/or mitigate the effect of an accident on the appliance crew. (as per UST004B, F) • Include details of compliance with any relevant standards adhered to in the construction and fitout. • Provide details (drawings, photos) of the proposed method used for entrance and egress from your appliance's cab. If design supports exiting the appliance facing forwards include additional detail • Provide details of how fix equipment is secured in the cab of the appliance, including (UST004G): - ability to withstand the force created in an accident or collision - details of how the in-cab fittings and fixtures would perform in the event of a rollover	UST004A	Sharp or un-yielding projections should be kept to a minimum and should be suitably padded or protected.	4
				UST004B	Appliance fixtures in the cab should be designed and attached to reduce the potential for injury to crew members in the event of a collision.	3
				UST004C	Clearly identifiable grab handles should be provided in each doorway on both sides of each door opening.	4
				UST004D	The door stays should be designed to avoid any body contact when entering or exiting the appliance	4
				UST004E	For all cabs with steps to enter and exit, the cabin design should always support 3 points of contact (i.e. two hands and one foot) while entering and exiting doors (note our crew currently exit the appliance facing inwards).	4
				UST004F	The safety features of the cab, the chassis and the body (i.e. the entire appliance) should be designed to protect occupants in the event of a collision, accident or rollover	4
				UST004G	In the event of an accident or during emergency braking, accidental release of any fixed equipment should be prevented either by physical separation or by equipment securing devices which can resist a deceleration of 10 g in the direction of travel. The fixed equipment shall remain secured when inverted	4
UST005	As the fleet manager, I want the appliance to have compliant seat belts that are fit for purpose and easy to use, so that the crew are protected in the event of an accident	13.6	• Provide details (description, drawings, photos, diagrams or digital models) of: - seatbelt fittings and features - seat belt material - the proposed SCBA seats - how our SCBA equipment will be stowed in the seat and how it will interact with the seatbelt - adjustability of the seatbelts - how the seatbelts will sit when in use/ not in use Provide detail as per all assessment criteria.	UST005A	The seat belt should allow the diagonal webbing to be pulled forward 900mm without anyone seated. (The measurement is taken from the intersection point between the seat back and base cushions forward along the surface of the seat base and perpendicular to the seat back)	4
				UST005B	SCBA seats should be adjustable to accommodate people of different genders, weights and heights, and to accommodate different makes and models of BA set and sizes of BA cylinder.	4
				UST005C	Seat belts should retract clear of SCBA sets in such a way to reduce the chance of getting tangled, both when buckling or unbuckling and stowing or removing SCBA sets.	4
				UST005D	The seat belts must allow sufficient movement for the driver to reach switches, controls and lighting.	3
				UST005E	The seat belt stalk should be easy for the seat occupants to locate and be able to be operated while wearing gloves.	3
				UST005F	The seat belts should be easily identifiable (i.e. different colour, or similar)	3

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
UST006	As the driver, I want to reduce the risk of any vehicles being dragged under the appliance in the event of a collision with other vehicles.	13.6	• Provide details (drawings, photos, diagrams or digital models) of: - The proposed appliances underrun protection - compliance with any relevant underrun standards adhered to in the construction and fitout. (as per UST006A) • ***If Underrun Protection is not fitted, state why***	UST006A	If fitted, Underrun Protection should comply with a recognised international standard.	4
				UST006B	Any underrun protection fitted should not interfere with the appliance's emergency response or firefighting capability	4
UST007	As a firefighter, I want to know that the appliance's displays and visual measurements are accurate and well calibrated so that I can rely on my equipment	13.6	• Provide details (drawings, photos, diagrams or digital models) of all displays (i.e. electronic displays, readouts, visual indicators, LCD readouts etc) used on the appliance • Provide information about the accuracy over the expected service life of all measurement displays including: - any measurement standard complied to - Construction materials of this equipment • Provide detail for all assessment criteria.	UST007A	The displays/gauges/readouts should be accurate and tested using a recognised testing regime Please specify the accuracy of the pressure and flow displays/readout/gauges.	4
				UST007B	There should be a system (i.e. colour coding) for distinguishing the difference between the different displays (meters and measures)	3
				UST007C	All pump displays should be back lit and preferably colour coded	3
				UST007D	The appliance should be able to calculate and display the difference between water flowing into and out of the appliance	2
UST008	As an officer, I want the appliance to be self-sustained for a reasonable amount of time, so that I can plan my situation response.	9.1	• Provide information on the appliances fuel or charge capacity including the following calculations: - The operating range of the appliance in both normal and emergency response conditions - details of consumption when the pump is engaged and operating at maximum capacity - systems for forecasting the remaining runtime or range	UST008A	The appliance should retain enough fuel/charge to support driving the appliance for 5 hours without needing to refuel/recharge	4
				UST008B	The appliance should retain enough fuel/charge to support operation of the pump at full rated pump output for 5 hours.	4
				UST008C	The appliance should forecast range/run time based on the amount of fuel/charge that the appliance currently holds.	3
UST009	As the fleet manager, I want the appliance to have systems and alerts that help prevent damage to the appliance.	6.8	• Provide information about what alerts and warning systems are on your proposed appliance including: - unsecured lockers/compartments or equipment (UST009C) - audible or visual warning systems - details of how the warnings are triggered • Outline what warning systems are available to prevent damage during servicing of the appliance, i.e. preventing damage when tilting the cab	UST009A	The appliance should have alerts that activate when key pieces of equipment are not stowed correctly when the appliance is put in drive gear to be moved	3
				UST009B	The appliance should have alerts or warnings to prevent damage to key equipment during maintenance and servicing. i.e. preventing a cab from tilting when it is obstructed, e.g. by a ladder).	4
				UST009C	The appliance should alert the driver to unsecured locker doors/compartments or equipment before moving away.	3
				UST009D	The appliance could have seat belt warning lights indicating when occupied seats occupants are unrestrained	1
				UST009E	The roof of the locker module should be able to support the weight of two service technicians (100 kg each) without damaging the roof or key components	4
UST010	I want to be made aware of which doors or lockers/compartments are not securely closed so that I can easily identify the fault.	3.8	• Provide details of any warning/alert that are available for the lockers, describe the functionality provided to warn the driver if any lockers/compartments are open when the appliance is moving. (Provide detail as per UST010A, B)	UST010A	The alerts for open/unsecure doors (including cab) should be able to identify which specific door is open to assist in fault finding	4
				UST010B	The door / locker alerts could be an overridable function for situations where switches are faulty	2

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
UST011	I want to be warned if the appliance's scene lights are on when the appliance is moving, so that I don't create a hazard for other road users.	2.6	• Confirm whether the appliance's external scene lights can be operated while the appliance is moving. (UST011A) • Provide information about the functionality provided to warn the driver if the scene lights are on whilst the vehicle is moving. (UST011B)	UST011A	The appliance should be able to have the scene lights on for low speed manoeuvring, but they should not be activated during normal driving i.e. the scene lights should automatically shut off when appliance reaches 15 kph,	2
				UST011B	A primary scene light warning indicator should be in one location and indicate which specific lights are on	4
UST012	I want to be able to alarm the appliance's lockers/compartments, and know if an unauthorised person attempts to gain access to them so that I can focus on my task rather than the appliance's security	0.7	• Provide information as to what (if any) alarm features are available for the locker/compartment doors on the proposed as perUST012A, B, D • If locker alarms are available, outline the features, operation and details of audible and/or visual warnings as per UST012B • If the lockers are lockable please provide details of the locking mechanism i.e. electronic or manual as per UST012C	UST012A	Pump Operator should be able to activate (arm) locker/compartment alarm system from the pump operating position	1
				UST012B	Any locker/compartment alarm should be audible from around the operating envelope of the appliance	1
				UST012C	The appliance locker/compartment doors could be able to be locked	2
				UST012D	The locker alarm should be easy to use and not interfere with the emergency operations of the appliance	3
UST013	I want to be able to work in and around the appliance in all ambient lighting conditions so that I can see what I am doing	4.2	• Provide details of the lighting solution provided with the appliance include: - lighting of the working area immediately around the appliance - wider scene lighting - lighting inside lockers/compartments - any fixed or hand-held lights on the side of the appliance to be used to identify street address numbers, driveways etc. • Describe how each light on the appliance is controlled. • The response should provide a lighting map that includes the working range of mast lighting solution and the configurability of the lights	UST013A	Locker lighting provides full illumination inside all lockers/compartments.	3
				UST013B	Scene lighting can be used to define the scene area around the appliance	3
				UST013C	The operator should be able to control the scene lights on each side of the appliance individually There should be the ability for a master control switch to turn on and turn off all scene lights from both inside the cab and at the pump operating area.	3
				UST013D	The appliance should have mast lighting or equivalent that should illuminate the ground next to the appliance through as great a vertical range as possible and have a horizontal plain range of 360 degrees.	2
				UST013E	The appliance's solution for illuminating street addresses should be able to be used at speeds greater than 15kph	3
UST014	I want to be able to control the external scene lights from either the cab or the pump operator location so that I don't need to leave my work area	1.3	• Provide details of the scene light controls, include: - control locations i.e. cab and the pump control panel - a description and picture of the proposed controls.	UST014A	The controls for scene lighting should be duplicated in the cab as well as the pump panel	4
				UST014B	The controls for scene lighting should be clearly identified and well laid out	2
UST015	As a firefighter, I want the appliance to have redundancy should any critical automated functions fail so that I can operate the mission critical systems.	13.6	• Provide information about how the flow of water to and from the pump is controlled by the pump operator and/or the pump control system to allow for: - emergency (fast) shut off if required - slow opening to prevent pressure surge - managing the effect of sudden pressure changes on firefighters operating hose lines/ nozzles - prevention of water hammer both within the appliance and on the hydrant or incoming supply. • Provide information of the appliances manual overrides for critical systems on the appliance	UST015A	Flow controls should have soft open and close where required to avoid water hammer and sudden pressure changes for hose lines and operators.	4
				UST015	The appliance should have an emergency pump shut off	4
				UST015B	Key systems on the appliance should have manual overrides	3
				UST015C	Manual overrides should be clearly marked and easily accessible on the appliance	4
				UST015D	When the manual override is used on key systems (i.e. pump or engine control) there should be an event created automatically in a log	3

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
UST016	As a fleet manager, I want an appliance that is reliable and robust throughout its operational life.	13.6	• Provide detailed information related to materials and method used in the assembly of the proposed appliance including: - Corrosion resistance of materials and fasteners - Testing regimes and standards adhered to - Stress testing • Outline design features to reduce corrosion, fatigue or failure of welds, fastenings, fixings or stressed areas	UST016A	The materials used for appliance construction including fasteners/fixings are to be made from corrosion resistant materials	4
				UST016B	The overall construction of the appliance should support the operational life of the appliance	4
				UST016C	The appliance should have been tested to demonstrate robustness and reliability.	4
UST017	As a Fire Fighter, I want the cab to be comfortable to ride in so that I can arrive at my destination ready to work	13.6	• Provide details about the cab/crew area suspension type, and any adjustability available.	UST017A	The appliance cab and/or crew area suspension should be adjustable (by a technician) to tune the set up to maximise crew comfort on a range of road types including rough and winding roads.	4
UST018	As the fleet manager, I want the finished appliance to be handed over in a state that its ready to go into operational service.	13.6	• Provide detail of your ability to supply the proposed appliance in a ready to go on the run (operational state), including: - Process used for applying branding and Conspicuity elements (as per UST018A, C) - Provision of consumables, such as fuel, firefighting foam, fluids, etc • Provide detailed drawings/models of proposed appliance mocked up in Fire and Emergency livery (UST018A)	UST018A	The appliance should be branded in accordance with Fire and Emergency's branding guidelines.	4
				UST018B	The appliance should be supplied with all fluid tanks full.	3
				UST018C	The materials used for branding should be made of high-quality materials compliant with international standards.	4
				UST018D	The appliance should be supplied with 1,000km of prepaid Road User Charges license[13]	4
				UST018E	The Class A foam supplied with the appliance should be the brand and variant approved by FENZ.	4
UST019	As a Fleet Manager, I want the appliance to be able to operate in New Zealand's wide range of ambient temperatures and weather conditions so that I can allocate the appliance anywhere in New Zealand.	20.3	• Provide details of the proposed appliance's ability to operate in the wide range of ambient temperatures that exist in New Zealand (UST019C), include details on the appliance's ability to: - Fit snow chains (UST019B) - Operate in heavy fog (UST019G) - Maintain comfortable temperatures in the cabin (UST019F) - Demist mirrors, windows and any other screen surface (UST019H) - Protect key features from damage when operating in high winds e.g. roller door, cab doors, covers (UST019D, E) - Operate in flooded areas - Shield equipment from damage when operating on a fire ground. • Outline the testing conditions, regimes or standards used to assess the ability of your appliance's equipment ability to meet the assessment criteria. • Provide information about the proposed appliance's maximum wading depth, identify the how the appliance design protects key systems from water intrusion.	UST019A	Maximum wading depth and any other features designed to protect key systems from water intrusion.	4
				UST019B	There should be clearance of 75mm around the rear wheels to allow the manual fitting of snow chains or an automatic chain deployment solution provided	4
				UST019C	The appliance should be able to safely operate (or easily be configured to operate) within a temperature range of - 20°c to +40°c	4
				UST019D	The appliance should be able to operate in extreme weather events such as heavy rain, high winds or both	4
				UST019E	The appliance equipment should be designed to operate in adverse weather conditions i.e. doors should be fitted with robust door-stays to withstand high winds when doors are open.	4
				UST019F	The appliance air conditioning should be fitted and work effectively throughout the cabin in all weather conditions	3
				UST019G	The appliance should be fitted with fog lights	2
				UST019H	The appliance should have a mechanism for demisting the external mirrors	3
UST020	As the fleet manager, I want the appliance to support on appliance charging and use of	13.5	• Provide details of the appliances electrical systems describing in detail: - The battery isolation system functionality (UST020A) - Key features that allow the selection of which electrical items are	UST020A	The appliance's automatic battery isolation system must protect the appliance battery and retain enough charge to start the appliance. This must prevent the battery from discharging to the point that the appliance is unable to start.	4

[13] https://www.nzta.govt.nz/vehicles/licensing-rego/road-user-charges/ruc-licences/

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
	electrical equipment in a way that protects the battery from going flat, so that the operational users can rely on the appliance		isolated by the system - Alert process used before the system isolates the battery. • Provide details of the alternator capacity when both at idle and higher revs. Outline the design of the appliance's battery charging capacity when all systems are operating. (UST020C) Detail the proposed appliance's ability to charge equipment identified on the attached equipment list. Including: - in cab charging (UST020E) - in locker/compartment charging (UST020F) • Provide details of the pump priming solution • Specify the appliance starting battery quantity and model	UST020B	The appliance should support on-appliance charging for the manufacturer's features (i.e. remote system controls)	3
				UST020C	The alternator capacity calculation should demonstrate how charging of on-board equipment is supported.	3
				UST020D	The appliance should support charging for the features identified in the equipment list when the engine is running	4
				UST020E	The priming mechanism for the pump should be robust and should not place an excessive load on the appliance's electrical systems	4
				UST020F	The appliance must be able to support onboard charging in lockers/compartments of electrical tools outlined in the Equipment list in the appendix	4
				UST020G	The appliance's alternator should provide consistent charging through the engine's entire rev range.	4
UST021	As the fleet manager, I want the solution used for on station charging to be fit for purpose and easy to use so the appliances electrical systems are ready to use	13.5	• Provide details on the proposed appliance's interoperability with Fire and Emergency's on station charging systems, including: - safeguards to prevent damage to the appliance or charging equipment should an appliance be put in gear whilst still connected to appliance bay power supply(UST021A) - usability of connection (UST021 B, C)	UST021A	The charging solution should ensure that the appliance cannot drive off with the charging plug still connected	4
				UST021B	The charging solution should indicate whether the 230V feed is charging the appliance battery or not (e.g. in case of blown fuse or charger failure).	4
				UST021C	The on station charging solution should be easy to reconnect	4
UST022	As the driver, I want to able to easily check that the appliance's wheels and tyres are correctly set up, so that I can ensure it is ready to drive	13.5	• Provide detail of systems for measuring and monitoring: - correct operating tyre pressure - whether wheel nuts have become loose	UST022A	The appliance should have a means for monitoring whether the tyres are at the correct pressure.	4
				UST022B	The appliance should have an audible or visual warning if tyre pressures are outside of manufacturers specifications	2
				UST022C	The appliance should support the fitting of wheel nut indicators.	4
UST023	As the fleet manager, I want the appliance's waterways to be fit for purpose, so that firefighters can get to work without wasting water or damaging the appliance's waterways.	67.5	• Provide detail of the proposed appliance's waterway (drawings, schematics, or digital models) including information relating to: (UST023A) - construction materials - preventative measures used to prevent excessive water entering the appliance (UST023B) - solutions for dealing with excess water (UST023B) - measures to prevent cavitation (UST023T) - connections to onboard preconnected hose lines (if proposed) - measures to ensure foam is contained to the foam specific parts of the appliance and does not contaminate other parts of the appliance such as the water tank (UST023D) • measures to remove gravel or other contaminants from the water before it enters the pump:(UST023E) - solutions for cleaning and filtration system (UST023F) - solutions for preventing mineral damage to the waterways (UST023E) - calculations showing any pressure loss due to the design of the waterway (UST023C) - the cooling systems for the waterways and the pump (UST023L,	UST023A	The appliance waterway should be fit for purpose for the operational life of the appliance	4
				UST023B	The appliance should have systems to prevent surplus water entering the appliance and should not discharge excess water to the ground beneath the appliance and should therefore control the incoming water flow when necessary.	4
				UST023C	The appliance's waterway design should support a minimal amount of pressure loss between the impellors (pump) and the outlets	4
				UST023D	It should be possible to flush the foam system after use so that firefighters can ensure that there is no unwanted foam discharge at any time.	3
				UST023E	The appliance's waterways should be protected from damage by gravel, other impurities and mineral introduced from an external water supply.	4
				UST023F	The appliance should have a means of emptying the tank of sediment, sand gravel etc.	4

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
			UST023N) - preconnected high pressure booster/hose reel (UST023P) • Demonstrate how the water tank is accessed for planned maintenance or repairs (UST023 G and HI) • Provide details of the proposed appliance's pump priming system capability including: (UST023I, J, K, T) - whether the pump automatically primes - the type of primer and how it is powered - whether any redundancy is provided in the priming system including whether the pump can self-prime from the tank without the use of the primer. - describe primer performance and outline what standards the priming system adheres to • Provide details of the proposed appliances pumping system including: - The pumps rated capacity in terms of pressure and flow (UST023N) - high pressure capability - include standards and methodology used to measure the above information - safeguards to prevent overheating or catastrophic failure of the engine or pump (UST023M and N) - pump performance curves • Provide details of the procedure used to flush the foam system as part of the shutdown procedure. Include what measures are used to prevent unwanted discharge • Provide details of the mechanism to prevent the pump from overheating (UST023L) • Provide details of OEM compliance for fitting the pump to the appliance. (UST023O)	UST023G	Tank should also allow all required maintenance tasks to be performed without dismantling the appliance.	2
				UST023H	There should be access to the appliance's tank without need for intervention from a mechanic i.e. dismantling the appliance.	2
				UST023I	The pumps priming mechanism should be robust and sustainable for the life of the appliance.	4
				UST023J	The appliance should be able to be primed without the use of the primer including self-prime from tank.	3
				UST023K	The appliance should be able to draw water directly from an open water supply and from a hydrant supply.	4
				UST023L	The pump automatically prevents overheating in all situations including when driven at full engine power with no water flowing out of the pump firefighting outlets.	4
				UST023M	What alerts or warnings are available to the pump operator to notify them of any potential or imminent catastrophic engine failure.	3
				UST023N	The appliance must be able to pump at maximum rated pump output for a minimum of five hours continuously without overheating or experiencing any other issue.	4
				UST023O	The appliance's pump is fitted so that it conforms to OEM pump installation instructions and guidelines	4
				UST023P	The pre-connected high-pressure booster/hose reel delivery should be deployed easily	4
				UST023Q	Full rated pump output is available without cavitation over full range of tank water levels until empty.	4
				UST023T	If fitted the pumps priming systems should be protected from impurities of gravel in the incoming water supply	
UST024	As the Driver/pump operator I want to have safety overrides so that I can safely and quickly throttle down and/or quickly disengage the pump.	18.6	• Confirm what locations the pump can be engaged and disengaged from. (UST024A) • Provide detail of emergency shut off control locations (UST024B) • Provide details of the pump throttle control and location • Describe the mechanism for controlling the pressure and flow from the pump panel (UST024C)	UST024A	The pump should be able to be engaged/disengaged at the pump panel so that it can be switched on or off as needed	2
				UST024B	There should be an emergency shut off control on the pump control panel	4
				UST024C	The mechanism for controlling the pumps pressure and flow needs to be located with the other pump controls	4
UST025	As a Firefighter, I need the appliance to support a portable solution for boosting my water supply, so that I can draw water from a static supply or remove water in a salvage setting	4	• Provide information relating to how the proposed appliance would support an ejector style pump, include: - makes and model supported - flow return rates - detailed set up information - delivery hose type required to supply the pump	UST025A	The appliance should support the use of an ejector style pump in situations where hard suction is unsuitable	4
				UST025B	The appliance should support operation of an ejector style pump at effective rates within 30m of the appliance.	4
UST026	As a Driver/Pump Operator, I want to be able to control the	16.5	• Provide detail of how all flow controls can be managed by the pump operator and/or the pump control system to:	UST026A	The pump operator should be able to easily select the pump's water source (tank, pressure inlet, open water, static supply) in a smooth, incremental and controlled manner	3

