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1. PURPOSE

- 1.1 The Department for Transport Dangerous Goods Division (DGD) intends to let a contract for provision of research into the development of performance based safety standards for petroleum road fuel tankers. It is anticipated that the outputs from this research will underpin UK proposals for test procedures to be included in the relevant standards and/or regulations.
- 1.2 The Department wishes to appoint a project manager to establish, progress and ensure the timely, successful, delivery of the above research on its behalf. This work specification relates solely to the appointment of the project manager.
- 1.3 The project manager will be required to work closely with DGD policy and technical leads, keep external stakeholders informed of the research and provide robust technical support in taking forward the research findings. A key part of the role will be to ensure any reporting of the research is well suited to assisting policy makers in developing future requirements for assessing the safety performance of such tankers.
- 1.4 Furthermore, given that a single organisation is considered unlikely to be able to deliver all aspects of the research into performance based safety standards for petroleum road fuel tankers, it is anticipated that a key part of the project manager role will be to bring together the sub-package reports into a summary report.

2. BACKGROUND TO THE CONTRACTING AUTHORITY

- 2.1 DGD leads on the policy for the safe and secure carriage of dangerous goods by road and rail and also has oversight of the sea and air modes. Goods that are classified as hazardous are vital to our economy and a modern way of life, and can include chemicals for industry, fuel to heat and light our homes, or batteries which power our gadgets. Movement of such goods is essential, but it has to be carried out in a way which minimises the risk of harm to people, property or the environment.
- 2.2 The Division's objective is therefore to ensure that the regulations continue to safeguard the carriage of dangerous goods, but in a manner that is proportionate and does not needlessly hinder trade. The division also exists to ensure that the UK compliance and enforcement framework is as effective as possible.
- 2.3 The DGD research programme derives from recent experience with non-compliant petrol tankers which could have led to the failure of some fuel deliveries. The programme supports implementation of lessons learned and further proportionate improvements to the design, construction, testing and inspection of tankers, so as to reduce the risk of non-compliance and avoid further issues. It will also support the UK negotiating position at international standards fora, minimising the risk of disproportionate regulations and backing the UK interest.

3. BACKGROUND TO REQUIREMENT

- 3.1 Since 2013, the Department for Transport DGD has successfully brought about the withdrawal from service of around 230 non-compliant petroleum tankers manufactured by GRW in South Africa. This withdrawal programme was based on robust evidence from research, which enabled the issue to be resolved without compromising road safety or disrupting fuel supplies. The research reports were published in December 2014 and November 2015 and can be found at www.gov.uk – search for "Petroleum

- road fuel tankers: technical assessment, December 2014” and “Petroleum fuel tankers: technical assessment, November 2015”.
- 3.2 More recently subsequent research has been completed on welded repairs and the assessment of BS EN 13094 lap and partition joint designs. This research also looked at end dish ruptures of tanks in rollover incidents and at meetings of the relevant standards working group, helped secure agreement on improvements to the tanker design and construction standard aimed at reducing the possibility of end dish ruptures in rollover incidents.
- 3.3 This more recent research on welded repairs concluded, amongst other things, that the tanker service environment, the level of internal surface saturation and contamination that cannot be mechanically or chemically removed without loss of material thickness, and the weld repair practice adopted will have a significant influence on the success of a welded repair satisfying a commercial standard quality criteria for gas pore and porosity levels.
- 3.4 The conclusions of this research were taken into account during the preparation of preliminary guidelines for repairs and modification of tanks for the carriage of dangerous goods. Further work would be necessary if the procedures for welded repairs were to be improved. The research to date is yet to be published but the final versions of the reports are available on request.
- 3.5 Further research commissioned by DGD is looking to establish state-of-the-art requirements for finite element analysis of other aspects of tanker design under rollover, frontal, side and rear impact conditions. The findings of this research are helping to develop a revised version of standard EN13094 to be adopted into regulations for July 2021.
- 3.6 The focus of the current research, to be managed by the appointed project manager, will be to establish performance based safety test procedures for petroleum fuel tankers that may be used as an alternative to the constraints of the existing design and construction rules. Under the DGD research programme, this research will be known as work package 5 (WP5).
- 3.7 It is anticipated the new test procedures will enable manufacturers to develop tank shells using design and construction methods not necessarily depicted in the standards, but which are nevertheless able to sustain rollover, frontal, side and rear impacts without having to use a series of more costly full scale tests. In so doing, the new test procedures will reduce barriers to new tanker designs and construction technologies, and further improve the regulations and standards.
- 3.8 Any new test procedures would need to be specified in the relevant standard or a national technical code. EN 13094 Design and Construction – Gravity discharge tanks and EN 12972 Testing, inspection and marking of metallic tanks are the standards referenced in ADR for the design, construction, inspection and testing of petroleum road tankers. The DGD are actively involved in the continual review of these standards and it is anticipated that the results of the WP5 research will underpin the UK input to these reviews.
- 3.9 In accordance with the requirements of the ‘Public Services (Social Value) Act 2012’ the Department considers that this research has the potential to facilitate an
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improvement in the environmental effects of the transport of dangerous goods, specifically the transport of petroleum road fuels.