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
	flow and /or pressure to outlet with the ability to choose the water source so that I can complete my water delivery safely		- allow for emergency (fast) shut off (UST026B) - slow opening to prevent pressure surge effect on firefighters operating deliveries (UST026A, B) - avoid water hammer both within the appliance and the hydrant supply (UST026B) - allow different pressure/ flow across multiple outlet types simultaneously (UST026C)	UST026B	All pump flow controls should be able to be opened or closed quickly or slowly depending on operator's need	1
				UST026C	The pump operator should have the option to be able to manage differing water pressures of each outlet type simultaneously (e.g. Low and high-pressure deliveries)	4
UST027	As a Driver/ Pump Operator, I want a pressure control system to prevent damage to the pump, hoses or personnel operating the hose lines.	16.6	• Provide detail of the proposed appliance's pressure control system including: - operation guides - level of automation - pre-set options -manual overrides(UST027B) • Provide details about where this solution has been used before or details of testing to prove its effectiveness (UST027A)	UST027A	The appliance's pressure control system should be proven and tested	4
				UST027B	The appliance's pressure control system should require as little manual intervention as practical	4
UST028	As a Fire fighter, I want to be able to deploy firefighting attack options such as a monitor (roof mounted / ground) that is supplied from the onboard water tank at an incident so that I can quickly control a situation	17	• If the proposed solution has an onboard water capacity greater than 1400 litres available, please describe. (UST028B) • Provide details of all delivery outlets connected to the appliance's water tank (UST028D) • Describe the proposed appliance's high-pressure hose options and how they could be used as a first attack, fast 'get to work' option (UST028A) • Provide details of the onboard water supply and whether it can supply the pump at its maximum rated capability. (UST028C)	UST028A	There should be a connected hose option to get to work immediately from either side for a firefighting attack, that is robust, manoeuvrable and flows at a minimum rate of 240 LPM	4
				UST028B	The onboard usable water tank capacity could be greater than 1400 litres.	4
				UST028C	The onboard water supply should be plumbed directly into the pump and be able to supply at the pumps maximum rated LPM capacity from the tank	4
				UST028D	There should be option to perform non-firefighting tasks (e.g. PPE or equipment wash-down) from the appliances onboard water.	1
UST029	As a fire fighter fleet manager, I want the appliance to have capacity to supply the FENZ Type 5 aerial appliances at maximum capacity, so that I maximise the output of the aerial appliance monitors.	6.8	• Confirm whether your proposed appliance complies with this requirement	UST029A	The pump variant of the appliance could have the ability to supply the (32m) aerial appliance with enough water. (supply pressure of 1500kPa operated at maximum capacity of 3800 LPM)	3
UST030	As the driver/pump operator I want to be able to see how much water is in the onboard tank with the least latency possible so that I know how much water I have	10.4	• Provide details of all indicators used to display the water level in the proposed appliance, include: - metric used - visual display - accuracy - location/s on the appliance - solution for interpreting in different ambient lighting conditions (UST030A, B) • If a remote pump control is provided, advise whether tank water level is displayed on the remote control. (UST030C)	UST030A	The water level should be clearly identifiable in all ambient light conditions, and any level of measurements used should be displayed.	4
				UST030B	The water level indicator should be accurately calibrated and visible from where the pump operator is working even if they are not directly adjacent to the pump panel location	4
				UST030C	All water level indicators i.e. warning lights should be visible to the pump operator, even if they are not directly adjacent to the pump panel location	3
UST031	As the driver/pump operator I want to be able to easily produce foam from the pump	6.2	• Provide detail of the Class A foam system, including: - the functionality included (UST031C) - available foam percentages(UST031A) - maximum and minimum flow rates(UST031C) - maximum and minimum operating pressures(USt031A)	UST031A	The appliance should have a reliable and proven Class A foam system and onboard concentrate tank fitted with visible content readout/display	3
				UST031B	The foam system should be able to be replenished while the pump is running and foam system is in use	3

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
	so that firefighting tactics can be varied		- which deliveries (hose/booster reel, high pressure, low pressure, roof mounted monitor) have foam capability(UST031D) • Describe all options provided to fill the Class A foam system tank and confirm whether it can be replenished during foam operation. (UST031B) • Describe the ability to simultaneously operate a combination of some foam outlets/deliveries and water only to other deliveries including the possibility to select foam and/or water from low pressure outlets/deliveries, while simultaneously having foam available to the hose/booster reel/s and Roof Mounted Monitor(UST031D)	UST031C	The pump operator should be able to select different foam concentration percentages (0.1% - 3.0%) to meet tactics deployed to a mix of deliveries	3
				UST031D	The appliance should be able to simultaneously flow foam and water only from multiple low-pressure outlets/deliveries and from either side of the appliance (e.g. operate foam from a minimum of two outlets)	4
UST032	As the Driver/pump operator I want to be able to perform specific tasks within proximity of the pump control panel so that I can safely operate the pump controls (*Tasks include but are not limited to:* *- putting out road cones* *- shipping standpipe* *- running riser/hydrant feeders* *- operating remote controlled monitor* *- managing SCBA entry control duties)*	4.4	• Provide detail (drawing, plans photographs) about the location of the pump control panel or panels, and whether a remote-control option is available. (UST032A, B, C) • The response should describe the functionality of the pump control system's features, including any automatic functionality e.g. the pump control system's ability to automatically control pump pressure, flow, engine revs, incoming water supply etc, and any emergency stop functionality. as well as its ability to prevent damage to the pump (UST032B) • Describe how all pressure and flow readings measured by the appliance are displayed to the pump operator. (UST032C) • Provide details of the layout of equipment in relation to the pump controls location.	UST032A	The appliance pump should be able to be operated from multiple operating locations positions (for safe operation)	2
				UST032B	The appliance's pump control system should have the ability: - to automatically control pressure - manage engine revs - maintain pump functionality when operator isn't nearby	4
				UST032C	The pump display should be capable of displaying both flow and pressure for each individual outlet and inlet	3
UST033	As a driver/pump operator I want to be able to monitor the engine running parameters when operating the pump so that I can operate the pump as effectively as possible	2	• Provide detail of what aspects of the appliance's engine are monitored by the pump control system, what information is displayed to the pump operator and at the pump control panel, and how they are displayed. (UST033A, C) • Is a clock is included on the pump control panel, if so, provide details. (UST033B)	UST033A	The audible and visual alarms monitoring of engine oil pressure, water temperature, engine temp, low voltage, engine Rev counter etc Should be easily accessible to the pump operator i.e. are they provided on a pump portable display.	4
				UST033B	The pump display should have an accurate time displayed that can be seen in all ambient lighting conditions	4
UST034	As the Driver/pump operator I want the pump to have the ability to supply multiple outlets/deliveries, of varying flows	4.9	• Provide details (maximum available pressures and flows) of the appliances ability to maintain consistent pressure when simultaneously operating: - /high pressure/ booster hose reel nozzle and low-pressure deliveries/outlets during simultaneous operation - high pressure hose reel nozzle and roof mounted monitor - Low pressure delivery and a monitor • Provide details of how you would control pressure differentiation between different outlet types	UST034A	The ability to operate any combination of low-pressure delivery/outlet and the booster/hose reel, and roof mounted monitor together at optimal nozzle pressures It should be safe and user friendly.	4
				UST034B	The appliance should support the management of maximum pressure for each delivery/outlet type (as per nozzles and branches included in the equipment list) is safe and user friendly.	3

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
UST035	As the pump operator, I want the pump to be able to operate at pressures and flows above the minimum specification set out in the preconditions	3.9	• Provide details of any options available for higher flows and/or pressures. • Provide a pump performance curve showing the relationship between pump output volume and pressure. • Confirm the maximum flow available at the appliance delivery outlets combined.	UST035A	The pump has the ability to exceed the minimum of 3840 LPM at a pressure of 1050kpa from a lift of 3m, assessed against the capacity of the pump (pressure and flow)	4
UST036	As the fleet manager, I want the tank to be plumbed directly to the pump in a way that supports the pump operating at maximum capacity	3.8	• Provide details of usable capacity of appliance's water tank, (this should be testable by pumping the water out of the tank until the pump starts to cavitate.) • Provide detail of the pumps ability to draw water from both a hydrant and a static water source	UST036A	The appliance design should support operating the pump with a hydrant supply directly into the tank and with the hydrant attached directly to the pump.	4
UST037	As the driver/pump operator I need to be able to expel air out of the feeder (supply) hose before it hits the pump so that they I can protect the pump from damage and / or airlocks	2.8	• Confirm that it is possible to switch from tank supply to hydrant supply without introducing air from the supply hose into the pump. • Describe your solution for preventing disruption to the flow of firefighting water.	UST037A	The solution should minimise the amount of air entering the pump casing	3
UST038	As the driver/pump operator I would like to be able to operate the pump without the need for hearing protection	2	• Provide detail of the external noise levels of the appliance measured in accordance with DIN EN 1846-2.	UST038A	The supplier will demonstrate the noise level of the pump operating at maximum capacity (measurement to be taken 75 cm perpendicular to the pump operating panel at a height of 165cm) Identify alignment with international standards	4
UST039	As a firefighter, I want the ability to connect a forestry hose so that I can utilise the flexibility and the higher pressure required to fight vegetation fires.	3.8	• Provide details of interoperability with FENZ couplings for various hoses (25mm, 41mm) outlined in ANNEX - Couplings	UST039A	The solution will be assessed against its interoperability with the FENZ couplings and outlets as identified in the supporting documentation	3
UST040	As a firefighter, I want to be able to operate a roof mounted monitor, so that I can provide additional fire attack or cover safely.	6.6	• Provide details (drawings, digital renderings, video, etc) of the proposed appliance's roof mounted monitor, including - specifications - performance - mounting method - method of operation - location on the appliance - range of operation/coverage range - location of controls • If the roof mounted monitor is manually operated provide details of the measures taken to make this a safe working area.	UST040A	The fixed roof mounted monitor should be able to be safely operated by one person	4
				UST041B	The fixed roof mounted monitor could be operated via a remote control	3
UST041	As a driver/ pump operator I want to have hose inlets and outlets on three sides of the appliance (left, right and rear) and possibly the front, so that I	4	• Provide details (drawing, digital renderings, photographs) clearly identifying the locations of: - the suction - hydrant/external water supply inlets - the delivery outlets	UST041A	Hose Inlets and outlets should be fitted to left and right sides of the appliance	4
				UST041B	The appliance could have inlets fitted to the rear of the appliance	3
				UST041C	The appliance could have other outlets accessible on the front of the appliance	2

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
	can establish hose lines at a safe location			UST041D	The appliance's hose inlets should be located so that they do not interfere with accessing key equipment or operating around the appliance	4
UST042	As the fleet manager, I want the non-slip surface coatings to be high quality and fit for purpose, so that the appliance is safe to work around in all weather conditions	4	• Provide detail (diagrams, photos, models) of the areas of the appliance with non-slip surfaces • Outline the method of providing slip resistance to those parts, and any relevant standard that the slip resistance material meets • Provide detail of any standard that the non-slip surfaces adhere to	UST042A	The appliance should have non-slip surfaces supplied in all areas that firefighters have step or standing access to	3
UST043	As the fleet manager, I want to know how the appliance is being used so that I can ensure it receives the correct maintenance	27	• Provide details of the proposed appliances event date recording capability including: - telemetry systems (UST043A) - interfaces for retrieving the data (UST043B) - ability to access information remotely and automatically (UST043C) - reporting availability (UST043C) - compliance with recognised standards (UST043B) - capability to provide real time reporting • Provide details of the formal the reporting data is stored and displayed in (UST043E)	UST043A	The appliance should have a telemetry system that measures, stores and allows the remote downloading and viewing of data related to usage (e.g. Odometer, engine hours, pump hours, water and foam usage, oil usage, fuel economy brake pad wear etc.), warnings and faults.	4
				UST043B	The appliances telemetry interfaces should meet an industry standard.	4
				UST043C	The information should be easily retrievable and easily used	4
				UST043D	The appliance should be able to report the real-time status of key equipment (e.g. emergency beacons on, engine running etc.).	1
				UST043E	The event data should be able to be extracted and stored in a non-proprietary format • Reporting • Ease of interface • Retrieval and storage	4
UST044	As a firefighter, I want labels, edges and hazards to be clearly identifiable, so that I can easily negotiate the appliance.	13.5	• Provide details on methods used for identifying physical hazards on the proposed appliance including: - pinch points - trip hazards - mechanical hazards - maximum loadings for shelves and lockers/compartments (UST043D)	UST044A	The appliance labelling and stowage should be clearly marked to identify areas that are not to be used as steps.	4
				UST044B	The edges on the sliding trays, shelves, lockers and other stowage features on the appliance should be conspicuous and easily identifiable	4
				UST044C	The maximum loading capacity of each stowage area should be clearly labelled	4
				UST044D	When not in their locked position the stowage systems should be easily able to be seen when open to prevent users and other moving hazards from colliding with them	3
UST045	As a fire fighter, I want the appliance to be easily identifiable as an emergency response vehicle, so that I can respond to incidents	13.5	• Provide details of: - any proposed appliance's digital messaging boards - lighting plans for emergency response mode - lighting plans for stationary emergency operation - digital messaging boards - configurability of the appliance emergency response lighting - detail any standards that relate to the proposed emergency lighting design • Provide details of techniques and solutions used to prevent the appliance from dazzling other road users	UST045A	The appliance should be conspicuous to members of the public in all weather and lighting conditions	4
				UST045B	It should be easy for members of the public to differentiate between the appliance responding to an emergency and when it is operating at an emergency scene.	3
				UST045C	There could be signage that can be used to alert the public to what action they need to take (e.g. Stay back, keep left, keep right, etc.)	4
UST046	As the fleet manager, I want an appliance with the lowest	10.5	• Provide information relating to your proposed appliance's emissions management systems	UST046A	The appliance should have the lowest emissions practicable	4

ID	Requirement	Weight points	Information required	Assessment ID	Assessment Criteria	Criteria Weight
	emissions practical, so that it helps FENZ meet targets		• Provide details of any innovations or product developments you are making that could reduce appliance emissions	UST046B	The supplier should have plans to reduce emissions in future appliance within the contract life	2

3.5.3 User Stories – Functional Elements

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
USF001	Yes	Yes	Yes	I want to be able to enter and exit the cab in all conditions and times of the day while wearing full fighter gear, so that I do not injure myself and can get to the incident quickly	7.9	• Provide details (drawings, photos, diagrams or digital models) of: - the appliance's cab layout (USF001H) - images of the doorways including any protrusions which firefighters may knock when entering or exiting the cab - details of grab handles including construction and fixing - details of door openings including angles of the door stays (USF001E, F) - the front and rear steps with measurements and tolerances (USF001E, F, C, D) • Describe the solution used for making the steps visible in all lighting conditions. (USF001G) • Confirm that the door hinges and stays will not come into contact with a crew member alighting from the appliance, and that hands could not be injured when holding a grab handle if the door is suddenly closed. (USF001 A, B, F, H) • Describe how your solution supports entry and egress to or from the cab using three points of contact as outlined in the appendix	USF001A	The design and layout of the cabin should leave the rear crew area aisle clear of protrusion or obstructions when fire fighters are alighting the appliance	4
							USF001B	The cabin design should support 3 points of contact while entering and exiting doors	4
							USF001C	The steps should be a minimum of 350mm wide and 170mm deep to support level 2 PPE boots	3
							USF001D	The steps should be evenly spaced vertically within a tolerance of 15%	1
							USF001E	First step should be no higher than 405mm	4
							USF001F	The door should open 70 - 90 degrees	4
							USF001G	All the steps below the door should be illuminated when the door is open	2
							USF001H	Handrails should be clearly identifiable and reachable from the ground by all personnel taller than 150cm tall	4
USF002	Yes	N/A	N/A	I want to be able to configure the seating position, mirrors and steering wheel to fit me from the driving position, so that I can safely and comfortably operate the appliance	7.9	• Describe the adjustability of the driver's seat and any international safety or ergonomic standards that the seat conforms to. (USF002A, B) • Describe how the mirrors are adjusted and confirm which mirrors can be demisted and how. (USF002C) • Outline details of the driver seat's suspension and standard to which it complies (NFPA- 1901 – 2016 14.1.7.1 or similar)	USF002A	The driving position adjustments should be able to be made while the driver is in the driver's seat	4
							USF002B	The driver's seat should conform to international safety and ergonomic standards	4
							USF002C	The external mirrors should be able to be adjusted from the driver's position	2
USF003	Yes	Yes	Yes	I want to be able to easily clean and decontaminate the cab area including seats so that I can minimise my exposure to carcinogens and other contaminants	10.7	• Describe what the cab surfaces are made of and how they can be cleaned (USF003A) • Please describe what the seat covering materials are, and how they can be cleaned. (USF003B)	USF003A	All cab surfaces should be made from materials that are easily wipeable and non-porous	4
							USF003B	All seat coverings should be cleanable, or non-porous and wipeable.	4
USF004	n/a	Yes	Yes	I want to be able to stow a self-contained breathing apparatus set in my seat so that I can reduce the time taken to get work at an incident	4.5	• Provide details (drawings, photos, diagrams or digital models) of SCBA seats: - Adjustability - Construction - Ability to be used with our equipment - Configuration when SCBA is not stowed - Details on the suitability for occupants of different heights and sizes • Provide details on SCBA mechanism in the seat including: - Adjustability (USF004C) • Provide details of the SCBA telemetry charging capability	USF004A	When the SCBA set is not in the seat, the seat should be comfortable and safe	3
							USF004B	The appliance should support in-appliance charging for specified SCBA telemetry batteries while they are stowed	3
							USF004C	SCBA sets should be able to be adjusted in the seat to reduce the risk of injury to the lower back and shoulders	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
USF005	Yes	Yes	Yes	I want to be able to sit comfortably and safely for the duration of the journey in order to minimise the effects of fatigue and reduce the chance of injury in the course of normal operation or a collision.	13.5	• Provide details (drawings, photos, diagrams or digital models) of all seating positions including: - Construction Materials - Adjustability (USF005A, B) - Functionality (USF005B) - Usability (USF005A, B) - Safety features (USF005E) - International standards that they meet (USF005E) • Provide details on SCBA mechanism in the seat including: - Features to protect the SCBA from wear and tear. (USF005D)	USF005A	The seat should be adjustable to allow the person seated to sit with both feet on the floor with knees facing forward.	2
							USF005B	The seat base cushion could be adjustable to accommodate firefighters of varying size	2
							USF005C	There should be a grab handle to assist getting out of the seat wearing the SCBA	2
							USF005D	The Breathing Apparatus mask should be able to be stowed free from catch hazards/entanglement while attached to the BA set	3
							USF005E	The seats should have safety features to protect the occupants in the event of a collision	2
USF006	Yes	N/A	N/A	I want to be able to clearly see around the outside of the appliance while driving, so that I can safely manoeuvre it	6.4	• Provide details (including diagrams, photos models) on what systems (e.g. sensors, cameras) are provided with the proposed appliance to assist driver's visibility around the appliance when driving, including: - interfaces - screens - audible warnings - visual warnings	USF006A	The solution could have a camera system to assist drivers' vision and / or automatic proximity sensors that can be activated by the driver if required	3
USF007	Yes	Yes	Yes	I want to see in the direction of travel from all seats so that I can assess the conditions as well as see out the nearest side window to minimise the effects of motion sickness	5.2	• Provide details (drawings, photos, diagrams or digital models) of: (USF007A, B) - the appliance's cab layout - Sight lines - Details of bulkheads and openings in the cabin - Seating positions - Seating configuration options • Please advise the options for the number of seats in the rear of the cab, and describe whether it is possible to reconfigure the appliance during its operational life (USF007C) • Provide information on how the proposed appliance's window can be opened, if these are automated provide details of the user controls and interfaces (USF007D)	USF007A	There needs to be an unobstructed view forward between the drivers and officers' seat and an ability to see out the nearest side window from the seated position	4
							USF007B	The cab should have an opening between the front and rear, of no less than the width between the officers and the driver's seat headrests, with a minimum vertical opening height of 400mm	3
							USF007C	The non-crew or 5th seating position should be located in the rear of cab and shouldn't obstruct the crew.	4
							USF007D	Side windows to be able to be opened from the seated position, the controls or user interface should be well designed and positive to use	4
USF008	N/A	Yes	N/A	I want to have an unobstructed view to the exterior of the appliance so that I can be aware of the surrounds and potential risks/hazards	5.2	• Provide details (drawings, measurements or photos) of the sightlines from the officer's seat.	USF008A	There should be good visibility of the out of the cab from the officer's seat. i.e. The officer should have a line of sight (where practical) to the incident that the appliance is arriving at.	3
USF009	N/A	Yes	Yes	The crew want to be able to read maps, manuals or documentation clearly regardless of ambient light levels so that I do not strain my eyes, with minimum driver distraction.	3.7	• Provide details of the in-cab lighting including: - lighting plans - controls - measures to prevent driver distraction - standard adhered to	USF009A	There should be a reading light for the Officer in Charge in the front passenger seat	4
							USF009B	There should be a reading lighting for the crew in the rear of the cab	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
USF010	Yes	Yes	Yes	I want to be able to clearly communicate with all the other members of the crew at all times while travelling in the cab, so that we can receive, make and clarify all instructions to be prepared when we arrive.	10.7	• Provide information on the noise level in the proposed appliance's cabin, including: - measures to reduce engine noise (USF010A, B) - measures to reduce the noise from airhorns and sirens (USF010A) - ability to control speaker levels in different areas in the cabin (USF010C) - Location of speakers and controls in relation to all seating positions (USF010C) - location of airhorns and measures to reduce their noise inside the cabin (USF010A) • Provide the noise levels within the cabin measured in accordance with NFPA1901-2016 14.1.6 without air horn or siren operating (USF010B) • Provide details of any radio or sound system supplied with the appliance (USF010E)	USF010A	The noise level should be minimised in the cabin	4
							USF010B	The cab should be insulated with sufficient thermal and sound deadening material to minimise engine noise	3
							USF010C	The speaker volume of the LMR in the crew area should be able to be controlled independently from the officer and driver area.	3
							USF010D	The crew communication should not require in-cab headsets	4
							USD010E	The appliance could be supplied with a AM/FM radio	2
USF011	Yes	Yes	Yes	I want to be able to travel in the cab of the appliance when responding (using lights, sirens and airhorns) without being required to wear hearing protection	4.5	• Provide the noise level calculations/measurements within the cabin measured with siren and air horn operating.	USF011A	The crew members need to be able to travel in the cab of the appliance under siren without having to wear hearing protection.	3
USF012	Yes	Yes	N/A	I want the controls for the LMR, siren, airhorn and beacons to be easy to access, use and see in all lighting conditions, so I can react efficiently and for them to be mounted such that the chance of the controls getting accidentally activated is minimised.	6	• Provide details (drawings, photos, models) of the proposed location of the MSU and LMR equipment and confirm that they will be able to be read and used by the driver and the officer in the front seats of the proposed appliance. • Show the controls for the siren, air horn and beacons and describe the functionality.	USF012A	All switches should be clearly distinguishable to reduce the chance of inadvertently operating the wrong switch	3
							USF012B	Accessing the controls should not get in the way of other tasks in the cab	3
USF013	N/A	Yes	Yes	I want to be able to easily reach vital equipment whilst seated and wearing a seatbelt, so that I can safely do my job on the way to and from an incident.	5.3	• Provide detail how the listed items will be stowed in the cab. (USF013A) • If an ergonomic study has been used in the design show how this has been incorporated (USF013C) • Show detail of the stowage solutions including adjustability for firefighters of differing heights (USF013C) • Show details of how an SCBA tally could be passed between the officer and a firefighter in the rear of the cab. (USF013D)	USF013A	The equipment in the cab should be stowed so that each member of the crew (except for the driver) can reach at least one IGC radio, one pair of barrier gloves, one pair of goggles, one pair of ear muffs, and a torch whilst seated and wearing a seat belt.	4
							USF013B	At least one member of the crew in the rear of the cab, sitting in one of the two crew seats, should be able to reach the TIC in its charger, whilst wearing a seat belt. The ability to reach other items would be beneficial	4
							USF013C	The solution should support the ergonomic stowage of equipment identified on the equipment list	4
							USF013D	The officer should have enough space to pass the SCBA tally back to the crew member in the left rear seating position without it being dropped.	4
USF014	N/A	Yes	N/A	I want to be able to start the role of officer in charge as soon as I exit the cab on arrival at an incident so that I can take control efficiently	4.3	• Provide details of the stowage solutions available to the officer and how these items could be stored in an ergonomic tidy solution.	USF014A	The information and equipment the officer in charge needs to access i.e. information screens (MDT or similar), radios, torch, ERG book, Officer Notebook, Level 2 PPE helmet should be easily reachable from seat with their safety belt buckled. This all relates to what they can access on the way to the call.	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
USF015	Yes	N/A	N/A	I want to be able to operate the foot pedals of the appliance regardless of the size of my feet[14], so that I can drive safely in my operational footwear.	3.8	• Provide diagrams including dimensions of the distance from the centreline of each pedal to the nearest obstruction on each side of the pedal, the size of the pedals and the distance between the pedals. • Provide accurate measurements of the brake and accelerator pedals (size, total width of the foot well area and the measurements of each pedal's centreline to the nearest obstruction (e.g. steering column, door map pockets, trim, cowling, etc)	USF015A	There should be clearance around accelerator and brake pedals, they appliance will be assessed on the layout and clearance.	3
							USF015B	The clearance should allow the driver to be wearing work boots or Level 2 structural firefighting boots	4
USF016	N/A	Yes	Yes	I want to be able to store Level 2 Structural Firefighting PPE that I am not wearing, safely in a non-obstructive way, so that I can sit comfortably when travelling in the appliance.	3.8	• Provide details of how Level 2 PPE could be stowed when not being worn by firefighters. (USF016A) • Provide information (drawings, diagrams, pictures) about how helmets will be securely stowed when not being worn by the crew (USF016B, C) • Provide details of in cab stowage (USF016A, B)	USF016A	All crew PPE gear should be able to be stored/carried within the cabin in a safe area without creating a trip hazard	2
							USF016B	Helmets should be within reach of the crew member and securely stowed, to prevent injury or damage from movement in the event of sudden acceleration or deceleration	4
							USF016C	The stowage of PPE and other critical in cab items should allow the crew to be able to be seated with both feet on the floor with knees facing forward	4
USF017	Yes	Yes	Yes	I want to be able to store my dirty PPE gear appropriately so that I don't contaminate the cab	2.8	• Provide detail of what (if any) solution is available for stowing dirty PPE (USF017A) - how many sets does the solution hold (USF017B) - how do the crew clean the solution (USF017C) - where on the appliance is the solution (USF017C)	USF017A	There should be the capability to store dirty gear in an area that doesn't contaminate the appliance cabin	2
							USF017B	This area should have the capability to hold 4 sets of Level 2 PPE gear	4
							USF017C	These storage areas or lockers/compartments should be easily cleaned and dried with the ability to drain excess water	3
USF018	N/A	Yes	Yes	I want the cab storage space to be effective, secure and ergonomic so that items are stored in a way that is practical and considered	3.8	• Describe your methodology for determining the stowage layouts and the location for all equipment items including in the cab (USF018A) • Advise whether cup holders are an option, and if so, provide details of the solution. (USF018B) • Provide measurements for the openings for cup/beverage holder if provided	USF018A	Equipment needs to be stored in groupings based on response type (Refer baseline stowage appendix)	3
							USF018B	Cup/beverage holders are preferred for all crew positions	2
USF019	N/A	N/A	Yes	I want to be able to store and access chilled bottled drinking water for the crew so that we can stay hydrated	2.8	• If your proposed appliance has a temperature-controlled area for storing water or other beverages, provide information that describes the proposed solution.	USF019A	The cabin should have a temperature-controlled compartment of at least 10 litres capacity that can be used to carry bottled drinking water or temperature sensitive items	4
USF020	N/A	Yes	Yes	I want to find task-based equipment that I need in one place when I arrive at an incident, so that I am most efficient and	24.5	• Provide a draft equipment stowage plan (drawings, digital models, photographs) including - stowage solutions - equipment groupings - what equipment will be accessible by a firefighter standing at ground level (USF020B)	USF020A	The supplier should be able to work with FENZ to stow the appliance in a way to improve workflow and support the "one locker, one job" concept. The stowage solutions should be configurable to achieve optimal ergonomics i.e. vertical boards, trays etc.	3