4. DEFINITIONS

Expression or Acronym	Definition
ADR	Accord Dangereux Routier (regulations concerning the international transport of dangerous goods by road)
DGD	Department for Transport Dangerous Goods Division
WP5	Work package 5 of the DGD petroleum road fuel tankers research programme.
GMH	Department for Transport, Great Minster House, 33 Horseferry Road, London, SW1P 4DR.

5. SCOPE OF REQUIREMENT

5.1 The scope of the work of the Project Manager is to facilitate the procurement and management of research project WP5 for the DGD by:

- 5.1.1 Taking a leading role in the preparation of the research tender documentation, preparing all of the appropriate documentation required for research procurement, working with procurement colleagues to ensure that the most appropriate procurement strategy is employed.
- 5.1.2 Working with procurement colleagues to respond to any questions and queries that arise from potential suppliers, lead the assessment of tender responses alongside DGD officials to ensure that the most suitable provider is chosen and identify and respond to any risks to the project and its deliverables.
- 5.1.3 Assisting as required in the commissioning of the research and holding regular progress meetings with the appointed research contractor(s). To review the content and pace of the work and to guide subsequent research and/or modifications to the work as appropriate.
- 5.1.4 Liaising with DGD officials to keep them informed of progress and the findings of the work. Seek their input on the direction and management of the research, take forward lessons emerging from the project and keep major internal and external stakeholders informed of progress.
- 5.1.5 Working with policy and technical leads in DGD, with peers elsewhere and with the research contractor(s) to agree content, format and timing of all reports/outputs in formats suitable for eventual publication and/or circulation to domestic and international experts.
- 5.1.6 Supporting policy and technical leads in the DGD at domestic and international discussions regarding the co-ordination of the research with other research elsewhere, dissemination and potential proposals for the implementation of the research findings in standards and /or regulations.

- 5.2 In respect to paragraph 5.1.6 it is anticipated that the project manager will need to provide support and participate at the following domestic and international meetings:
- 5.2.1 Meetings with domestic stakeholders responsible for design, construction, testing and inspection of petroleum fuel tankers (normally held in a mutually convenient location in the UK). Support and participate at such meetings on three occasions.
 - 5.2.2 Meetings of national experts and relevant standards working groups; usually held at BSI (Chiswick) and VdTUV (Berlin). Support and participate at such meetings on six occasions.
 - 5.2.3 The UN ECE Joint Meeting Informal Working Group on the inspection and certification of tanks (normally held in London or by exception elsewhere at a mutually convenient location for the Contracting Parties of the European agreement on the ADR) or the UN ECE Joint Meeting Working Group on tanks (normally held in Geneva in September and Bern in March). Support and participate at such meetings on three occasions.