[14] Firefighter gumboot size range US size 3 – 14 Eu size 35 – 48

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
				minimise the get to work time. ("one locker, one job" as far as practicable)		- what height and reach have been assumed for your response (USF020B) - How configurable the solution is. (USF020F) - The equipment stowage plan and location of each item in the Equipment List appendix. (USF020G) - ergonomic standards the stowage complies with, and any other ergonomic features of the equipment stowage. (USF020H) - what solutions are used to improve the ease access to equipment and details of how they are stowed (USF020E) • Confirm what methodology has been used to determine the optimal stowage detailing: (USF020A, C, E) • Provide details of where the entry control board will be mounted while it is in use (USF020C) • Confirm whether in locker charging will be provided for specified items in the equipment list If provided give details of fittings and fixtures. (USF020D) • Provide detail of what, if anything, other than the ladder and roof mounted monitor will be stowed on the roof: (USF020J) - how this equipment is to be accessed - providing detail of how the rescue ladder will be stowed and removed - how the roof mounted monitor will be accessed. (USF020K) • Provide detail of whether firefighters will need to access the roof, including: (USF020J, K) - how they will access the roof - what safety measures will be used • Provide detail of features are in place to ensure the steps are not a trip or fall hazard. (USF020I) • Provide details of the process for confirming the final stowage layout of the appliance	USF020B	Equipment stowage uses full depth of the locker and easily accessible by a firefighter without having to overreach	3
							USF020C	The entry control board (standard or telemetry) should be stowed, (able to be charged if required) in a locker and easily utilised in the pump operator's workspace. The solution for mounting the board to the appliance should be clear.	3
							USF020D	The appliance should allow for equipment to be charged whilst being stowed	3
							USF020E	The stowage of the appliance should support preferred equipment grouping and locker locations that best support workflow as described in Appendix 3: Equipment List.	4
							USF020F	The stowage should be able to be reconfigured to futureproof the appliance and support future changes in stowage policy	3
							USF020G	The equipment stored on the appliance should be stowed in a manner that will reduce the likelihood of injury to the person retrieving or stowing i.e. All equipment stored more than 500mm reach into a locker/compartment should be to be able to be presented on a moveable stowage system Manufacturer to describe the use of ergonomic standards and smart stowage (i.e. Heavy equipment stored down low)	3
							USF020H	The design of the locker/compartment and work areas need to support ergonomic storage of equipment	4
							USF020I	Any locker steps if fitted should be able to be stored out of the way and not create a trip/obstruction hazard	3
							USF020J	Getting on the roof to retrieve and use equipment should be minimised.	2
							USF020K	Any roof mounted equipment should be able to be operated / deployed by an automated system	3
							USF020L	The driver should be able to access their level 2 firefighting PPE and SCBA within a short step (approx. 1.5 metres) of where the pump controls are located/stowed	4
USF021	Yes	Yes	Yes	I want a stowage system that will easily open with one hand so that I am able to open or close lockers/compartments and move shelves and trays without having to put equipment on the ground	4.3	• Describe the operation of the of any sliding, tilting locker/compartments components and confirm whether they can be operated by one gloved hand. (USF021A) • Describe all stowage solutions proposed, include: - what extent are these solutions currently in use on existing fire appliances (USF021C) - what testing regimes the stowage system has gone through (USF021B and C)	USF021A	Any sliding or tilting trays or peg boards should be operable using one gloved hand.	3
							USF021B	Pull out trays need to be secured against vibration, normal operation of the appliance or any sudden violent movement, so as not to jam the locker/compartment doors	3
							USF021C	All stowage solutions need to have been thoroughly tested and proven	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
							USF021D	All equipment stowed in the lockers/compartments should be stowed in such a way as to prevent items from coming loose and jamming or damaging locker/compartment doors.	
USF022	N/A	N/A	Yes	I want to be able stow the medical kit in a clean, dry and easily accessible part of the vehicle so that I can access it quickly and ensure that it is hygienic and remain sterile	6.2	• Provide information about any special treatment for the stowage of the medical kit: (USF022A, B) - contamination prevention - is the area sealed? - what material is it made from - How to clean the locker/compartment • Provide information to support the location of the medical kit in your design.	USF022A	Stowage area for medical kit needs to be a fit for purpose clean area that can be kept free from contaminates. The location should be on the left side of the appliance.	3
							USF022B	The medical kit stowage area needs to be easily cleaned and drained	3
USF023	Yes	Yes	Yes	I want to be able to access the necessary equipment to do my job, so that I do not need to wait for a support vehicle	2.4	• Provide details of the proposed appliance's total usable locker/compartment volume, include: USF023A) - depth, height and width - height from the ground - location on the appliance - amount taken up by proposed stowage plan - Redundancy for addition regional or tactical items not on baseline equipment list - Breakdown of loading by each locker's weight • Confirm that items stowed externally (USF023B) - do not interfere with any of the appliance's functionality - operate within the maximum dimensions of the appliance	USF023A	The appliance should have usable storage space (approx. up to 0.5m³ and 100kg) above the baseline equipment stowage requirements, to support tactical/regional equipment needs.	3
							USF023B	Any equipment that is stowed externally is not to interfere with the operation of other functions and should operate within the defined maximum height and width limits	3
USF024	Yes	N/A	N/A	I want to be able to operate the pump free from exhaust fumes so that I can protect my health	3.8	• Provide details of the pump control panel/area in relation to the proposed appliance's exhaust. For guideline see appendix	USF024A	Exhaust outlet is located away from area that the pump operator is working in or the pump panel control area	3
USF025	Yes	N/A	N/A	I want to access feeder (supply) hose quickly so that I can easily secure a water source for my crew	10.4	• Provide detail of feeder hose stowage in relation to water inlets. Provide rationale for: - the design layout - impact on get to work time	USF025A	The appliance should support the feeder (supply) hose being able to be easily deployed from the appliance (e.g. transverse locker/compartment, hose bed or multiple feeder hose stowage areas.)	4
USF026	Yes	Yes	Yes	I want to have access to the correct equipment to support simple cleaning processes such as washing hands or the decontamination of BA sets and PPE at the scene after an incident.	4.7	• Provide details of any proposed hygiene station, outline: - functionality features e.g. wash station, warm water, compressed air, paper towels, soap, wipes, etc • Provide drawings, diagrams or video of the proposed solution including how it could be used to support cleaning and decontamination.	USF026A	The Appliance should have a decontamination station, with the ability for crew to wash their hands and support the decontamination process of personnel, BA sets and PPE at the scene	4
							USF026B	As part of the decontamination features the appliance should have a safe biohazard disposal repository capable of carrying an approximately 5 litre biohazard bags	2
USF027	Yes	N/A	N/A	I want to be able to lock the appliance cab with the engine running so that the appliance can be left secure on scene whilst still operating electrics or pumping equipment	1.5	• Confirm whether the appliance cab can be locked with the engine running and pump or electrical equipment operating. Describe features and operation of the proposed solution.	USF027A	Ability to lock the cab, yet keep the engine running with the cab secured.	2
USF028	N/A	N/A	Yes		12.5		USF028A	The ladder should be easily unlatched and latched (securing system) by one person, preferably by a power assisted system	1

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
				I want to be able to easily deploy ladder/s at an incident so that I can quickly access hard to reach areas		• Provide detail of how the ladders specified in the equipment list will be carried and how they can be loaded and unloaded from the appliance. • Confirm that the any ladder gantry stows the ladder in compliance with the ladder manufacturer's requirements. • Provide details (drawings, models video, etc) confirming the operation of roof mounted equipment whilst unloading/restowing ladders. Outlining any compatibility issues with the simultaneous use. • Provide detail of the space required around the appliance to access and deploy the rescue ladder • Confirm what the maximum height of the highest point of the ladder or gantry is above ground when loading and unloading the rescue ladder	USF028B	The ladder should be easily removed from and returned to the bracket by 2 people at ergonomic height at a safe and smooth speed	4
							USF028C	When deploying the ladder, the operating height should not exceed maximum height of 4.4m during deployment and re-stow (4.4m = accommodates low hanging residential power lines)	4
							USF028D	The ladder should be able to be deployed in an area no greater than the length of the stowed ladder from the rear of appliance or within 1 metre of the side	2
							USF028E	The ladder stowage should be compatible with the use of other rooftop equipment (e.g. monitor, lighting tower, etc) when stowed or deployed	3
							USF028F	Ladder should be protected from catching on overhead hazards (i.e. low tree branches)	1
							USF028G	The deployment of the ladder should not obstruct access to lockers/compartments	4
							USF028H	The ladder should be able to be unloaded from the appliance in under one minute	2
USF028 (464 ladder)	N/A	N/A	Yes	I want to be able to easily deploy 464 ladder at an incident so that I can quickly access hard to reach areas (464model 13.5m extension ladder per PC042)	12.5	• Provide detail of proposed appliance's ability to be configured to carry a 464 ladder, include: - details of what configuration would need to occur - space required to unload and re stow - the time required to unload and re stow • Confirm that the any ladder gantry stows the ladder in compliance with the ladder manufacturer's requirements. • Provide details (drawings, models video, etc) confirming the operation of roof mounted equipment whilst unloading/restowing ladders. Outlining any compatibility issues with the simultaneous use. • Provide details (drawings, models video, etc) confirming the operation of roof mounted equipment whilst unloading/restowing ladders. Outlining any compatibility issues with the simultaneous use.	USF028A	The ladder should be easily unlatched and latched (securing system), preferably by a power assisted system	1
							USF028B	The ladder should be easily removed from and returned to the bracket at ergonomic height at a safe and smooth speed	4
							USF028C	When deploying the ladder, the operating height should not exceed maximum height of 4.4m during deployment and re-stow (4.4m = accommodates low hanging residential power lines)	4
							USF028D	The ladder should be able to be deployed in an area no greater than the length of the stowed ladder from the rear of appliance or within 1 metre of the side	2
							USF028E	The ladder stowage should be compatible with the use of other rooftop equipment (e.g. monitor, lighting tower, etc) when stowed or deployed	3
							USF028F	Ladder should be protected from catching on overhead hazards (i.e. low tree branches)	1
							USF028G	The deployment of the ladder should not obstruct access to lockers/compartments	4
							USF028H	The ladder should be able to be unloaded from the appliance in under one minute	2
							USF028I	It should be possible to configure the appliance to carry a 464 ladder	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
USF029	Yes	Yes	Yes	I want to be able to be alerted to messages from the Communication Centre(ComCen) within a 30-metre radius from the appliance so that I can keep up to date with the situation	1.9	• Provide details of external audible and/or visible alert system to notify the crew of communications centre alerts that will be fitted as per the annex -ICT component installation requirements.	USF029A	The notification alarm needs to be audible and/or visible within a 30-metre radius of the appliance during emergency operations and in all lighting conditions.	3
USF030	Yes	Yes	Yes	I want to be able to communicate clearly with the ComCen without having to enter the appliance cab	1.2	• Provide information of the proposed appliance's ability to interface with FENZ's radio requirements as outlined in the ANNEX – ICT component installation requirements at the pump panel area	USF030A	The appliance needs to be interoperable with any current FENZ radio systems as listed in ANNEX - ICT component installation requirements i.e. remote handset, Routine and Priority buttons, and be accessible from pump controls	4
PRT Specific Requirements									
USF031	Yes	Yes	Yes	I want to have the availability of appliance mounted anchor points around the appliance so that I can assist in rope rescue and TIRFOR scenarios.	25.3	• Provide details (pictures, diagrams, photos) of the proposed appliance's anchor points including - where the anchor points can be provided around the appliance (USF031B, C, D) - the SWL (kg and kN) of the anchor points - compliance with the listed assessment criteria. - labelling • Provide details of how you would configure the proposed appliance's anchor points differently for a PRT or Pump variant include: - scene lighting coverage for anchor point location - anchor points in relation to appliance exhaust • Describe ability to conform with 21kN for lines rescue 2,500 kg for TIRFOR	USF031A	PRT Variant: Anchor Points are to be mounted on, and accessible from, a minimum of one point on all of sides of appliance (Front, rear and both sides). Side mounted anchor points between 0.5m and 1.5m high	2
							USF031B	PRT variant: Anchor points should sit flush to the appliance or have suitable protection to avoid personal injury when not in use	3
							USF031C	PRT variant: Anchor points are located clear of the pump operator work area	1
							USF031D	PRT variant: Anchor points are clearly identifiable, with safe working load clearly marked	4
							USF031E	PRT Variant: Location of anchor points and compliance with desired strength / capacity[15].	3
							USF031F	PRT Variant: Anchor point should be an enclosed loop and support lines rescue and the TIRFOR	4
							USF031H	PRT Variant: Anchor points should be covered by appliance scene lighting	3
							USF031I	PRT Variant: Anchor points should be clear of appliance exhaust	3
USF032	Yes	Yes	Yes	I want to have the ability (on a Pump Rescue Tender variant) to easily winch items without having to set up equipment or find a power source so that I can quickly respond in rescue situations.	8.2	• If provided show details of the proposed winch solutions, including: - mounting design - how the winch is powered - how easily is the winch able to be deleted - any implications of fitting the winch - if the winch can be moved and fitted on different points of the appliance provide details - details of the control system	USF032A	PRT variant: The PRT Variant should have an automated winch rated at 5 tonnes (12,000 lbs) in addition to the TIRFOR	3
							USF032C	PRT Variant: The winch should be able to be controlled from a safe operating position	4
							USF032D	PRT variant: Any winch solution offered should preferably be fitted with synthetic as opposed to steel cable	4

[15] Ferry lashing points are suitable to be used to meet this requirement

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Information Required	Assess ID	Assessment Criteria	Criteria Weight
							USF032E	PRT variant: The winch should be able to pull from the front and rear of the appliance	4
							USF032F	PRT variant: The winch could be able to pull from the side of the appliance.	2
USF033	Yes	Yes	Yes	I want the Pump Rescue Tender Variant to have enhanced scene lighting, so that I can perform technical tasks with the appropriate level of lighting	16.5	• Provide the specifications of the light level achieved by the lighting solution around the appliance - at ground level - vertically • The response will provide a lighting map of the solution for the PRT configuration	USF033A	PRT variant: The Pump Rescue Tender (PRT) configuration should have a scene light solution that can illuminate the area near the appliance to a higher level of brightness (LUX) than the standard configuration (for operation at rescue scenes i.e. MVA's, technical rescues)	4

3.5.4 Support and Warranty requirements

ID	Requirement	Weighting	Assessment Measurement
WS001	The appliance warranty should provide for key features of the appliance as per appendix	30	The warranty aligns with the projected life of the appliance, covering off key features and components as outlined in the warranty items appendix
WS002	The supplier confirms the proposed contract attached with RFP	40	Assessment of proposed changes to the draft contract
WS003	What level of service is the supplier offering for appliance availability based on the appendix	30	This will be assessed based on proposed SLA's as per contract. Also, in appendix 15 Ability to perform complex fault diagnosis: - Outline the process and support structure for complex faults - How they would do complex fault diagnosis remotely, or with our Service Agent to diagnose a potential product fault? What additional service guarantee/ service credits are offered? If something goes wrong with the appliance, it should be off the run for as short a period as practicable Parts required for servicing and repairs due to normal wear and tear and/or minor accidents when driving, and parts critical to the operation of the appliance must be readily available. Other parts required less frequently must be available in a timely manner and for the life of the appliance. What support will be available i.e. 24/7 availability for first level support, level of secondary support, factory support, design support etc

3.5.5 Value for money assessment

See the pricing information section.

3.6 Stage Three: Hands – on Assessment/ Site Visits / Customer References

The purpose of Stage Three is to gather sufficient evidence that the supplier has the capability to deliver their proposal. Stage Three involves weighted assessment criteria being scored by the evaluation panel, or their agent, for a maximum of 5 suppliers. There will be multiple options for the conducting of assessments at Stage Three, and the exact nature of the assessment will be decided upon at the end of Stage Two based on how the COVID-19 global pandemic is affecting travel at the time.

Fire and Emergency NZ may also choose to delay the start of Stage Three by up to 12 months to allow for a consistent approach to be taken with all respondents at our sole discretion.

If a Respondent short-listed for Stage Three does not have a candidate appliance for testing, for example the supplier is proposing a new model appliance, or is designing the appliance to meet the requirements specifically, the default position for assessment will be a combination of Options Two and Three to enable an even assessment.

Option One – Fire and Emergency conducting all Stage Three directly

For some components of Stage Three the evaluation panel, will split into sub-evaluation groups to further evaluate based on their specialisation and subject matter expertise. These sub-evaluation teams will only score the sections in which they were involved and share those scores with the whole panel during Stage Three moderation.

Factory Safety Inspection and Site Assessment

The Factory Sub-Evaluation Panel, will conduct site visits to assess health and safety standards and inspect production lines to assure themselves that the quality of proposal matches the quality of production. This will also inspect and assure Fire and Emergency NZ that Health and Safety obligations are being met.

Test Drives

The Test-Drive Sub-Evaluation Panel will conduct a hands-on assessment to inspect proposed appliances and test-drive the appliance to assess the ergonomics and to ensure that the Respondent proposal is consistent with their user experience.

Customer Reference Checks

Reference Checks with current customers will be conducted at Stage Three with the results shared with the Evaluation panel.

Option Two: Agent conducts hands-on Assessment and Site Visits

If at the end of Stage Two, Fire and Emergency NZ decide that it is untenable to conduct Stage Three via in-person travel to the Respondent Sites, a testing agent may be employed to conduct the assessment.

In this instance, the agent will conduct the hands-on assessment as if they are the Evaluation panel. For the Site Visits and Factory Tests, the agent will use tests and assessments approved by Fire and Emergency NZ, which map back to the high-level weightings and criteria for this Stage.

The Evaluation Panel would still conduct Customer Reference Checks with the Respondents virtually.

Following the agent reports and scoring being presented to the Evaluation Panel, with the customer reference checks, the Evaluation Panel will recommend the Suppliers based on their final scores for this Stage.

Option Three: Partial Hands-On Assessment and Supplier Presentations

If it becomes apparent that some hands-on assessment could be undertaken, a hybrid option may be selected. This would allow for one or other of the following testing to be undertaken by Fire and Emergency NZ directly:

- Testing of individual componentry (e.g. Pump) through all Respondents sending this component to New Zealand for testing
- Testing of similar appliances locally (e.g. Cab and Chassis)
- Allowing for travel to Australia to test drive similar Respondent appliances, or best fit, provided a trans-Tasman travel arrangement is reached.
- All Respondents sending a Commercial off the Shelf (COTS) appliance to New Zealand for testing.

The COVID-19 pandemic means that Fire and Emergency NZ will need to be flexible in its assessment methodology for this option. Whilst the overall weighting for this component will not change, Fire and Emergency NZ will reserve the rights to alter the assessment to fit with one or more of the options above in order to conduct the hands-on assessment.

The Customer Reference Checks will remain unchanged in this option, and the Site Visits, may be able to be conducted by either an Agent or Fire and Emergency NZ under this approach. However, in order to ensure consistency, a lowest common denominator approach to assessment will be maintained. For instance, if not all suppliers can provide an appliance or component for testing, within the agreed timeframe, Fire and Emergency NZ will reserve the right to substitute this testing for another option (e.g. the agent option) or to not undertake the hands-on assessment.

Supplier Presentations

These will be used to assess some of the hands-on assessment of the appliance via a show and tell (virtual tour of the appliance). Respondents will be given instructions on the content required of the presentations so that it maps to the high-level assessment criteria so that the Evaluation Panel can score this component for any part that is unable to be tested per one of the options above.

Option Four: No hands-on Assessment (all Presentation/Virtual based)

If it is untenable for either an agent or Fire and Emergency NZ to conduct any hands-on assessment for all of the respondents, then Fire and Emergency NZ will substitute Supplier Presentations for both the Site/Factory Visits and the hands-on Assessment. The respondents will be notified of this and will be expected to provide virtual 'walk-throughs' and 'tours' of their solution and factory for Fire and Emergency NZ to review. Collateral to demonstrate their Site safety will also be requested from respondents. Customer Reference Checks will remain unchanged.

Moving from Stage Three to Stage Four

Stage Three scores are then applied to the Stage Two results on a 25% Stage Three and 75% Stage Two split. This may alter the rank.

We will take the top two suppliers through to Stage Four - Appliance Testing and relevant contract negotiation with each supplier contracting for a pump and PRT appliance i.e. four appliances in total.

However, if the proposals result in the same underlying appliance, being put forward by two separate respondents, and these are the top two proposals, Fire and Emergency NZ will reserve the right to

take the first and third ranked appliances through to trial phase so as to test the widest variety of top-scoring appliances available.

The bottom three respondents will be assessed at this point and if the results of Stage Three show no concerns they may be added to the second tier of the panel. A condition of joining this tier of the panel may be a no-negotiation or minimal negotiation approach to the panel agreement.

Considerations Before Stage Four

Fire and Emergency NZ intends to take the top two suppliers through to Stage Four - Appliance Testing and relevant contract negotiation. However, depending upon the options which were proposed in the supplier responses, the Evaluation Panel may need to recommend to the Working Group, Project Owner, and Sponsor, the following items:

- Whether or not to take any PRT variants through to appliance trials,
- Whether or not to take 2 or 3 suppliers through to appliance trials; and
- Whether or not to take a combination of the above through to appliance trials.

This is because Fire and Emergency NZ does not wish to anticipate what solutions the Suppliers may propose. If the successful responses negate the need for a variant structure, Fire and Emergency ENZ may wish to trial a different set of appliances accordingly. Leaving this decision until the end of Stage Three affords Fire and Emergency NZ the flexibility to decide based upon the scored responses and the respective appliance options proposed.

The final recommendation will allow for negotiation of Tier One Panel contracts, and for candidate appliances to be delivered for testing.

3.6.1 User Stories for Qualitative Evaluation

Hands-on assessment and experiential User Stories

Due to the optionality for assessing this Stage, the following hands- on Assessment questions are example questions that Fire and Emergency NZ would look to ask directly, or incorporate into an agent's battery of testing. The exact questions and assessment options will be confirmed with Stage Three finalists prior to that stage commencing.

These will be used in addition to the review of requirements assessed during stage two

Sample Qualitative Evaluation Structure

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
US3001	Yes	Yes	Yes	I want to be able to enter and exit the cab in all conditions and times of the day while wearing full fighter gear, so that I do not injure myself and can get to the incident quickly	11	US3001A	All steps and grab handles should be coloured to contrast with the surrounding appliance body so that the location and position of the step / grab handle is easily identifiable	4
						US3001B	All cabin door handles should be robust and positive to operate	4
						US3001C	Any cab overhead locker should not present an impact hazard when open	3
						US3001D	Breathing Apparatus release mechanism should be ergonomic and easy/positive to operate and maintain	3
US3002	Yes	Yes	Yes	I want to be able to easily clean and decontaminate the cab area including seats so that I can minimise my exposure to carcinogens and other contaminants	6	US3002A	All stowage containers should be easily cleaned and decontaminated	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
US3003	n/a	Yes	Yes	I want to be able to stow a self-contained breathing apparatus in my seat so that I can reduce the time taken to get work at an incident	5	US3003A	The SCBA set should be stowed in a way that minimises the chance of damage to the set or injury to the user, when releasing or stowing it	4
US3004	Yes	Yes	Yes	As a crew, we want to be able to clearly communicate so that we can receive, make and clarify all instructions related to the incident en-route so that everyone is prepared when they arrive	5	US3004A	The airhorn should to be located in a position that is well insulated from the cab	4
US3005	Yes	N/A	N/A	The driver to be able to clearly see around the outside of the appliance while driving, so that I can safely manoeuvre it	8	US3005A	The appliance should have effective blind spot management including windscreen wiper arc that caters for the officer	4
						US3005B	The appliance needs to have effective mirrors that minimise blind spots	4
						US3005C	The appliance should have a windscreen that is designed to improve vision around the A pillar for firefighters of varying heights	4
US3006	Yes	Yes	Yes	I want to see in the direction of travel from all seats so that I can assess the conditions as well as see out the nearest side window to minimise the effects of motion sickness	4	US3006a	Sightlines need to be clear and the supplier has allowed adequate space for rear passenger visibility	4
						US3006B	The crew should be able to see out of the side windows	4
US3007	Yes	Yes	Yes	I want to be able to sit comfortably for the duration of the journey so that I minimise the	4	US3007A	The seat height should be adjustable to accommodate fire fighters of varying size	3

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
				effects of fatigue and reduce the chance of injury preferably with an option of user adjustment		US3007B	The seat should be designed to not catch on the top of the firefighter's level 2 boots	1
						US3007C	The seat should be adjustable to support the lumbar area	3
						US3007D	The seat should be well designed and appropriately padded for journeys of greater than one hour	3
US3008	Yes	Yes	N/A	I want the controls for the LMR, siren, airhorn and beacons to be easy to access, use and see in all lighting conditions without them getting in the way of other tasks in the cab, so I can react efficiently and reduce the chance of the controls getting accidentally bumped	4	US3008A	The lights and siren controls should be mounted in a position where they are able to be controlled by the officer or the driver without having to stretch, overreach or lean forward	4
						US3008B	The driver could be able to operate the lights, sirens and horn without taking their hands off the steering wheel	4
						US3008C	All light and siren controls should be laid out ergonomically	4
US3009	Yes	Yes	N/A	I want to be able to use the LMR, phone or mobility devices from either of the front seats of the fire appliance	1	US3009A	The crew should be able to receive and read messages from Communication Centre, LMR when in the appliance.	3
US3010	N/A	Yes	Yes	The crew want to be able to read maps or documentation clearly regardless of ambient light levels so that I do not strain my eyes, with minimum driver distraction.	3	US3010A	Precise directional lighting for the front passenger seat occupant (Officer)	3

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
US3011	Yes	Yes	Yes	I want to be able to identify risks or hazards before exiting the appliance regardless of which door I use, so that I can safely make a risk assessment before opening the door (including step lighting)	9	US3011A	The sight lines of the occupants should allow them to clearly identify hazards/obstructions when alighting from cabin	3
						US3011B	There should be a clear line of sight from the cabin to ground next to cab	2
US3012	Yes	Yes	Yes	I want a tool that allows me to illuminate numbers on properties in all light conditions from the cab, so that I can find the physical address of an incident	2	US3012A	The "letterbox light" could be able to be targeted and the focus controlled from inside the cab	3
US3013	N/A	Yes	N/A	I want to be able to start the role of officer in charge as soon as I arrive at an incident so that I can take control efficiently	3	US3013A	The front passenger seat (officer's seat) should have good forward and side vision	4
						US3013B	The officer's PPE or other uniform should be easily accessible from the cab	3
						US3013C	The officer should be able to access their BA set in the least amount of time practicable	3
US3014	N/A	Yes	Yes	I want to be able to store Level 2 Structural Firefighting PPE that I am not wearing in an area out of the way so that I can sit comfortably when travelling in the appliance.	3	US3014A	The stowage space next to the officer and firefighter should be well designed, planned out and ergonomic. (Supporting storage of items on the equipment list)	4
						US3014B	Any area of the cab should be able to be accessed so it can be easily cleaned.	4
US3015	N/A	Yes	Yes	I want the cab storage space to be effective, secure and ergonomic so that items are stored in a way that is practical and considered	2	US3015A	The storage areas in the cab should be well ergonomically designed and laid out based on identified workflow	3

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
US3016	Yes	Yes	Yes	I want to be able to easily lock and unlock the appliance so that it can be left secured and accessed quickly as required	2	US3016A	There should be a failsafe option should the crew get locked out of the cabin	3
US3017	Yes	N/A	N/A	I want to be able to control the scene lights from either the cab or the pump so that I don't need to leave my work area	5	US3017A	The in-cab scene light controls should be within easy reach of the officer and the driver	2
US3018	Yes	Yes	N/A	(If fitted) I want to be able to use the external radio (any function, buttons, knobs, etc.) with my gloves on so that I can safely make and respond to radio calls	1	US3018A	The external radio controls should be accessible and controllable whilst wearing level 2 PPE	2
US3019	Yes	N/A	N/A	I want to have safety overrides so that I can safely and quickly throttle down and/or quickly disengage the pump.	8	US3019A	The throttle control mechanism needs to be robust and able to withstand normal wear and tear	4
US3020	Yes	N/A	N/A	I want a pressure control management system to prevent damage to the pump, hoses or personnel operating the hoses.	8	US3020A	The pressure control system should be well designed and intuitive to use, set, engage, and disengage	4
						US3020B	The pressure control system should be able to function through the entire range of the pumps capacity	4
						US3020C	The pressure control system will prevent over-pressurising of deliveries if deployed, or there is a sudden change in the pressure of any of the delivery outlets	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
US3021	Yes	N/A	N/A	I want to be able to see how much water is in the onboard tank with the least latency possible so that I know how much water I have	8	US3021A	Any water indicator needs to be easily cleaned and protected from normal operating conditions, and should not foul quickly	3
US3022	Yes	N/A	N/A	I want to access the feeder (supply) hose quickly so that I can easily secure a water source for my crew	6	US3022A	The feeder (supply) hose should be easily deployed and restowed	4
						US3022B	The hose should be stowed in a way that reduces the risk of damage to the hose	4
US3023	N/A	Yes	Yes	I want to find task-based equipment that I need in one place when I arrive at an incident, so that I am most efficient and minimise the get to work time. ("one locker, one job" as far as practicable)	11	US3023A	The solution should support Fire and Emergency locker lighting standards and the ability for firefighters to see into lockers in all ambient lighting conditions	4
						US3023B	Ease of access to the locker module will be assessed during testing	4
						US3023C	Locker doors / roller shutters are to be robust and easy to open / close one handed	4
						US3023D	Solution has an innovative use of space, equipment can be stored at a height relevant to weight of the equipment, with ergonomic retrieval systems	4
US3024	Yes	Yes	N/A	I want to be able to easily produce foam from the pump so that firefighting tactics can be varied	5	US3024A	The foam system should be simple and quick to operate, adjust percentages and supported flows Intuitive usability adjustability pre-set options (e.g. vegetation, car, structure	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
							fire settings, percentages 0.1 - 3.0%) ease of ability to refill the foam tank while pumping overall capacity	
						US3024B	It should be possible to flush the foam system after use so that firefighters can ensure that there is no unwanted foam discharge at any time.	4
US3025	Yes	Yes	Yes	I want to be able to access and retrieve equipment in the lockers with minimum risk of ergonomic injury so that I can safely do my job	6	US3025A	Able to retrieve all stowed equipment without having to stretch while lifting or over-reaching	2
US3026	Yes	Yes	Yes	I want to be able to work in and around the appliance in all ambient lighting conditions so that I can see what I am doing	2	US3026A	The working lights are angled and set to not dazzle users when approaching appliance	4
US3027	Yes	N/A	N/A	I want to be able to monitor the entry control board and keep time when I am operating the pump so that I can perform my tasks efficiently	4.5	US3027A	The Entry Control Board should be easily and quickly deployable on arrival	4
US3028	Yes	Yes	Yes	I want to be able to access the necessary equipment for the appliance's role, so that I do not need to wait for a support appliance	4.5	US3028A	Equipment specified in equipment list should be stowed in a way that is easily accessible on the appliance	2
US3029	Yes	Yes	Yes	I want to have the ability (on a Pump Rescue Tender variant) to easily winch items without	4.5	US3029A	PRT variant: The winch can be easily moved between the front and rear of the appliance	4

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
				having to set up equipment or find a power source so that I can quickly respond in rescue situations.				
US3030	Yes	N/A	N/A	I want to have hose inlets and outlets on three sides of the appliance (left, right and rear) and possibly the front, so that I can establish hose lines at a safe location	4.5	US3030A	Hose Outlets could be fitted to the front and rear of the appliance	2
						US3030B	The manufacturer should demonstrate a track record of providing reliable solutions	1
US3031	Yes	N/A	N/A	I want to able operate the pump from a safe location so that I am clear of hazards	11	US3031A	Ability to control the pump from a position where feeder and delivery hoses are visible	4
						US3031B	Operated from a position that is deemed the least hazardous by the pump operator	4
						US3031C	Controls are clear and easy to use in all environments	3
US3032	N/A	Yes	N/A	I want to be able to have access to an onboard water supply to meet my crews needs until an external water supply has been established	5	US3032A	The tank water supply supports a quick get to work and can be managed to meet tactical needs	2
US3033	Yes	Yes	Yes	I want to be able to safely open and close the cab doors with a minimum risk of them swinging open/closed on me so that I am not injured	2	US3033A	The doors can be opened and closed with the minimal amount of effort	4
						US3033B	The door stay should secure the door at a series of opening increments	4
US3034	Yes	N/A	Yes	The ability to fill the tank from a number of sources will be evaluated during due diligence	2	US3034A	The tank could be able to be filled from an external water supply without couplings (i.e. garden hose)	3

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story	Weight	Assess ID	Assessment Criteria	Criteria Weight
US3035	N/A	N/A	N/A	The placement and effectiveness of the appliances audible, and visual warning systems will be assessed during due diligence	3	US3035A	The appliance's lights and sirens package should be fit for purpose	4
US3036	N/A	N/A	N/A	The ability to recover should a pump throttle control fail	9	US3036A	Review manual override	4
US3037	N/A	N/A	N/A	Daily Inspection Access. Actions, including engine oil checking, transmission oil checking, windscreen washer refilling, checking fuses and batteries etc, should be via access that does not require the cab to be tilted	4	US3037A	Perform Inspections	3
US3038	Yes	N/A	N/A	I want to be able to operate the foot pedals of the appliance regardless of the size of my feet, so that I can drive safely in whatever footwear I select (work boots and structural firefighting boots)	3	US3038A	The appliance should have adequate clearance around accelerator and brake pedals (size, total width of the foot well area and the measurements of each pedal's centreline to the nearest obstruction (e.g. steering column, door map pockets, trim, cowling)	3
US3039	Yes	Yes	Yes	I want the design of the appliance to be forward thinking so that I know that the designers have considered the changing nature of my role	11	US3039A	Does the proposal outline any innovation that wasn't identified in our requirements?	4

3.6.2 Supplier Factory Site Visit

Sample of Factory Visit evaluation assessment

ID	Requirement Area	Weight	Assessment Criteria	Criteria Weight
FV001	Health and Safety	TBD	Supplier can demonstrate Health and Safety plans, compliance and management practices. i.e. Compliance manuals, hazards registers, accident logs and compliance with local guidelines	TBD
FV002	Equipment Certification	TBD	Supplier can demonstrate compliance and testing regimes for key equipment e.g. Lifting equipment, cutting and welding equipment, key testing tools, electrical equipment, etc	TBD
FV003	Environmental policy	TBD	Supplier can demonstrate spill containment and environmental plans to a high standard	TBD
FV004	Quality Assurance	TBD	Supplier can demonstrate compliance with international standards and ability to identify and manage manufacturing faults	TBD
FV005	Production Capacity	TBD	Supplier is able to demonstrate ability to produce required number of units in accordance with their proposal	TBD
FV006	Facilities and storage of partially completed appliances	TBD	Supplier is able to demonstrate that key components will not be exposed to the elements during assembly, that partially completed appliances will be secure	TBD
FV007	Employee qualifications	TBD	Supplier is able to demonstrate the qualifications of key staff i.e. engineering qualifications, current weld tickets etc	TBD
FV008	Public Liability Policy	TBD	Supplier able to demonstrate public liability policy	TBD
FV009	Stores	TBD	Supplier is able to demonstrate inventory management system and how inventory is tracked to the job	TBD

3.6.3 Customer Site Visit

Sample of evaluation areas for customer visits

ID	Requirement Area	Weight	Assessment Criteria	Criteria Weight
CV001	Customer Service	TBD	How has the customer found dealing with the supplier? Has the supplier been responsive to their needs? What has the quality of the aftersales service been like	TBD
CV002	Wear and Tear	TBD	How has the appliance held up during its service? Does the appliance condition fairly reflect the age and use of the appliance? How have key pieces of equipment performed	TBD
CV003	Training and implementation	TBD	What has the quality of the training been like	TBD
CV004	Ease of servicing	TBD	What is the quality of access for key components that require regular servicing. (The appliance should be able to be serviced without requiring significant deconstruction of the appliance.)	TBD

3.7 Stage Four – Appliance Trial

Appliance Trial

A key element when using design thinking is the operational trial and testing phase. It is important to Fire and Emergency NZ that due to the long nature of this future partnership that any appliance is field tested by our users prior to final selection. User Surveys will be conducted, and data will be collected, to determine how these trial appliances have performed. Some of the feedback from these surveys will be incorporated in in the final co-design phase.

Support and Maintenance Assessment

The Fleet Management team will also use the data to assess the supportability of the appliances during the trial phase as a comparison with other appliances within their first year of service. This also allows Fire and Emergency NZ to assess the performance of the New Zealand based Service Agent.

Collaboration and Partnership

Getting the final appliance right is important to Fire and Emergency NZ and ensuring that we utilise the feedback we've received to improve is equally as important. Therefore, we will be scoring the final Respondents on how well they work with Fire and Emergency NZ during this phase.

Best and Final Offer

Following the trial phase taking into account the user feedback, supportability information and co-design of the final appliances, Fire and Emergency NZ will ask for and assess the Best and Final Offer for the finalised appliance.

The score for Stage Four will stand alone from all the other assessment.

3.7.1 Operational Trial Survey questionnaire (sample)

End User Surveys will be based on the role of the survey recipient

Sample survey questionnaire questions

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4001	Yes	Yes	Yes	I want to be able to enter and exit the cab in all conditions and times of the day while wearing full fighter gear, so that I do not injure myself and can get to the incident quickly
US4002	Yes	N/A	N/A	I want to be able to configure the seating position, mirrors and steering wheel to fit me from the driving position, so that I can safely and comfortably operate the appliance
US4003	Yes	Yes	Yes	I want to be able to easily clean and decontaminate the cab area including seats so that I can minimise my exposure to carcinogens and other contaminants
US4004	n/a	Yes	Yes	I want to be able to stow a self-contained breathing apparatus in my seat so that I can reduce the time taken to get work at an incident
US4005	Yes	Yes	Yes	As a crew, we want to be able to clearly communicate so that we can receive, make and clarify all instructions related to the incident enroute so that everyone is prepared when they arrive
US4006	Yes	N/A	N/A	The driver to be able to clearly see around the outside of the appliance while driving, so that I can safely manoeuvre it
US4007	Yes	Yes	Yes	I want to see in the direction of travel from all seats so that I can assess the conditions as well as see out the nearest side window to minimise the effects of motion sickness
US4008	Yes	Yes	Yes	I want to be able to sit comfortably for the duration of the journey so that I minimise the effects of fatigue and reduce the chance of injury preferably with an option of user adjustment
US4009	N/A	Yes	N/A	I want to have an unobstructed view to the exterior of the appliance so that I can be aware of the surrounds and potential risks/hazards

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4010	Yes	Yes	N/A	I want the controls for the LMR, siren, airhorn and beacons to be easy to access, use and see in all lighting conditions without them getting in the way of other tasks in the cab, so I can react efficiently and reduce the chance of the controls getting accidentally bumped
US4011	Yes	Yes	Yes	I want to be able to travel in the cab of the appliance when responding (using lights, sirens and airhorns) without being required to wear hearing protection
US4012	Yes	Yes	Yes	I want to be able to easily reach vital equipment whilst seated and wearing a seatbelt, so that I can safely do my job on the way to and from an incident
US4013	Yes	Yes	N/A	I want to be able to use the LMR, phone or mobility devices from either of the front seats of the fire appliance
US4014	N/A	Yes	Yes	The crew want to be able to read maps or documentation clearly regardless of ambient light levels so that I do not strain my eyes, with minimum driver distraction.
US4015	Yes	Yes	Yes	I want to be able to identify risks or hazards before exiting the appliance regardless of which door I use, so that I can safely make a risk assessment before opening the door (including step lighting)
US4016	Yes	N/A	N/A	I want to be made aware of which doors or lockers are not securely closed so that I can easily rectify the problem
US4017	Yes	Yes	Yes	I want a tool that allows me to illuminate numbers on properties in all light conditions from the cab, so that I can find the physical address of an incident
US4018	N/A	N/A	Yes	I want to be able to store and access chilled drinking water for the crew so that we can stay hydrated
US4019	N/A	Yes	N/A	I want to be able to start the role of officer in charge as soon as I arrive at an incident so that I can take control efficiently
US4020	Yes	N/A	N/A	I want to be able to operate the foot pedals of the appliance regardless of the size of my feet, so that I can drive safely in whatever footwear I select (work boots and structural firefighting boots)

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4021	N/A	Yes	Yes	I want to be able to store Level 2 Structural Firefighting PPE that I am not wearing in an area out of the way so that I can sit comfortably when travelling in the appliance.
US4022	N/A	Yes	Yes	I want the cab storage space to be effective, secure and ergonomic so that items are stored in a way that is practical and considered
US4023	Yes	Yes	N/A	I want to be able to easily demist my mirrors from the driver's position so that I can safely manoeuvre the appliance
US4024	Yes	Yes	Yes	I want to be able to easily lock and unlock the appliance so that it can be left secured and accessed quickly as required
US4025	Yes	N/A	N/A	I want to be warned if the appliance's scene lights are on when the appliance is moving
US4026	Yes	N/A	N/A	I want to be able to control the scene lights from either the cab or the pump so that I don't need to leave my work area
US4027	Yes	Yes	N/A	I want to be able to use the external LMR (any function, buttons, knobs, etc.) with my gloves on so that I can safely make and respond to radio calls
US4028	N/A	N/A	N/A	The pump should have the capacity to feed the riser mains of a building and release the residual pressure after use
US4029	Yes	N/A	N/A	I want to have safety overrides so that I can safely and quickly throttle down and/or quickly disengage the pump.
US4030	Yes	N/A	N/A	I want to be able to control the flow and /or pressure to outlet with the ability to choose the water source so that I can complete my water delivery safely
US4031	Yes	N/A	N/A	I want a pressure control system to prevent damage to the pump, hoses or personnel operating the hoses.
US4032	Yes	Yes	Yes	I want to be able to deploy a firefighting attack medium such as a monitor (Roof mounted / ground) that is supplied from the onboard water tank at an incident so that I can quickly control a situation
US4033	N/A	N/A	N/A	The appliance supports supplying the FENZ type 5 aerial appliance at optimal capacity

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4034	Yes	N/A	N/A	I want to be able to see how much water is in the onboard tank with the least latency possible so that I know how much water I have
US4035	N/A	N/A	Yes	I want to be able to easily deploy all ladder/s at an incident so that I can quickly access hard to reach areas
US4036	Yes	N/A	N/A	I want to access the feeder (supply) hose quickly so that I can easily secure a water source for my crew
US4037	N/A	N/A	Yes	The pump should be able to support the use of an ejector pump
US4038	N/A	Yes	Yes	I want to find task-based equipment that I need in one place when I arrive at an incident, so that I am most efficient and minimise the get to work time. ("one locker, one job" as far as practicable)
US4039	Yes	Yes	N/A	I want to be able to easily produce foam from the pump so that firefighting tactics can be varied
US4040	Yes	Yes	Yes	I want to have the availability of appliance mounted anchor points around the appliance so that I can assist in rope rescue and TIRFOR scenarios
US4041	N/A	N/A	Yes	I want to be able stow the medical kit in a clean, dry and easily accessible part of the appliance so that I can access it quickly and ensure that it is hygienic
US4042	Yes	Yes	Yes	I want to be able to access and retrieve equipment in the lockers with minimum risk of ergonomic injury so that I can safely do my job
US4043	Yes	Yes	Yes	I want to be able to work in and around the appliance in all ambient lighting conditions so that I can see what I am doing
US4044	Yes	N/A	N/A	I want to be able to perform specific tasks within close proximity of the pump control panel so that I can safely operate the pump controls
US4045	Yes	Yes	Yes	I want the equipment that I use most often to be stored or accessed from the left hand (kerbside) side of the appliance so that my exposure to traffic is minimised

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4046	Yes	N/A	N/A	I want to know what the flow rates are in all the hoses (incoming and outgoing) with the minimum amount of lag so that I can have accurate understanding of my water supply
US4047	Yes	N/A	N/A	I want to be able to monitor the entry control board and keep time when I am operating the pump so that I can perform my tasks efficiently
US4048	Yes	Yes	Yes	I want a stowage system that will easily open with one hand so that I am able to open or close lockers and move shelves and trays without having to put equipment on the ground
US4049	Yes	Yes	Yes	I want to be able to access the necessary equipment for the appliance's role, so that I do not need to wait for a support appliance
US4050	Yes	N/A	N/A	I want to be able to monitor the engine load when operating the pump so that I can operate the pump as effectively as possible
US4051	Yes	N/A	N/A	I want to be able to easily engage/disengage the pump at the pump panel so that I can use as needed
US4052	Yes	Yes	Yes	I want to have the ability (on a Pump Rescue Tender variant) to easily winch items without having to set up equipment or find a power source so that I can quickly respond in rescue situations.
US4053	Yes	Yes	Yes	I want to be able to communicate clearly with ComCen without having to enter the appliance cab
US4054	Yes	Yes	Yes	I want to be able to operate a appliance mounted monitor without being exposed to excessive appliance exhaust or noise, so that I can safely do my job
US4055	Yes	Yes	Yes	I want to be able to control the water flow of the appliance mounted monitor so that I can distribute water through other deliveries
US4056	Yes	Yes	Yes	I want to know that the appliance is safe as practicable and that there are safety features that will protect me in the event of a crash

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4057	Yes	N/A	N/A	I want to have hose inlets and outlet at useful point on the left and right-hand sides of the appliance (left, right and rear) and possibly the front, so that I can establish hose lines at a safe location
US4058	Yes	N/A	Yes	The pump needs the ability to supply multiple deliveries, of varying pressures
US4059	Yes	N/A	N/A	I want the appliance to be as manoeuvrable as practicable (this includes having the smallest practical turning circle) so that I can get to an incident quickly and safely while navigating the appliance through heavy traffic, narrow streets and tight angles
US4060	Yes	N/A	N/A	I want to able operate the pump from a safe location so that I am clear of hazards
US4061	Yes	Yes	Yes	I want to have access to the correct equipment (i.e. a wash station, warm water, compressed air, paper towels, soap) to support the decontamination process of BA sets and PPE at the scene
US4062	N/A	N/A	N/A	I want the appliance to have redundancy should any critical automated functions fail so that I can operate the systems
US4063	Yes	N/A	N/A	I want the pump to be able to operate at pressures and flows above the minimum specification
US4064	N/A	N/A	N/A	The tank should be plumbed to the pump to support the pumps maximum operating capacity
US4065	Yes	N/A	N/A	I want to be able to operate the pump free from exhaust fumes so that I can protect my health
US4066	Yes	N/A	N/A	As a pump operator, I want to be able to operate the pump in such a way that it prevents water hammer, so that I can protect my equipment, and anything attached to the pump
US4067	N/A	N/A	N/A	The ability for the appliance to relay information from its telemetry systems to fleet or any service agents
US4068	N/A	N/A	N/A	The non-slip surface coatings are of a good quality and is fit for purpose
US4069	Yes	N/A	N/A	I want to be warned of potential engine malfunction, oil pressure, overrevving or anything may cause the engine to fail while operating the appliance's pump

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4070	Yes	N/A	N/A	I want to be able to raise and lower rear suspension of the appliance so that I can reduce the distance between the appliance and ground to make it is easier to remove equipment from the appliance
US4071	Yes	N/A	N/A	I want to be able drive through flood water up to the centre of the front wheel hubs so that I can respond to natural disaster and flooding emergencies,
US4072	Yes	Yes	Yes	I want to be able to store my dirty PPE gear appropriately so that I don't contaminate the cab
US4073	Yes	N/A	N/A	The fire fighter needs to be able to expel air out the feeder (supply) hose before it hits the pump so that they can protect the pump from damage and / or airlocks
US4074	N/A	N/A	N/A	The pump operator should be able to operate the pump without the need for hearing protection
US4075	Yes	Yes	Yes	I want to be able to be alerted to messages from Communication Centre within a 30-metre radius from the appliance so that I can keep up to date with the situation
US4076	Yes	N/A	N/A	I want to be able to secure the appliance cab with the engine running so that the appliance can be left secure on scene whilst still operating electrics or pumping equipment
US4077	N/A	Yes	N/A	I want to be able to be able to have access to an onboard water supply to meet my crews needs until an external water supply has been established
US4078	Yes	N/A	N/A	I want to have access to driving aides such as engaging a differential lock so that I can improve my ability to operate on various road surfaces and in variety of weather conditions
US4079	Yes	Yes	Yes	I want to be able to alarm the appliance's lockers, and know if an unauthorised person attempts to gain access to them so that I can focus on my task rather than the appliance's security
US4080	Yes	Yes	Yes	I want the design of the appliance to be forward thinking so that I know that the designers have considered the changing nature of my role

ID	Driver/ Pump Operator	Officer	Fire Fighter	User Story
US4081	Yes	Yes	Yes	I want to be able to safely open and close the cab doors with a minimum risk of them swinging open/closed on me so that I am not injured
US4082	Yes	Yes	Yes	The interfaces will be tested during the due diligence phase of the project
US4083	N/A	N/A	N/A	As a firefighter responding to an incident, I want to be able to drive on a variety of road surfaces safely without stowed equipment coming loose.
US4084	N/A	N/A	N/A	The appliance should handle well, particularly in emergency response driving conditions, with minimal body roll and precise steering
US4085	N/A	N/A	N/A	The appliance should be able to clear obstacles in a simulated set of scenarios
US4086	Yes	N/A	N/A	I want to be able to assess the appliance against a number of real-world driving scenarios so that I can assess how the appliance will perform in everyday conditions
US4087	Yes	N/A	Yes	The ability to fill the tank from a number of sources will be evaluated during due diligence
US4088	N/A	N/A	N/A	The placement and effectiveness of the appliances audible, and visual warning systems will be assessed during due diligence
US4089	N/A	N/A	N/A	The ability to recover should a pump throttle control fail
US4090	N/A	N/A	N/A	Daily Inspection Access. Actions, including engine oil checking, transmission oil checking, windscreen washer refilling, checking fuses and batteries etc, should be via access that does not require the cab to be tilted (Supplier to ensure the standard of the cab/chassis as received is maintained).
US4091	N/A	N/A	N/A	The ability to connect to forestry hoses

3.8 Evaluation Due Diligence

In addition to the above, Fire and Emergency NZ may undertake the following process within our Due Diligence checking, in relation to shortlisted Respondents. The findings will be taken into account in the evaluation process. Should Fire and Emergency NZ decide to undertake any of these we will give shortlisted Respondents reasonable notice where input from the Respondent is required.

a. in addition to our rights in Section 6.6 of any RFP (Third Party Information), assessment of a Respondent's track record and past performance (if any) under any contract or arrangement you have had with Fire and Emergency NZ (previously NZFS) within the last five years

b. other checks against the Respondent, e.g. Companies Office

c. interview Respondents

d. inspect audited accounts for the last three financial years

e. undertake a credit check

f. undertake a Police check for all named personnel

g. A Fire Emergency Levy (FEL) check will be applicable for any contract that is over $1 million. The purpose of the FEL check is to ensure that any entity conducting business for or with or on behalf of Fire and Emergency New Zealand:

   - is meeting their obligations under the Fire Service Act 1975 and the Fire and Emergency New Zealand Act 2017;
   - that the correct amount of FEL is being received and
   - that the business is paying FEL based on an accepted method and complies with the law, i.e. it is not acceptable to engage in a collective policy or operate an excess of indemnity policy and reduced FEL payable.

3.9 Evaluation criteria

Proposals which meet all pre-conditions will be evaluated on their merits according to the following evaluation criteria and weightings.

Criterion	Weighting
1. Stage Two – response assessment (fit for purpose)	**100%**
Assessment of Functional and Technical User Stories	**(75%)**
Support and Warranty Requirements	**(15%)**
Customisation Assessment	**(10%)**
Total Cost of Ownership (Second Envelope)	**(N/A)**
2. Stage Three – Test Driving / Site Visits / Customer Implementations	**100%**
Testing (to assess written assessment is consistent with user experience of appliance.)	**(50%)**
Factory Visit (to assess health and safety standards)	**(15%)**
Customer site visits and Reference Checks	**(35%)**
3. Stage Four – Appliance Trial	**100%**

User Survey Responses	**(55%)**
Support and Maintenance assessment	**(25%)**
Collaboration/Co-Design Score	**(10%)**
BAFO (Post final Co-Design)	**(10%)**

3.10 Scoring

The following scoring scale will be used in evaluating Proposals. Scores by individual panel members may be modified through a moderation process across the whole evaluation panel.

Rating	Definition	Score
EXCELLENT significantly exceeds the criterion	Exceeds the criterion. Exceptional demonstration by the Respondent of the relevant ability, understanding, experience, skills, resource and quality measures required to meet the criterion. Proposal identifies factors that will offer potential added value, with supporting evidence.	**9-10**
GOOD exceeds the criterion in some aspects	Satisfies the criterion with minor additional benefits. Above average demonstration by the Respondent of the relevant ability, understanding, experience, skills, resource and quality measures required to meet the criterion. Proposal identifies factors that will offer potential added value, with supporting evidence.	**7-8**
ACCEPTABLE meets the criterion in full, but at a minimal level	Satisfies the criterion. Demonstration by the Respondent of the relevant ability, understanding, experience, skills, resource, and quality measures required to meet the criterion, with supporting evidence.	**5-6**
MINOR RESERVATIONS marginally deficient	Satisfies the criterion with minor reservations. Some minor reservations of the Respondent's relevant ability, understanding, experience, skills, resource and quality measures required to meet the criterion, with little or no supporting evidence.	**3-4**
SERIOUS RESERVATIONS significant issues that need to be addressed	Satisfies the criterion with major reservations. Considerable reservations of the respondent's relevant ability, understanding, experience, skills, resource and quality measures required to meet the criterion, with little or no supporting evidence.	**1-2**
UNACCEPTABLE significant issues not capable of being resolved	Does not meet the criterion. Does not comply and/or insufficient information provided to demonstrate that the Respondent has the ability, understanding, experience, skills, resource and quality measures required to meet the criterion, with little or no supporting evidence.	**0**

3.11 Price

We wish to obtain the best value-for-money over the whole-of-life of the Contract. This means achieving the right combination of fit for purpose, quality, on time delivery, quantity and price.

If a Respondent offers a price that is substantially lower than other Proposals (an abnormally low bid), the Buyer may seek to verify with the Respondent that the Respondent is capable of fully delivering all of the Requirements and meeting all of the conditions of the Proposed Contract for the price quoted.

3.12 Variants

Our requirements outline key differences between a pump and a PRT, we would like your response to identify a solution/s that meets these requirements, if you are proposing more than one variant of your appliance to meet requirements we would like to see as much commonality as practical, particularly that they:

- Are Built on a common platform
- Use the same make and model pump
- Share the same pump operational interface
- Are interoperable

SECTION 4: Pricing information

4.1 Pricing information to be provided by respondents

Respondents are to provide their price as part of their Proposal. In submitting the price, the Respondent must meet the following:

a. Respondents are to use the Response Form Part 2 – Price & Financial Information.

b. Where the price, or part of the price, is based on fee rates, all rates are to be specified, either hourly or daily or both as required.

c. Respondents are to document in their Proposal all assumptions and qualifications made about the delivery of the Requirements, including in the financial pricing information. Any assumption that the Buyer or a third party will incur any cost related to the delivery of the Requirements is to be stated, and the cost estimated if possible.

d. Respondents need to document where a Variant Appliance has different pricing and the impact each variation has on the overall pricing.

e. Please note that the evaluation review will not be based solely on lowest price but will take into consideration the whole-of-life costs which includes, but is not limited to, any additional costs plus other impacts including transition costs, if applicable.

f. Prices should be tendered in NZ$. Unless otherwise agreed, the Buyer will arrange contractual payments in NZ$.

g. Where a Respondent has an alternative method of pricing (i.e. a pricing approach that is different to the pricing schedule) this can be submitted as an alternative pricing model. However, the Respondent must also submit a pricing schedule that conforms.

h. Other Costs, such as Administration fees and other non-specific charges are not accepted by Fire and Emergency NZ. Any other costs anticipated to be charged must be listed for Fire and Emergency NZ consideration.

i. Fire and Emergency NZ does not have to accept any or all items and prices stated.

SECTION 5: Our Proposed Contract

5.1 Proposed Contract

Please refer to the proposed Contract which is provided as a separate document with this RFP.

In submitting your Proposal, you must let us know if you wish to question and/or negotiate any of the terms or conditions in the Proposed Contract or wish to negotiate new terms and/or conditions. The Response Form contains a section for you to state your position. If you do not state your position you will be deemed to have accepted the terms and conditions in the Proposed Contract in full.

SECTION 6: RFP Process, Terms and Conditions

Note to suppliers and Respondents

1. In managing this procurement the Buyer will endeavour to act fairly and reasonably in all of its dealings with interested suppliers and Respondents, and to follow due process which is open and transparent.
2. This section contains the government's standard RFP Process, Terms and Conditions (shortened to RFP-Terms) which apply to this procurement. Any variation to the RFP-Terms will be recorded in Section 1, paragraph 1.6. Check to see if any changes have been made for this RFP.
3. Words and phrases that have a special meaning are shown by the use of capitals e.g. Respondent, which means '*a person, organisation, business or other entity that submits a Proposal in response to the RFP. The term Respondent includes its officers, employees, contractors, consultants, agents and representatives. The term Respondent differs from a supplier, which is any other business in the market place that does not submit a Proposal*.' Definitions are at the end of this section.
4. If you have any questions about the RFP-Terms please email our Point of Contact.

Standard RFP process

Preparing and submitting a proposal

Preparing a Proposal

a. Respondents are to use the Response Form provided and include all information requested by the Buyer in relation to the RFP.

b. By submitting a Proposal the Respondent accepts that it is bound by the RFP Process, Terms and Conditions (RFP-Terms) contained in Section 6 (as varied by Section1, paragraph 1.6, if applicable).

c. Each Respondent will:

   c. examine the RFP and any documents referenced in the RFP and any other information provided by the Buyer

   d. consider all risks, contingencies and other circumstances relating to the delivery of the Requirements and include adequate provision in its Proposal to manage such risks and contingencies

   e. document in its Proposal all assumptions and qualifications made about the delivery of the Requirements, including any assumption that the Buyer or a third party will deliver any aspect of the Requirements or incur any cost related to the delivery of the Requirements

   f. ensure that pricing information is quoted in NZ$ exclusive of GST

   g. if appropriate, obtain independent advice before submitting a Proposal

   h. satisfy itself as to the correctness and sufficiency of its Proposal, including the proposed pricing and the sustainability of the pricing.

d. There is no expectation or obligation for Respondents to submit Proposals in response to the RFP solely to remain on any prequalified or registered supplier list. Any Respondent on such a list will not be penalised for failure to submit a Proposal.

Offer Validity Period

- Proposals are to remain valid and open for acceptance by the Buyer for the Offer Validity Period.

Respondents' Deadline for Questions

- Each Respondent should satisfy itself as to the interpretation of the RFP. If there is any perceived ambiguity or uncertainty in the RFP document/s Respondents should seek clarification before the Deadline for Questions.
- All requests for clarification must be made by email to the Buyer's Point of Contact. The Buyer will endeavour to respond to requests in a timely manner, but not later than the deadline for the Buyer to answer Respondents' questions in Section 1, paragraph 1.2.a, if applicable.
- If the Buyer considers a request to be of sufficient importance to all Respondents it may provide details of the question and answer to other Respondents. In doing so the Buyer may summarise the Respondent's question and will not disclose the Respondent's identity. The question and answer may be posted on GETS and/or emailed to participating Respondents. A Respondent may withdraw a request at any time.
- In submitting a request for clarification a Respondent is to indicate, in its request, any information that is commercially sensitive. The Buyer will not publish such commercially sensitive information. However, the Buyer may modify a request to eliminate such commercially sensitive information, and publish this and the answer where the Buyer considers it of general significance to all Respondents. In this case, however, the Respondent will be given an opportunity to withdraw the request or remove the commercially sensitive information.

Submitting a Proposal

i. Each Respondent is responsible for ensuring that its Proposal is received by the Buyer at the correct address on or before the Deadline for Proposals. The Buyer will acknowledge receipt of each Proposal.

ii. The Buyer intends to rely on the Respondent's Proposal and all information provided by the Respondent (e.g. correspondence and negotiations). In submitting a Proposal and communicating with the Buyer each Respondent should check that all information it provides to the Buyer is:

   c. true, accurate and complete, and not misleading in any material respect

   d. does not contain Intellectual Property that will breach a third party's rights.

iii. Where the Buyer requires the Proposal to be delivered in hard and soft copies, the Respondent is responsible for ensuring that both the hard and soft copies are identical.

iv. Where the Buyer stipulates a two envelope RFP process the following applies:

   1. each Respondent must ensure that all financial information and pricing components of its Proposal are provided separately from the remainder of its Proposal
   2. financial information and pricing must be contained either in a separate sealed envelope or as a separate soft copy file (whichever option has be requested by the Buyer)
   3. the pricing information must be clearly marked 'Financial and Pricing Information.' This is to ensure that the pricing information cannot be viewed when the package containing the other elements of the Proposal is opened.

Assessing Proposals

Evaluation panel

a. The Buyer will convene an evaluation panel comprising members chosen for their relevant expertise and experience. In addition, the Buyer may invite independent advisors to evaluate any Proposal, or any aspect of any Proposal.

Third party information

i. Each Respondent authorises the Buyer to collect additional information, except commercially sensitive pricing information, from any relevant third party (such as a referee or a previous or existing client) and to use that information as part of its evaluation of the Respondent's Proposal.

ii. Each Respondent is to ensure that all referees listed in support of its Proposal agree to provide a reference.

iii. To facilitate discussions between the Buyer and third parties each Respondent waives any confidentiality obligations that would otherwise apply to information held by a third party, with the exception of commercially sensitive pricing information.

Buyer's clarification

a. The Buyer may, at any time, request from any Respondent clarification of its Proposal as well as additional information about any aspect of its Proposal. The Buyer is not required to request the same clarification or information from each Respondent.

b. The Respondent must provide the clarification or additional information in the format requested. Respondents will endeavour to respond to requests in a timely manner. The Buyer may take such clarification or additional information into account in evaluating the Proposal.

c. Where a Respondent fails to respond adequately or within a reasonable time to a request for clarification or additional information, the Buyer may cease evaluating the Respondent's Proposal and may eliminate the Proposal from the RFP process.

Evaluation and shortlisting

1. The Buyer will base its initial evaluation on the Proposals submitted in response to the RFP. The Buyer may adjust its evaluation of a Proposal following consideration of any clarification or additional information as described in paragraphs 6.6 and 6.7.
2. In deciding which Respondent/s to shortlist the Buyer will take into account the results of the evaluations of each Proposal and the following additional information:
   - each Respondent's understanding of the Requirements, capability to fully deliver the Requirements and willingness to meet the terms and conditions of the Proposed Contract
   - except where the price is the only criterion, the best value-for-money over the whole-of-life of the goods or services.
3. In deciding which Respondent/s, to shortlist the Buyer may take into account any of the following additional information:
   1. the results from reference checks, site visits, product testing and any other due diligence
   2. the ease of contracting with a Respondent based on that Respondent's feedback on the Proposed Contract (where these do not form part of the weighted criteria)
   3. any matter that materially impacts on the Buyer's trust and confidence in the Respondent
   4. any other relevant information that the Buyer may have in its possession.
5. The Buyer will advise Respondents if they have been shortlisted or not. Being shortlisted does not constitute acceptance by the Buyer of the Respondent's Proposal, or imply or create any obligation on the Buyer to enter into negotiations with, or award a Contract for

delivery of the Requirements to any shortlisted Respondent/s. At this stage in the RFP process the Buyer will not make public the names of the shortlisted Respondents.

Negotiations

i. The Buyer may invite a Respondent to enter into negotiations with a view to contract. Where the outcome is unsatisfactory the Buyer may discontinue negotiations with a Respondent and may then initiate negotiations with another Respondent.

ii. The Buyer may initiate concurrent negotiations with more than one Respondent. In concurrent negotiations the Buyer will treat each Respondent fairly, and:

1. prepare a negotiation plan for each negotiation
2. advise each Respondent, that it wishes to negotiate with, that concurrent negotiations will be carried out
3. hold separate negotiation meetings with each Respondent.

iii. Each Respondent agrees that any legally binding contract entered into between the Successful Respondent and the Buyer will be essentially in the form set out in Section 5, the Proposed Contract.

Respondent's debrief

i. At any time after shortlisting Respondents the Buyer will offer all Respondents who have not been shortlisted a debrief. Each Respondent will have 30 Business Days, from the date of offer, to request a debrief. When a Respondent requests a debrief, the Buyer will provide the debrief within 30 Business Days of the date of the request, or of the date the Contract is signed, whichever is later.

ii. The debrief may be provided by letter, email, phone or at a meeting. The debrief will:

1. provide the reasons why the Proposal was or was not successful
2. explain how the Proposal performed against the pre-conditions (if applicable) and the evaluation criteria
3. indicate the Proposal's relative strengths and weaknesses
4. explain, in general terms, the relative advantage/s of the successful Proposal
5. seek to address any concerns or questions from the Respondent
6. seek feedback from the Respondent on the RFP and the RFP process.

Notification of outcome

i. At any point after conclusion of negotiations, but no later than 30 Business Days after the date the Contract is signed, the Buyer will inform all unsuccessful Respondents of the name of the Successful Respondent, if any. The Buyer may make public the name of the Successful Respondent and any unsuccessful Respondent. Where applicable, the Buyer will publish a Contract Award Notice on GETS.

Issues and complaints

a. A Respondent may, in good faith, raise with the Buyer any issue or complaint about the RFP, or the RFP process at any time.
b. The Buyer will consider and respond promptly and impartially to the Respondent's issue or complaint.
c. Both the Buyer and Respondent agree to act in good faith and use their best endeavours to resolve any issue or complaint that may arise in relation to the RFP.
d. The fact that a Respondent has raised an issue or complaint is not to be used by the Buyer to unfairly prejudice the Respondent's ongoing participation in the RFP process or future contract opportunities.

Standard RFP conditions

Buyer's Point of Contact

6 All enquiries regarding the RFP must be directed by email to the Buyer's Point of Contact. Respondents must not directly or indirectly approach any representative of the Buyer, or any other person, to solicit information concerning any aspect of the RFP.

7 Only the Point of Contact, and any authorised person of the Buyer, are authorised to communicate with Respondents regarding any aspect of the RFP. The Buyer will not be bound by any statement made by any other person.

8 The Buyer may change the Point of Contact at any time. The Buyer will notify Respondents of any such change. This notification may be posted on GETS or sent by email.

9 Where a Respondent has an existing contract with the Buyer then business as usual communications, for the purpose of managing delivery of that contract, will continue using the usual contacts. Respondents must not use business as usual contacts to lobby the Buyer, solicit information or discuss aspects of the RFP.

Conflict of Interest

a. Each Respondent must complete the Conflict of Interest declaration in the Response Form and must immediately inform the Buyer should a Conflict of Interest arise during the RFP process. A material Conflict of Interest may result in the Respondent being disqualified from participating further in the RFP.

Ethics

a. Respondents must not attempt to influence or provide any form of personal inducement, reward or benefit to any representative of the Buyer in relation to the RFP.

b. A Respondent who attempts to do anything prohibited by paragraphs 6.13.a. and d. and 6.15.a. may be disqualified from participating further in the RFP process.

c. The Buyer reserves the right to require additional declarations, or other evidence from a Respondent, or any other person, throughout the RFP process to ensure probity of the RFP process.

Anti-collusion and bid rigging

3 Respondents must not engage in collusive, deceptive or improper conduct in the preparation of their Proposals or other submissions or in any discussions or negotiations with the Buyer. Such behaviour will result in the Respondent being disqualified from participating further in the RFP process. In submitting a Proposal the Respondent warrants that its Proposal has not been prepared in collusion with a Competitor.

4 The Buyer reserves the right, at its discretion, to report suspected collusive or anti-competitive conduct by Respondents to the appropriate authority and to give that authority all relevant information including a Respondent's Proposal.

Confidential Information

g. The Buyer and Respondent will each take reasonable steps to protect Confidential Information and, subject to paragraph 6.17.c. and without limiting any confidentiality undertaking agreed between them, will not disclose Confidential Information to a third party without the other's prior written consent.

h. The Buyer and Respondent may each disclose Confidential Information to any person who is directly involved in the RFP process on its behalf, such as officers, employees, consultants, contractors, professional advisors, evaluation panel members, partners, principals or directors, but only for the purpose of participating in the RFP.

i. Respondents acknowledge that the Buyer's obligations under paragraph 6.17.a. are subject to requirements imposed by the Official Information Act 1982 (OIA), the Privacy Act 1993, parliamentary and constitutional convention and any other obligations imposed

by law. The Buyer will not be in breach of its obligations if Confidential Information is disclosed by the Buyer to the appropriate authority because of suspected collusive or anti-competitive tendering behaviour. Where the Buyer receives an OIA request that relates to a Respondent's Confidential Information the Buyer will consult with the Respondent and may ask the Respondent to explain why the information is considered by the Respondent to be confidential or commercially sensitive.

○ Confidentiality of RFP information

1. For the duration of the RFP, to the date of the announcement of the Successful Respondent, or the end of the RFP process, the Respondent agrees to keep the RFP strictly confidential and not make any public statement to any third party in relation to any aspect of the RFP, the RFP process or the award of any Contract without the Buyer's prior written consent.
2. A Respondent may disclose RFP information to any person described in paragraph 6.17.b. but only for the purpose of participating in the RFP. The Respondent must take reasonable steps to ensure that such recipients do not disclose Confidential Information to any other person or use Confidential Information for any purpose other than responding to the RFP.

○ Costs of participating in the RFP process

4 Each Respondent will meet its own costs associated with the preparation and presentation of its Proposal and any negotiations.

○ Ownership of documents

i. The RFP and its contents remain the property of the Buyer. All Intellectual Property rights in the RFP remain the property of the Buyer or its licensors. The Buyer may request the immediate return or destruction of any or all RFP documents and any copies. Respondents must comply with any such request in a timely manner.

ii. All documents forming the Proposal will, when delivered to the Buyer, become the property of the Buyer. Proposals will not be returned to Respondents at the end of the RFP process.

iii. Ownership of Intellectual Property rights in the Proposal remain the property of the Respondent or its licensors. However, the Respondent grants to the Buyer a non-exclusive, non-transferable, perpetual licence to retain, use, copy and disclose information contained in the Proposal for any purpose related to the RFP process.

○ No binding legal relations

iii. Neither the RFP, nor the RFP process, creates a process contract or any legal relationship between the Buyer and any Respondent, except in respect of:

   i. the Respondent's declaration in its Proposal
   ii. the Offer Validity Period
   iii. the Respondent's statements, representations and/or warranties in its Proposal and in its correspondence and negotiations with the Buyer
   iv. the Evaluation Approach to be used by the Buyer to assess Proposals as set out in Section 3 and in the RFP-Terms (as varied by Section 1, paragraph 1.6, if applicable)
   v. the standard RFP conditions set out in paragraphs 6.13 to 6.26
   vi. any other matters expressly described as binding obligations in Section 1, paragraph 1.6.

iv. Each exception in paragraph 6.21.a. is subject only to the Buyer's reserved rights in paragraph 6.23.

v. Except for the legal obligations set out in paragraph 6.21.a. no legal relationship is formed between the Buyer and any Respondent unless and until a Contract is entered into between those parties.

Elimination

i. The Buyer may exclude a Respondent from participating in the RFP if the Buyer has evidence of any of the following, and is considered by the Buyer to be material to the RFP:
   i. the Respondent has failed to provide all information requested, or in the correct format, or materially breached a term or condition of the RFP
   ii. the Proposal contains a material error, omission or inaccuracy
   iii. the Respondent is in bankruptcy, receivership or liquidation
   iv. the Respondent has made a false declaration
   v. there is a serious performance issue in a historic or current contract delivered by the Respondent
   vi. the Respondent has been convicted of a serious crime or offence
   vii. there is professional misconduct or an act or omission on the part of the Respondent which adversely reflects on the integrity of the Respondent
   viii. the Respondent has failed to pay taxes, duties or other levies
   ix. the Respondent represents a threat to national security or the confidentiality of sensitive government information
   x. the Respondent is a person or organisation designated as a terrorist by New Zealand Police.

Buyer's additional rights

i. Despite any other provision in the RFP the Buyer may, on giving due notice to Respondents:
   1. amend, suspend, cancel and/or re-issue the RFP, or any part of the RFP
   2. make any material change to the RFP (including any change to the timeline, Requirements or Evaluation Approach) on the condition that Respondents are given a reasonable time within which to respond to the change.

ii. Despite any other provision in the RFP the Buyer may:
   a. accept a late Proposal if it is the Buyer's fault that it is received late
   b. in exceptional circumstances, accept a late Proposal where it considers that there is no material prejudice to other Respondents. The Buyer will not accept a late Proposal if it considers that there is risk of collusion on the part of a Respondent, or the Respondent may have knowledge of the content of any other Proposal
   c. in exceptional circumstances, answer a question submitted after the Deadline for Questions, if applicable
   d. accept or reject any Proposal, or part of a Proposal
   e. accept or reject any non-compliant, non-conforming or alternative Proposal
   f. decide not to accept the lowest priced conforming Proposal unless this is stated as the Evaluation Approach
   g. decide not to enter into a Contract with any Respondent
   h. liaise or negotiate with any Respondent without disclosing this to, or doing the same with, any other Respondent
   i. provide or withhold from any Respondent information in relation to any question arising in relation to the RFP. Information will usually only be withheld if it is deemed unnecessary, is commercially sensitive to a Respondent, is inappropriate to supply at the time of the request or cannot be released for legal reasons
   j. amend the Proposed Contract at any time, including during negotiations with a shortlisted Respondent

k. waive irregularities or requirements in or during the RFP process where it considers it appropriate and reasonable to do so.

iii. The Buyer may request that a Respondent/s agrees to the Buyer:

- selecting any individual element/s of the Requirements that is offered in a Proposal and capable of being delivered separately, unless the Proposal specifically states that the Proposal, or elements of the Proposal, are to be taken collectively
- selecting two or more Respondents to deliver the Requirements as a joint venture or consortium.

New Zealand law

a. The laws of New Zealand shall govern the RFP and each Respondent agrees to submit to the exclusive jurisdiction of the New Zealand courts in respect of any dispute concerning the RFP or the RFP process.

Disclaimer

6 The Buyer will not be liable in contract, tort, equity, or in any other way whatsoever for any direct or indirect damage, loss or cost incurred by any Respondent or any other person in respect of the RFP process.

7 Nothing contained or implied in the RFP, or RFP process, or any other communication by the Buyer to any Respondent shall be construed as legal, financial or other advice. The Buyer has endeavoured to ensure the integrity of such information. However, it has not been independently verified and may not be updated.

8 To the extent that liability cannot be excluded, the maximum aggregate liability of the Buyer, its agents and advisors is $1.

Precedence

1. Any conflict or inconsistency in the RFP shall be resolved by giving precedence in the following descending order:
   - Section 1, paragraph 1.6
   - Section 6 (RFP-Terms)
   - all other Sections of this RFP document
   - any additional information or document provided by the Buyer to Respondents through the Buyer's Point of Contact or GETS.
2. If there is any conflict or inconsistency between information or documents having the same level of precedence the later information or document will prevail.

Definitions

In relation to the RFP the following words and expressions have the meanings described below.

Advance Notice	A notice published by the buyer on GETS in advance of publishing the RFP. An Advance Notice alerts the market to a contract opportunity. Where used, an Advance Notice forms part of the RFP.
Business Day	Any week day in New Zealand, excluding Saturdays, Sundays, New Zealand (national) public holidays and all days from Boxing Day up to and including the day after New Year's Day.
Buyer	The Buyer is the government agency that has issued the RFP with the intent of purchasing the goods or services described in the Requirements. The term Buyer includes its officers, employees, contractors, consultants, agents and representatives.

Competitors	Any other business that is in competition with a Respondent either in relation to the goods or services sought under the RFP or in general.
Confidential Information	Information that: d. is by its nature confidential e. is marked by either the Buyer or a Respondent as 'confidential', 'commercially sensitive', 'sensitive', 'in confidence', 'top secret', 'secret', classified' and/or 'restricted' f. is provided by the Buyer, a Respondent, or a third party in confidence g. the Buyer or a Respondent knows, or ought to know, is confidential. Confidential information does not cover information that is in the public domain through no fault of either the Buyer or a Respondent.
Conflict of Interest	A Conflict of Interest arises if a Respondent's personal or business interests or obligations do, could, or be perceived to, conflict with its obligations to the Buyer under the RFP or in the provision of the goods or services. It means that the Respondent's independence, objectivity or impartiality can be called into question. A Conflict of Interest may be: **1.7.1** actual: where the conflict currently exists **1.7.2** potential: where the conflict is about to happen or could happen, or **1.7.3** perceived: where other people may reasonably think that a person is compromised.
Contract	The written Contract/s entered into by the Buyer and Successful Respondent/s for the delivery of the Requirements.
Contract Award Notice	Government Rules of Sourcing, Rule 45 requires a Buyer to publish a Contract Award Notice on GETS when it has awarded a contract that is subject to the Rules.
Deadline for Proposals	The deadline that Proposals are to be delivered or submitted to the Buyer as stated in Section 1, paragraph 1.2.
Deadline for Questions	The deadline for suppliers to submit questions to the Buyer as stated in Section 1, paragraph 1.2, if applicable.
Evaluation Approach	The approach used by the Buyer to evaluate Proposals as described in Section 3 and in Section 6 (as varied by Section 1, paragraph 1.6, if applicable).
GETS	Government Electronic Tenders Service available at www.gets.govt.nz
GST	The goods and services tax payable in accordance with the New Zealand Goods and Services Tax Act 1985.
Intellectual Property	All intellectual property rights and interests, including copyright, trademarks, designs, patents and other proprietary rights, recognised or protected by law.
Offer Validity Period	The period of time when a Proposal (offer) is held open by the Respondent for acceptance by the Buyer as stated in Section 1, paragraph 1.6.
Point of Contact	The Buyer and each Respondent are required to appoint a Point of Contact. This is the channel to be used for all communications during the RFP process. The Buyer's Point of Contact is identified in Section 1, paragraph 1.3. The Respondent's Point of Contact is identified in its Proposal.
Price	The total amount, including all costs, fees, expenses and charges, to be charged by the Successful Respondent for the full delivery of the Requirements. Each Respondent's Proposal must include its Price.

Proposal	The response a Respondent submits in reply to the RFP. It comprises the Response Form, the Respondent's bid, financial and pricing information and all other information submitted by a Respondent.
Proposed Contract	The Contract terms and conditions proposed by the Buyer for the delivery of the Requirements as described in Section 5.
RFP	Means the Request for Proposal.
Registration of Interest	A formal request by a Buyer asking potential suppliers to register their interest in a procurement. It is the first step in a multi-step tender process.
Request for Proposal (RFP)	The RFP comprises the Advance Notice (where used), the Registration of Interest (where used), this RFP document (including the RFP-Terms) and any other schedule, appendix or document attached to this RFP, and any subsequent information provided by the Buyer to Respondents through the Buyer's Point of Contact or GETS.
RFP-Terms	Means the Request for Proposal - Process, Terms and Conditions as described in Section 6.
RFP Process, Terms and Conditions (shortened to RFP-Terms)	The government's standard process, terms and conditions that apply to RFPs as described in Section 6. These may be varied at the time of the release of the RFP by the Buyer in Section 1, paragraph 1.6. These may be varied subsequent to the release of the RFP by the Buyer on giving notice to Respondents.
Requirements	The goods and/or services described in Section 2 which the Buyer intends to purchase.
Respondent	A person, organisation, business or other entity that submits a Proposal in response to the RFP. The term Respondent includes its officers, employees, contractors, consultants, agents and representatives. The term Respondent differs from a supplier, which is any other business in the market place that does not submit a Proposal.
Response Form	The form and declaration prescribed by the Buyer and used by a Respondent to respond to the RFP, duly completed and submitted by a Respondent as part of the Proposal.
Successful Respondent	Following the evaluation of Proposals and successful negotiations, the Respondent/s who is awarded a Contract/s to deliver all or part of the Requirements.

1. Appendix 1: Glossary of Terms Specific to Type 3 Appliance

Term	Definition
APPLIANCE	Fire engine, fire truck, apparatus. The vehicle.
APPLIANCE BAY	Area within the station that the appliance is parked while Traditionally this is an enclosed area with exhaust extraction and appliance charging facilities
ALPS / AVL	Accurate Landmark Positioning System / automatic vehicle location system linked to ComCen databases showing real time location of vehicles.
ASSESSMENT CRITERIA	The criteria defined by users and stakeholders of what good looks like in their context. Each Assessment criteria will be used to assess potential supplier proposals
BA SET	Self-Contained Breathing Apparatus (SCBA). Currently Draegar PS5000.
BASELINE STOWAGE	A specific list of operational equipment that will be allocated the appliance to allow it to function.
BATTENBURG	Reflective livery applied in red and yellow blocks along side of vehicle.
BEACONS	Flashers, flashing warning lights.
BRANCH	The nozzle at the end of a delivery hose.
CAFS	Compressed Air Foam System.
CLASS A (foam)	Foam concentrate used through an on-board system usually at percentages from 0.1% to 1.0%.
COFFIN	Jargon used to describe a horizontally mounted roof top stowage box, used to store relatively light weight equipment that is not used frequently, nor in the early stages of a response.
DELIVERY	Hose that is used from the pump to the fire. Called attack lines elsewhere. Usually stored in a flaked configuration near pump outlets, to allow rapid deployment.
ECO BOARD	Entry Control Officer – Breathing Apparatus control board, either manual or via a Telemetry system fitted to the Draegar PS5000 breathing apparatus sets.
EJECTOR PUMP	Portable pump that uses the venturi principle to uplift water on a fire ground. Used by feeding water under pressure from appliance pump to uplift water from a static supply and bring back to pump. Useful in rural areas. Can be used for salvage by removing flood waters.
EN 1846	European Standard specifies the common requirements for safety and the (minimum) common performance requirements of firefighting and rescue service vehicles as designated in BS EN 1846. Outlines requirements for the design and construction of fire appliances.
ERGONOMIC STOWAGE	Modern stowage techniques incorporating pull-out, swing out, fold down racks, shelves, tool boards, etc. Designed to be used by firefighters of varying shapes with the intention of reducing risk of injury during removal or restowing of

Term	Definition
	equipment. This includes minimising reaching distances into lockers, and placing heavy equipment being stored as low as possible (see also baseline stowage).
EXTRICATION EQUIPMENT	Hydraulic and other rescue tools used primarily for vehicle rescues. Tools can be motor, or battery powered, and includes other equipment such as airbag sets, battery powered saws and stabilising struts.
FEEDER	Hose used for supplying water to the appliance from a hydrant or other water supply. Also known as supply lines elsewhere. Usually stored in a flaked configuration near pump inlets to allow rapid deployment either when the appliance is moving forward or by hand pulling rearwards.
FENZ	Fire and Emergency New Zealand, the organisation.
FIRECOM	Control rooms receiving emergency calls and dispatching appliances and maintaining contact via radio with appliances.
FLAKED HOSE	A style of stowing hose, where it is folded into its storage tray either on its edge, or flat on top of each fold (lay-flat).
FORESTRY HOSE	Small diameter, 41mm diameter screw thread coupling hose capable of operating at 2100 kPa at 200LPM. Normally used for vegetation.
GET TO WORK	The term for the initial arrival actions by a crew off an appliance.
HOSE	Current sizes used in FENZ are the following diameters: 25mm, 41mm, 45mm, 70mm and 90mm internal diameters. Mostly rubber lined although some of the smaller diameters, used for rural firefighting, can be percolating.
HOSEREEL	Small diameter hose wound on drum(reel). Comes in lengths of 90m. Used for initial attack or quick get-to-work on smaller fires from on-board tank supply. Can be called booster reels or trash lines elsewhere.
LIGHT MAST	Manually operated mast with flood/spotlight on top.
LIGHT TOWER	Remotely controlled powered light system that can extend and rotate with more powerful lights than basic light mast.
LINE RESCUE	Rope rescue scenarios, specifically relating to requiring the anchor points built into future Type 3 appliances.
LMR	Land Mobile Radio. The VHF radio in the fire appliance used to send messages by voice and signal to ComCen.
MOBILITY	A project dealing with supplying real time information from data sources to operational appliances. Requirements for wiring/power supplies to various locations in the appliance for screens, etc. is required.
MSU	Mobile Signalling Unit, used in conjunction with the radio to send digital codes for pre-selected messages (responding, arrival, available, etc.)
NEARSIDE (NS)	Kerb side on an appliance that drives on the left side of the road (i.e. RHD appliance).

Term	Definition
NFPA 1901-2016	Latest Automotive Fire Apparatus standard from the National Fire Protection Association (USA). Outlines requirements for the design and construction of fire appliances.
OEM	Original Equipment Manufacturer, the maker of the specific components; this maybe the responding supplier or a third party.
OFFSIDE (OS)	Opposite of NS above, driver's side on RHD appliance. Road centre-line side.
PPE	Personal protective ensemble. Structural firefighting uniform comprising helmet, coat, over-trousers, boots, gloves and flash-hood.
PPV FAN	Positive Pressure Ventilation fan. Portable battery, motor-powered, water powered, or electric fan, used for removing smoke.
PRT	Pump Rescue Tender. Normally heavy pumping appliance but fitted out to carry additional equipment to allow it to function in a rescue role as well. Currently about 20% of the total Type 3 fleet are designated PRT's.
ROAD CONES	PVC traffic control devices for delineating a workspace, closing lanes on road, or generally protecting an area. NZ standard for working on roads calls for 900mm high rigid cone. Called "traffic pylons" in some countries. See Appendix 3 Equipment list.
ROOF MOUNTED MONITOR	This refers to a large flow water master stream device plumbed directly from pump, mounted on the upper level of the appliance (normally on locker module with the ability to be directed in anywhere within a 360-degree range of the appliance either manually or automatically /remote controlled. *Also referred to as Deck Monitor, Roof Turret, Roof mounted high flow turret.*
SCBA	Self-Contained Breathing Apparatus (SCBA). Currently Draegar PS5000.
TIC	Thermal Imaging Camera. Carried on many Type 3 appliances stored in a bracket that is wired into the appliance to allow constant charging whilst in bracket.
TYPE 3	Heavy pumping appliance used in urban areas and predominantly crewed by career staff.
TYPE 5	32m Aerial appliance, currently without fitted pump, but with internal waterway to cage nozzle, that require pumping into from a Type 3.
UHP	Ultra-High Pressure. A very high pressure, low flow, through a small diameter hose reel, found to be effective for firefighting in several scenarios world-wide. Could be offered to FENZ as innovation by overseas suppliers.
USER STORY	Descriptive narrative explaining what firefighters need to do, relating to what they want from their fire appliance.
WEIGHTING	Measure (usually %) used to compare supplier offerings across identified requirements.

Term	Definition
WORKFLOW	The concept of “one locker, one job” that sees equipment that is used together, grouped together, in any stowage proposal. This includes the most regularly used equipment being stored on the kerbside (left hand side) of the appliance.
WATER DRAGON	Portable ejector pump used to boost water supplies when hard suction isn’t suitable, used in salvage situations
464 LADDER	A 3-section aluminium ladder 46’ 4” (13.5m) with tormentor poles, made by Angus Sacol (UK) that requires a specific gantry and is carried on 13 front-line Type 3 appliances in NZ.

2. Appendix 2: High level outline for the role of Pump and PRT variants

Functional Area	Pump	PRT
Specialist Equipment	Must be able to be configured to carry 464 model 3 stage 13.5m rescue ladder that is currently carried on 13 Type 3 Pumping Appliances.	Time critical extrication equipment Hydraulic Extrication Equipment Rescue airbags Additional chocks and blocks Battery electric tools V Struts Lifting Bridle Basket Stretcher Additional engineer tools
Functionality Rescue		Appliance mounted Winch (optional with the possibility to delete) Additional anchor points
Scene Lighting	Standard scene lighting	Enhanced scene lighting with the capability to illuminate rescue scene

3. Appendix 3: Equipment list

The following equipment will be carried by the Type 3 Appliance, all equipment categorised as base is to be carried on both appliance variants and a list of equipment specific to the PRT. Included are examples of equipment carried in regional/tactical locker. This equipment list is to be used to populate the draft equipment stowage plan it will prove helpful when calculating the weight distribution on the appliance.

Equipment table: Base equipment list

Item	Category	Onboard charging required	Brand/ Supplier	Current common stowage location[16]	Count	Weight (kg)	Length (m)	Depth (m)	Height (m)	Volume (m^3)	Total volume (m^3)	*Total Weight*	*Preferred stowage location*
Torches (LED)	Base	No	Cory's/Blackwood's/Ideal	Cab	4	0.5	0.2	0.2	0.1	0.00	0.02	2.00	Cab
Ear Muffs	Base	No	TWG	Cab	4	0.25	0.12	0.12	0.23	0.00	0.01	1.00	Cab
Surgical Type Latex Rubber gloves (boxed)	Base	No	TWG	Left hand side lockers + cab	3	0.3	0.2	0.1	0.3	0.01	0.02	0.90	Cab
BA sets complete crew	Base	Yes	Draeger	Cab	3	16	0.4	0.3	0.7	0.08	0.25	48.00	Cab
Main guide line	Base	No	No	Cab	1	1	0.12	0.12	0.05	0.00	0.00	1.00	Cab
Jerkins	Base	No	TWG	Cab	7	0.25	0.15	0.15	0.15	0.00	0.02	1.75	Cab or Left-hand side locker
Incident Command Board	Base	No	Landau	Left hand side lockers	1	2	0.65	0.47	0.1	0.03	0.03	2.00	Cab or Left-hand side locker
Thermal Imaging Camera	Base	Yes	FLIR	Cab	1	1	0.1	0.2	0.2	0.00	0.00	1.00	Cab
Gas Detector	Base	Yes	APC Techsafe	Cab	1	1	0.1	0.1	0.2	0.00	0.00	1.00	Cab
IGC radios	Base	Yes	Loop	Cab	5	0.5	0.1	0.1	0.2	0.00	0.01	2.50	Cab
Drinking Water bottles (600ml minimum)	Base	No	No	Cab	8	0.5	0.7	0.7	0.3	0.15	1.18	4.00	Cab
Emergency Medical Response Kit	Base	No	RAPP	Left hand side clean space /or cab	1	10	0.15	0.4	0.5	0.03	0.03	10.00	Cab or Clean locker
Defibrillator - AED	Base	No	Medxus	Left hand side clean space /or cab	1	2	0.2	0.2	0.1	0.00	0.00	2.00	Cab or Clean locker
Air Purifying Respirator	Base	No	Draeger/TWG	Left hand side lockers	3	1	0.1	0.2	0.35	0.01	0.02	3.00	Cab or Clean locker
Level 1 Decontamination Kit	Base	No	TWG	Left hand side lockers or cab	1	5	0.5	0.3	0.4	0.06	0.06	5.00	Clean locker or hygiene station
Modesty Packs for Decontamination	Base	No	TWG	Left hand side lockers or cab	4	0.25	0.2	0.2	0.05	0.00	0.01	1.00	Clean locker or hygiene station
Hazardous Substance Information Board	Base	No	Landau	Left hand side lockers	1	0.25	0.35	0.4	0.02	0.00	0.00	0.25	Clean locker
Branches / Nozzles	Base	No	PSL/Wormald/Connells	Left hand or Righthand side lockers	4	2	0.1	0.1	0.3	0.00	0.01	8.00	Firefighting locker
Dry powder Extinguisher	Base	No	PSL	Left hand side lockers	2	4.5	0.24	0.18	0.6	0.03	0.05	9.00	Firefighting locker
CO2 Extinguisher	Base	No	PSL	Left hand side lockers	1	7	0.25	0.2	0.58	0.03	0.03	7.00	Firefighting locker
Pinch/Crow/Wrecking bar	Base	No	No	Left hand side lockers	1	1	0.02	0.02	0.9	0.00	0.00	1.00	Firefighting locker
Sledgehammer	Base	No	No	Left hand side lockers	1	5	1	0.2	0.1	0.02	0.02	5.00	Firefighting locker
Bolt Cutters - Large	Base	No	No	Left hand side lockers	1	4	0.17	0.05	0.8	0.01	0.01	4.00	Firefighting locker
Halligan style bar	Base	No	No	Left hand side lockers	1	6	0.1	0.1	0.9	0.01	0.01	6.00	Firefighting locker

[16] This can vary slightly between stations and regions

Item	Category	Onboard charging required	Brand/ Supplier	Current common stowage location[16]	Count	Weight (kg)	Length (m)	Depth (m)	Height (m)	Volume (m^3)	Total volume (m^3)	*Total Weight*	*Preferred stowage location*
Large Axe	Base	No	No	Left hand side lockers	1	4	0.1	0.2	0.8	0.02	0.02	4.00	Firefighting locker
Class B foam in drums	Baseline	No	No	Right hand side lockers	2	20	0.3	0.3	0.5	0.05	0.09	40.00	Right hand side lockers
Foam branch/nozzle	Baseline	No	Wormald	Right hand side lockers	1	2	0.1	0.1	0.5	0.01	0.01	2.00	Right hand side lockers
Knapsack Pump (Scotty pack)	Baseline	No	PSL	Right hand side lockers	1	1	0.4	0.1	0.1	0.00	0.00	1.00	Right hand side lockers
Hose 45mm	Baseline	No	Connells	Stowed flaked 1 on each side	2	10.2	0.1	0.5	0.5	0.03	0.05	20.40	Flaked[17] near outlet
Hose 45mm (spare)	Baseline	No	Connells	Coiled right hand side	2	10.2	0.1	0.5	0.5	0.03	0.05	20.40	Coil rack right hand side
Hose 70mm	Baseline	No	Connells	Stowed flaked 3 on each side	6	17.5	0.15	0.5	0.5	0.04	0.23	105.00	Flaked near outlet
Hose 70mm (spare)	Baseline	No	Connells	Coiled right had side	4	17.5	0.15	0.5	0.5	0.04	0.23	72.00	Coiled rack right hand side
Hose 90mm	Baseline	No	PSL	Flaked @ Rear	6	25	0.15	0.6	0.5	0.05	0.27	150.00	Flaked near inlet 6 x 90mm
Engineers style Tool Box	Baseline	No	No	Left hand side lockers	1	10	0.3	0.3	0.5	0.05	0.05	10.00	Left hand side lockers support
Positive pressure ventilation fan	Baseline	No	FARP	Left hand side lockers	1	35	0.5	0.4	0.5	0.10	0.10	35.00	Left hand side lockers support
Multipurpose access ladder	Baseline	No	Ulrich/Little giant	Right hand side lockers	1	16	0.45	0.2	1.4	0.13	0.13	16.00	Locker or external
Spare cylinders	Baseline	No	Fire & rescue products	Wheel Arch lockers	4	11	0.18	0.18	0.62	0.02	0.08	44.00	Lockers
BA sets complete driver	Baseline	Yes	Draeger	Cab	1	16	0.4	0.3	0.7	0.08	0.08	16.00	Near pump Operating area
Driver's level 2 PPE	Baseline	No	No	Cab	1	5	0.4	0.4	0.5	0.08	0.08	5.00	Near pump Operating area
Telemetry Entry Control Board	Baseline	Yes	Draeger	Left hand side lockers	1	9	0.5	0.06	0.78	0.3	0.3	9	Near pump Operating area
Step chocks, wooden blocks	Baseline	No	No	Left hand side lockers	1	20	0.5	0.5	0.5	0.13	0.13	20.00	Left hand side rescue
Bolt Cutters - Small	Baseline	No	No	Optional	1	2	0.1	0.05	0.45	0.00	0.00	2.00	Left hand side lockers support
Standpipes	Baseline	No	PSL/Wormald	Rear	2	20	0.4	0.16	1.1	0.07	0.14	40.00	Rear[18]
Key & Bar	Baseline	No	PSL/Wormald	Rear	2	3	0.05	0.05	1.2	0.00	0.01	6.00	Left hand side lockers support
Hose ramps	Baseline	No	No	Right hand side lockers	2	10	0.1	0.5	0.8	0.04	0.08	20.00	Optional Right-hand side lockers
Road Cones	Baseline	No	Blackwood's	Right hand side lockers or rear	8	5	0.38	0.38	0.9	0.13	1.04	40.00	Rear or Right-hand side lockers support
Chain Saw	Baseline	No	Cory's/Blackwood's/Ideal	Right hand side lockers	1	10	0.75	0.2	0.25	0.04	0.04	10.00	Right hand side lockers
Chain Saw kit (helmet / chaps)	Baseline	No	TWG	Right hand side lockers	1	2	0.3	0.2	0.2	0.01	0.01	2.00	Right hand side lockers
Disc Cutter saw	Baseline	No	No	Right hand side lockers	1	10	0.75	0.2	0.25	0.04	0.04	10.00	Right hand side lockers
Water Rescue Kits	Baseline	No	Outsider mountain sports	Right hand side lockers or coffin	2	20	0.6	0.6	0.9	0.32	0.65	40.00	Right hand side lockers rescue or coffin

[17] As per Appendix 9: Current Hose Stowage methods we currently store hose flaked for the purpose of a quick get to work. Alternate methods of stowing will be accepted if they support a fast get to work.

[18] The preference is that these are currently mounted on the rear exterior of the appliance.

Item	Category	Onboard charging required	Brand/ Supplier	Current common stowage location[16]	Count	Weight (kg)	Length (m)	Depth (m)	Height (m)	Volume (m^3)	Total volume (m^3)	*Total Weight*	*Preferred stowage location*
Shovel / Spade	Baseline	No	No	Right hand side lockers	1	5	0.2	0.3	1	0.06	0.06	5.00	Right hand side lockers support
Square mouth shovel	Baseline	No	No	Right hand side lockers	1	4	0.3	0.3	1	0.09	0.09	4.00	Right hand side lockers support
Level 1 line rescue kit	Baseline	No	Outsider mountain sports	Right hand side lockers	1	8	0.3	0.5	0.3	0.05	0.05	8.00	Right hand side lockers support
Bucket Line	Baseline	No	No	Right hand side lockers	1	1.5	0.3	0.2	0.2	0.01	0.01	1.50	Right hand side lockers support
General Purpose Line	Baseline	No	No	Right hand side lockers	1	2.5	0.15	0.3	0.4	0.02	0.02	2.50	Right hand side lockers support
LED portable floodlights	Baseline	Yes	Cory's/Blackwood's/Ideal	Right hand side lockers	2	5	0.2	0.2	0.6	0.02	0.05	10.00	Right hand side lockers support
Portable Pump	Baseline	No	PSL/Wormald/Connells	Right hand side lockers	1	100	0.9	0.8	0.8	0.58	0.58	100.00	Right hand side lockers support
Fuel can (for non-battery tools)	Baseline	No	No	Right hand side lockers	1	9	0.3	0.3	0.3	0.03	0.03	9.00	Right hand side lockers support
Suction strainer	Baseline	No	PSL/Wormald/Connells	Right hand side lockers	1	4	0.19	0.19	0.4	0.01	0.01	4.00	Right hand side lockers support
Suction spanners	Baseline	No	No	Right hand side lockers	2	0.5	0.06	0.06	0.25	0.00	0.00	1.00	Right hand side lockers support
Suction hose	Baseline	No	PSL/Wormald/Connells	Top or thru body	3	5	0.15	0.15	3	0.07	0.20	15.00	Right hand side lockers support
Ejector pump	Baseline	No	PSL/Wormald	Right hand side lockers	1	10	0.2	0.2	0.9	0.04	0.04	10.00	Right hand side lockers support
Splash Suits	Baseline	No	Draeger	Right hand side lockers	2	1	0.4	0.4	0.1	0.02	0.03	2.00	Right hand side lockers support
Hazardous Material spill kit	Baseline	No	TWG	Right hand side lockers	1	5	0.2	0.2	0.5	0.02	0.02	5.00	Right hand side lockers support
Salvage sheets	Baseline	No	No	Right hand side lockers	2	5	0.6	0.5	0.1	0.03	0.06	10.00	Right hand side lockers support
Broom	Baseline	No	No	Right hand side lockers	1	2	0.1	0.4	0.2	0.01	0.01	2.00	Right hand side lockers support
Squeegee	Baseline	No	No	Right hand side lockers	1	1	0.07	0.02	0.6	0.00	0.00	1.00	Right hand side lockers support
20 litre container spill absorbent material	Baseline	No	No	Right hand side lockers	1	15	0.4	0.3	0.3	0.04	0.04	15.00	Right hand side lockers support
Rapid deployment portable monitor	Baseline	No	PSL/Wormald	Right hand side lockers	1	15	0.8	0.2	0.2	0.03	0.03	15.00	Right hand side lockers support
Waterway adaptors/ breechings	Baseline	No	PSL/Wormald/Connells	Right hand side lockers	1	15	0.4	0.4	0.5	0.08	0.08	15.00	Right hand side lockers support
Ceiling hook / Preventer	Baseline	No	No	Right hand side lockers or thru	1	2	0.03	0.03	1.2	0.00	0.00	2.00	Right hand side lockers support or thru
Long crow bar	Baseline	No	No	Right hand side lockers	1	8	0.1	0.1	1.2	0.01	0.01	8.00	Thru locker Right hand side lockers
Collector head	Baseline	No	PSL / Frasers	Fitted to pump	2								To be determined
BASE Appliance Stowage Totals											**6.85m^3**	**1111.2 kg**	

Equipment table: Roof stowed items equipment list

Item	Category	Onboard charging required	Brand and/or Supplier	Current stowage location	Count	Weight (kg)	Length (m)	Depth (m)	Height (m)	Volume (m^3)	Total volume (m^3)	*Total Weight*	*Suggested location*
Access ladder (2 extension)	Baseline	No	Ulrich	Thru body /roof	1	12	0.5	0.18	2	0.18	0.18	12.00	Roof or other option
Rescue Ladder (10.5m)	Baseline	No	PSL / AS Ladders (UK)	Roof	1	42	0.45	0.172	6.27	0.49	0.49	42.00	Roof or other option
Base Stowage Roof Items											**0.67m^3**	**54.0 kg**	

Equipment table: Pump Rescue Tender specialist equipment list

Item	Category	Onboard charging required	Brand and/or Supplier	Current stowage location	Count	Weight (kg)	Length (m)	Depth (m)	Height (m)	Volume (m^3)	Total volume (m^3)	*Total Weight*	*Suggested location*
Battery Tools - Kit	PRT	Yes	Milwaukee	Right hand side lockers	1	10	0.3	0.3	0.6	0.05	0.05	10.00	Right hand side lockers support
Level 2 line rescue kit	PRT	No	Outsider mountain sports	Right hand side lockers	1	12	0.4	0.5	0.6	0.12	0.12	12.00	Right hand side lockers support
Hydraulic Power Unit	PRT	No	Holmatro / Chubb	Left hand side lockers	1	30	0.6	0.4	0.5	0.12	0.12	30.00	Left hand side lockers
Hydraulic hoses	PRT	No	Holmatro / Chubb	Left hand side lockers	3	5	0.4	0.4	0.1	0.02	0.05	15.00	Left hand side lockers
Secondary power unit (handpump)	PRT	No	Holmatro / Chubb	Left hand side lockers	1	15	0.2	0.2	0.5	0.02	0.02	15.00	Left hand side lockers
Cutters	PRT	TBD	Holmatro / Chubb	Left hand side lockers	1	18	0.15	0.25	0.75	0.03	0.03	18.00	Left hand side lockers
Spreaders	PRT	TBD	Holmatro / Chubb	Left hand side lockers	1	18	0.4	0.2	0.75	0.06	0.06	18.00	Left hand side lockers
Pedal cutter	PRT	TBD	Holmatro / Chubb	Left hand side lockers	1	3	0.1	0.1	0.5	0.01	0.01	3.00	Left hand side lockers
Hard Protection sheets	PRT	No	No	Left hand side lockers	3	0.5	0.9	0.6	0.01	0.01	0.02	1.50	Left hand side lockers
Hydraulic Rams and their bits	PRT	TBD	Holmatro / Chubb	Left hand side lockers	3	10	0.8	0.15	0.15	0.02	0.05	30.00	Left hand side lockers
V strut stabilisers	PRT	No	Holmatro / Chubb	Right hand side lockers	2	8	0.1	0.1	1	0.01	0.02	16.00	Left hand side lockers
Tirfor winch and strops / wire / handle	PRT	No	No	Right hand side lockers	1	15	0.1	0.6	0.4	0.02	0.02	15.00	Left hand side lockers
Sill plate adaptor	PRT	No	No	Left hand side lockers	1	10	0.5	0.1	0.15	0.01	0.01	10.00	Left hand side lockers
Airbags	PRT	No	Sava / FARP	Left hand side lockers	2	5	0.6	0.6	0.05	0.02	0.04	10.00	Left hand side lockers
Airbag controllers / hoses/ etc	PRT	No	Sava / FARP	Left hand side lockers	1	1	0.2	0.2	0.3	0.01	0.01	1.00	Left hand side lockers
Ply Boards for Airbags	PRT	No	No	Left hand side lockers	4	0.5	0.6	0.6	0.025	0.01	0.04	2.00	Left hand side lockers
Bag of sharps protection	PRT	No	No	Left hand side lockers	1	2	0.2	0.4	0.4	0.03	0.03	2.00	Left hand side lockers
Tool staging sheet	PRT	No	No	Left hand side lockers	1	2	0.05	0.4	0.3	0.01	0.01	2.00	Left hand side lockers
Time critical chain kits	PRT	No	No	Right hand side lockers optional	2	15	0.3	0.3	0.6	0.05	0.11	30.00	Optional
Bag of blankets	PRT	No	No	Cab		0.5						0.50	Local option
Basket Stretcher	PRT	No	Ferno	Thru body /roof	1	15	0.5	0.2	2	0.20	0.20	15.00	Thru body or roof
Spine Board	PRT	No	Ferno or local wooden	Thru body /roof	1	5	0.02	0.4	2	0.02	0.02	5.00	Thru body or roof
Glass Management Kit	Base	No	No	Left hand side lockers	1	4	0.1	0.4	0.4	0.02	0.02	4.00	Rescue locker left hand side
Step chocks, wooden blocks	Base	No	No	Left hand side lockers	1	20	0.5	0.5	0.5	0.13	0.13	20.00	Nearside rescue
PRT TOTALS											**1.17 m^3**	**285.0 kg**	

Equipment table: Pump Specialist items equipment list

Item	Category	Onboard charging required	Brand and/or Supplier	Current stowage location	Count	Weight (kg)	Length (m)	Depth (m)	Height (m)	Volume (m^3)	Total volume (m^3)	*Total Weight*	*Suggested location*
464 model 13.5 triple extension ladder (13.5m)	Pump only	No	AS Ladders (UK)	Roof	1	104	5.8	0.8	0.243	1.13	1.13	104.00	Roof
Small 2-step ladder (smoke alarm installs)	Pump only	No	Ulrich	Varies	1	3	0.9	0.4	0.1	0.04	0.04	3.00	Right hand side lockers
Pump Only Totals											**1.14m^3**	**107.0kg**	

Equipment table: Regional and tactical equipment

Examples of equipment carried in regional or tactical locker													
Item	**Appliance Type**	**Onboard charging required**	**Brand/ Supplier**	**Current stowage location**	**Count**	**Weight**	**Length**	**Depth**	**Height**	**Cubic meters**	***Total Cube***	***Total Weight***	***Suggested location***
Forestry pack - If carried - risk based	Regional/ tactical	N	Connells	Righthand side lockers	1	20	0.6	0.4	0.5	0.12	0.12	20.00	Regional Tactical
Double jacketed high-pressure hose (Water dragon)	Regional/ tactical	N	PSL/Wormald	Optional	2	6	0.1	0.4	0.4	0.02	0.03	12.00	Regional Tactical
Dam brackets	Regional/ tactical	N	No	Coffin	2	2				0.00	0.00	4.00	Regional Tactical - Auckland
Debris Bag	Regional/ tactical	N	No	Coffin	1	1				0.00	0.00	1.00	Regional Tactical - Auckland
Bulk CO2 kit	Regional/ tactical	N	No	Coffin	1	5				0.00	0.00	5.00	Regional Tactical - Auckland
Box of strops / chains / shackles	Regional/ tactical	N	No	Righthand side lockers	1	10	0.6	0.4	0.4	0.10	0.10	10.00	Regional Tactical - Auckland
Hydraulic breaking in/extrication tool (rabbit tool)	Regional/ tactical	N	No	Righthand side lockers	1	5				0.00	0.00	5.00	Regional Tactical - Auckland
3 tonne cum-a-long	Regional/ tactical	N	No	Righthand side lockers	1	10	0.3	0.3	0.25	0.02	0.02	10.00	Regional Tactical - Auckland
Bottle jacks	Regional/ tactical	N	No	Righthand side lockers	2	10				0.00	0.00	20.00	Regional Tactical - Auckland
Steel wedges	Regional/ tactical	N	No	Righthand side lockers	6	1				0.00	0.00	6.00	Regional Tactical - Auckland
Box of air tools and bits associated	Regional/ tactical	N	No	Righthand side lockers	1	10	0.4	0.4	0.6	0.10	0.10	10.00	Regional Tactical - Auckland
Gas Line Clamp	Regional/ tactical	N	No	Coffin	1	2				0.00	0.00	2.00	Regional Tactical - Auckland
Fuel containers	Regional/ tactical	N	No	Coffin	11	1	0.25	0.25	0.15	0.01	0.02	2.00	Regional Tactical - Auckland
Refreshment box and gas cooker	Regional/ tactical	N	No		1	1				0.00	0.00	1.00	Regional Tactical - Dunedin
Chimney Kit	Regional/ tactical	N	No		1	1	0.4	0.4	0.4	0.06	0.06	1.00	Regional Tactical - Dunedin
Stirrup Pump	Regional/ tactical	N	No		1	1	0.1	0.1	0.8	0.01	0.01	1.00	Regional Tactical - Dunedin

5. Appendix 4: Paint and brand

See ANNEX – Fire and Emergency Fleet Signage Brand Guidelines

6. Appendix 5: Radio Frequency Interference guidelines

See ANNEX – ICT component installation requirements

7. Appendix 6: Mobility High Level Requirements

See ANNEX – Mobility High Level Requirements

This document is to give potential suppliers adequate context of the Fire and Emergency NZ Mobility requirements. The information contained with the paper is to give the potential suppliers sufficient detail during the early design phase to accommodate Fire and Emergency NZ's mobility equipment.

The information contained in this document is to be used for high level design purposes, detailed design would be undertaken with the successful supplier/s at the conclusion of stage 3 of the evaluation process.

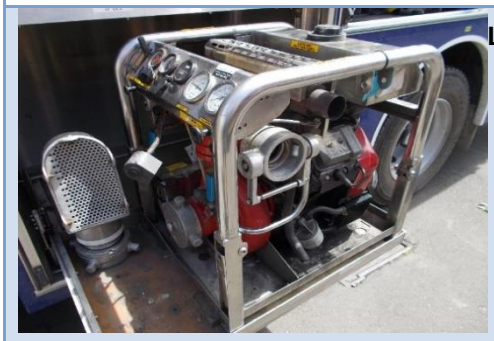
8. Appendix 7: Checks that need to be completed without lifting the cab

- Appliance Oil
- Water Level engine
- Water level Appliance Tank
- Firefighting foam tank
- Battery Voltage
- Brake pad percentage
- Brake air pressure
- Engine hours
- Main pump hours
- Pump High pressure stage hours
- Visual inspection of the wheels being torqued correctly
- Appliance lighting
- Appliance Beacons
- Appliance Audible warning systems
- Check and drain moisture from air tanks (note: Air tank drains should be accessible from the side of the appliance i.e. Without getting underneath)
- Ladder and gantry

9. Appendix 8: Visual Glossary Personal Protective Equipment

Item	Definition
	Structural boot – Skellerup Fire Fighter Extreme Gumboot
	Structural helmet – Pacific Helmets F10
	Level 2 structural fire coat – Lion apparel v-force
	Level 2 structural fire trousers – Lion V-Force over pant
	Level 1 work boot – Magnum Vulcan CT CP WPi

10. Appendix 9: Visual Glossary Fire and Emergency NZ specific equipment

Item	Definition
	Traffic cone (UV stabilised, NZTA compliant) • Base 360mm x 360mm • Height 900mm • 4.5kg • Up to 8 carried on each appliance
	**Forestry Pack:** In canvas bag with shoulder straps • W - 450mm • D - 250mm • H - 500mm
	**Large portable pump** • W - 500mm • D - 500mm • H - 600mm
	**Multi-Purpose Access Ladder:** Dimensions (stowed folded) • W - 600mm • D - 200mm • H - 1400mm

Item	Definition
	**Roof Kit:** In soft bag • Length – 750mm • Diameter - 80mm
	**Positive Pressure Ventilation fan:** 500mm x 500mm x 550mm (current model)
	**Example of 20 litre Class A foam drum** • W - 280mm • D - 280mm • H - 460mm
	**First Aid / Co-responder Kit** (New style) 360mm x 360mm x 600mm(L)
	**Pelican LED portable light**. 200mm(W) x 230mm(H) x 390mm(L) Some districts carry the slightly longer Streamlight ® style. Appliances may carry one or two (PRT) of these, again varies by district.

Item	Definition
	**Folded salvage cover**. 500mm x 480mm x 130mm
	**Small portable pump**. 470mm (H) x 390mm (D) x 570mm (L)
	**Spill Kit.** 600mm (L) x 200mm Diameter Soft bag.
	**Smoke Alarm ladder**. 970mm (H) x 330mm(W)x 220mm

Item	Definition
	**45mm Bandolier** 1500mm x 250mm x 80mm Comprising 1 x 25m length of 45mm hose and attached branch (nozzle) Some stations also carry 25m lengths of 70mm hose like this too, for high rise packs.
	**Screw-down Standpipe** 950mm(H) x 450mm(W) x 250mm(D)
	**Air Purifying Respirator (APR)** Container (9 litre) - 360mm x 240mm x 160mm 3 boxes of this style carried per appliance

Item	Definition
	**Gas Detector**. (Charger wired in) 250mm x 120mm x 90mm
	**Disposable Splash Suit.** 400mm x 400mm x 120mm Appliances usually carry between 2 and 4 of these depending on district needs.
	Selection of **Breaking and Entering Hand Tools** commonly used on NZ appliances. Halligan bar, large axe, sledgehammer, bolt cutters, pinch bar are the normal ones carried. Can be combination tools (e.g. Ham-axe) carried instead.
	Wheel nut indictors
	AS 464 model 13.5m triple extension ladder
	Working safely around water kit 840mm x 440mm x 350mm

11. Appendix 10: Current Hose Stowage methods

These are particular to Fire and Emergency New Zealand

The purpose of this appendix is for familiarising companies who may not have worked with Fire and Emergency NZ, with how we currently store hose. The hose is often stowed flaked for the purpose of supporting a quick 'get to work'. The photos are intended as a guide to illustrate current practice, Fire and Emergency are open to alternate methods for stowing hose. if they support a fast get to work.

Term	Definition
Feeder Hose	**Feeder hose:** can also be called supply line is usually stowed flaked (currently standing vertically on its edge). At, or near the rear, of the appliance allows for easy deployment by the appliance moving slowly forward, or by staff pulling rearwards. Staff prefer flaked style stowage for quicker deployment. 30 metre lengths of 90mm ($3^{1/2}$ inch) hose are what's currently used for feeder / supply hose. The appliances are normally positioned at incidents with access to a hydrant water supply behind the appliance. The standpipe is normally located on the exterior of appliance to support quick get to work.  Sample feeder, 6 lengths (30m x 90mm) stowage on current Type 3, in rear locker.

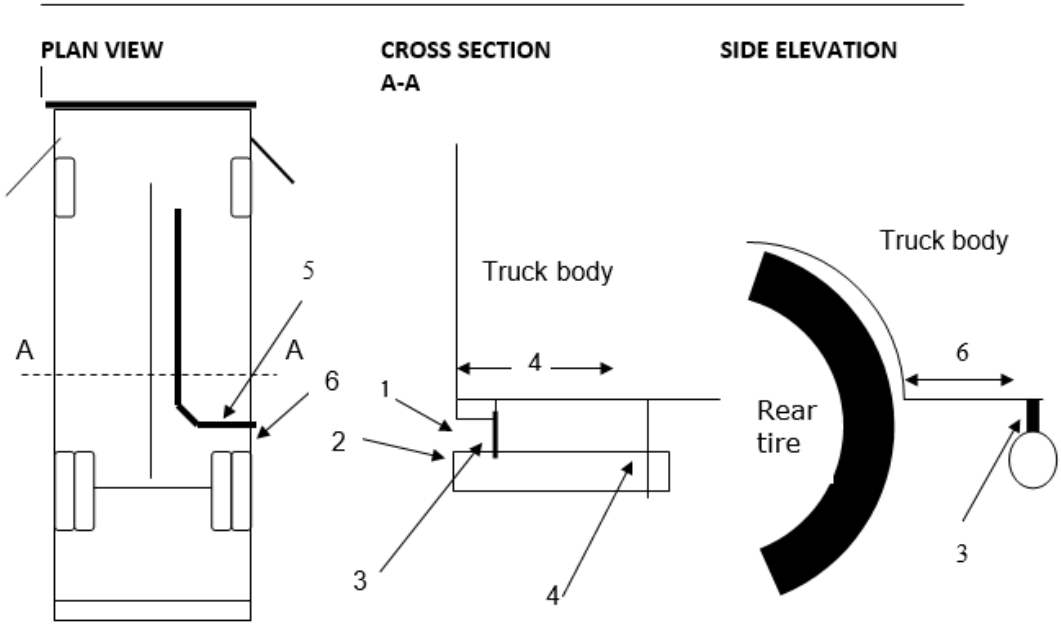
Term	Definition
Delivery Hose	**Delivery hose** (attack line) is shown in these following differing examples. Below, several trays holding 3 x 25m x70mm lengths and 1 x 25m x45mm length in shallower depth tray. Delivery hose is usually preferred to be flaked for speedy get-to-work (deployment) from near the pump outlets. The 25 metre length of 45mm ($1^{3/4}$ inch) hose is used as the attack / nozzle length. 
Coiled Hose	Any extra lengths of hose are usually carried in a coiled form, rolled on its female coupling, and stored vertically (see in locker example below).  Two views of a standard size coiled 25 metre length of 70mm ($2^{3/4}$ inch) hose as used in New Zealand. Coil diameter approx. 470mm, width of the hose (flat) is 110mm. Couplings as in NZ Standard 4505. 

Term	Definition
Flaked Hose	Left: Another style of stowing flaked delivery hose. These fully transverse bins hold 3 lengths (25m x 70mm) and 1 length (25m x 45mm) preconnected with attached branch (nozzle). Flaked stowage is the preferred option for staff for deliveries (attack lines) as they enable rapid deployment by limited staff. 

12. Appendix 11: Appliance Bay interoperability

A. Fire appliance tailpipe modification details: For common appliance with 90-100mmØ tailpipe

1. The distance between the exhaust pipe and the truck body must be at least 50mm.
2. The exhaust pipe should extend as close to outermost edge of truck as possible and be cut at a 90° angle and any sharp edges must be ground off.
3. The nozzle stop must be positioned at 80mm from the end of the tailpipe. The stop must extend to the underside of the truck body to eliminate risk of the nozzle bladder being fitted over the stop. (Can be basic 30x3 steel flat bar welded on end at top of tailpipe)
4. The exhaust pipe must be supported within 600mm of the exhaust pipe end.
5. The exhaust pipe must be at a 90° angle to the truck body with a maximum inclination of 5°.
6. The distance between the exhaust pipe and the truck wheels/mudguards and any other part of the truck body 'behind' at tailpipe level must be a minimum of 300mm.



B. Appliance Bay charging system

The appliance bay is configured to support the charging of the appliance and is commonly fitted with the following equipment to support charging

- Single switched 20A permanent connection unit mounted to the ceiling structure, with a 230V amber neon power indicator
- Caravan/RV style plug that meets New Zealand Electrical Standards AS/NZS 3100:2017 for connection to the appliance
- Flex between caravan plug and ceiling connection
- Dedicated 16A RCB0 within the local distribution board.

13. Appendix 12: Entering and exiting the appliance cab

The purpose of this document is to provide a visual reference of the correct method for entering and exiting a Fire and Emergency Type 3 appliance with full Personal Protective Equipment.

Please note:

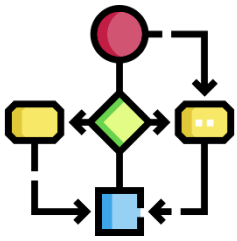
These photos are for reference only

Our crew do not hold the cab door when entering and exiting the appliance.

14. Appendix 13: Baseline Stowage

Introduction

Baseline Stowage is about supporting workflow by stowing equipment that is commonly used together in the same or adjacent lockers. The intention is to optimise the "get to work" time for Firefighters by reducing the number range of movement required to source critical equipment. This is one of our design principles:



One locker, one job (Optimising storage space)

'We are looking at ways we can optimise storage space and create efficiencies through logical storage depending on the type of incident being attended i.e. medical, fire or rescue. Ideally, we are looking for a "one locker one job" scenario that uses workflow analysis and ergonomics to determine the design and layout of the appliance, to reduce inefficiencies and improve health and safety outcomes'.

It has been shown that use of space can be improved by designing stowage based on design and ergonomic principles.

Key principles were:

- Smarter stowage
- Stow heavier items down low to reduce lifting injuries
- Present the equipment to the firefighter using:
    - pull out trays
    - swing out tool boards
    - tilting shelves
- Long equipment should be comfortable to reach for firefighters of varying heights
- Initial 'get to work' tools and equipment should be accessible from the kerbside.
- Secondary or support equipment e.g. additional hose etc, can be located elsewhere.

Applying this learning to the next generation Type 3 Appliance would see any new appliances being delivered to a station, fitted out, to a 'baselined equipment', with a selection of standard equipment for that type of appliance. This could enable better management of the equipment through the life of the appliance and the equipment. Larger equipment e.g. ladders, PPV fans, portable pumps, etc would live with the appliance for the duration of its service life.

A planned stowage approach allows for contaminant management and for clean equipment like medical kits, oxygen cylinders, defibrillators, overalls, dust-masks, etc to be stored away from motor or battery powered tools, or other equipment contaminated by the products of combustion.

Suggested locker equipment groupings for both a Pump and Pump Rescue Tender are shown on the following.

15. Appendix 14: Warranty Items

Category	Component	Warranty Period
Cab chassis	Cab including doors, handles, seating, steps, all associated cabin electrical and functional systems	
	Cab painting and rustproofing	
	Wiring and electrical systems and circuits	
	Chassis rail strength including cross members and mounting points	
	Chassis rail paint and rustproofing	
	Engine and all associated systems	
	Gearbox and associated systems	
	Drive line and associated systems	
	Steering and suspension systems	
	PTO, live drive and associated systems	
	Tyres and rims	
Pump	Pump and all components	
	Mounting and support systems	
Waterways	All valving and components	
	Pipework and associated components	
	Hose reel and all associated components	
Superstructure	All locker and cabinet doors	
	Shelving and stowage systems	
	Water tank and components	
	All body and lighting systems	
	Emergency service lighting and systems	
	Emergency radios, sirens and all systems including antenna	
	Foam systems	
	Multiplex modules and systems	

Category	Component	Warranty Period
	Body paintwork	
	Conspicuity and signage	
	Monitor and associated systems	
	Nozzles and waterways adaptors	
	Pumping system controllers and circuitry	
	Throttle control systems	
	On board charging systems	
	BA seats and mountings	
	Ladder mounting and gantry systems	
	ALP's systems	
Other	All other components, not separately specified in this table	

16. Appendix 15: Service Level Agreement

Without limiting Supplier's other obligations under this Agreement, Supplier will ensure that it meets the following Service Levels: Where there is a highlighted [x] supplier are to propose their service level agreements

Incident type	Service Level
Mean Time Between Defects	The Mean Time Between Defects for each Vehicle must be not less than [x] days. ***Mean Time Between Defects*** as at the end of any month, means the total number of Defects that have occurred in the rolling period of 12 months ending at the close of that month, divided by the number of days in the same period. Defects due to any cause beyond the reasonable control of Supplier and its Contractors will be excluded from this calculation.
Time to Fix Defects	For each Defect that Fire and Emergency NZ requires Supplier to remedy under clause 7 or clause 9.4 of this Agreement, the Time to Fix must be no more than: • [x] Business Days for any Defect that, in Fire and Emergency NZ's reasonable opinion, requires the Vehicle to be removed from active service. • [x] Business for any other Defect. ***Time to Fix*** means the time elapsed from when Fire and Emergency NZ notifies the Defect or Complex Fault to Supplier, until the time that the Defect or Complex Fault has been remedied to Fire and Emergency NZ 's reasonable satisfaction and the repaired Vehicle redelivered to Fire and Emergency NZ. The Time to Fix excludes any period of delay caused by Fire and Emergency NZ failing to make the Vehicle available for collection by Supplier or its Service Agent.
Service Agent Requests	For each Quarter, Supplier must ensure that not less than [x]% of all Service Agent Requests submitted during the Quarter are fulfilled within [x] Business Days of Supplier receiving the Service Agent Request. ***Service Agent Request means*** a request from a Fire and Emergency NZ Service Agent for a spare part, equipment or proprietary tool referred to in clause 9.5 of this Agreement.