6. THE REQUIREMENT

- 6.1 The Department requires a project manager to successfully deliver the WP5 fuel tanker research to technical, time and budget requirements, producing outputs of a quality that would, if appropriate, underpin proposals to amend the relevant standards and regulations. As a minimum it is anticipated this will require the project manager to:
- 6.1.1 Define and manage the scope and activities required at each stage of the WP5 project as appropriate (tender documents, project plan etc.).
 - 6.1.2 Develop and apply intelligent pro-active governance to support successful delivery of the project.
 - 6.1.3 To plan / chair / contribute to project status meetings (review of progress, risks, issues and actions), between the project manager, DGD officials and the successful WP5 contractor.
 - 6.1.4 To compile and circulate meeting agenda, minutes, briefing papers, actions points and distribute timely project communications.
 - 6.1.5 To maintain and manage electronic and paper-file management processes for project work and maintaining those files.
 - 6.1.6 To maintain a project risks/issues management log and manage/escalate issues such as changes to the technical aspects of the study for agreement at the appropriate level.
 - 6.1.7 As set out in paragraph 7.3, it is anticipated that the research carried out under WP5 will be divided into appropriate sub-packages. A key part of the project manager's role will therefore be to effectively manage the deliverables from each of these sub-packages in order to deliver the required WP5 outputs.
 - 6.1.8 To bring together the outputs from any WP5 sub-packages into a single summary report.

- 6.2 The Department considers individuals for this work are likely to require:
- 6.2.1 Excellent organisational skills with the ability to organise and plan own work and that of others to deliver agreed results to high quality on time and to budget.
 - 6.2.2 Flexibility and adaptability in responding to changing demands and a willingness to take a hands on approach to deliver project outputs.
 - 6.2.3 Good inter-personal skills and a tactful and diplomatic approach.
 - 6.2.4 Experience of managing and delivering projects in a public sector context, and
 - 6.2.5 Technical expertise in heavy vehicle road safety issues ideally with relevant experience in petroleum road fuel tanker safety.

7. OUTLINE OF WORK PACKAGE 5 RESEARCH

- 7.1 The purpose of the research will be to develop performance based safety test procedures for fuel tankers which will provide manufacturers with an alternative to the current prescriptive design requirements. It is anticipated that should the current regulations be amended with alternative requirements that sit alongside the current rules, this will provide manufacturers with the freedom to bring innovative more efficient designs to the market.
- 7.2 It is anticipated that this research will therefore include:
- 7.2.1 A review of any accident data relating to road fuel tankers that may be available in the UK and elsewhere, particularly any incidents involving tankers that have been constructed to the current requirements applied by ADR.
 - 7.2.2 Finite Element modelling of road fuel tankers designed to the latest construction rules to determine a benchmark of performance and highlight any deficiencies that could affect safety in accidents and under normal service conditions.
 - 7.2.3 The development of performance based tests for rollover and front, side, rear impacts that are equivalent to the current design rules, taking into consideration any findings arising from the outcomes of paragraph 7.2.2.
 - 7.2.4 Liaising with UK manufacturers and academia during the development of these performance based tests to ensure end user views are taken into consideration and the end product is fit for purpose.
 - 7.2.5 Physical full scale impact tests to validate the performance based tests that have been developed and provide a high level of confidence that an equivalent level of safety performance will be provided.
- 7.3 It is considered unlikely that a single organisation will be able to complete all the research, testing and validation requirements set out above. It is therefore anticipated that this work will need to be divided into discrete sub-packages and the outputs brought together by the project manager in a summary report.

8. KEY MILESTONES

8.1 The milestones outlined below indicate the anticipated timescales for the delivery of research project WP5.

Milestone	Description	Timeframe
WP005/01	Completion of research tender documents for WP5 and work with DfT procurement colleagues to identify a delivery route and ensure invitations to tender are released.	Four weeks from the date the project manager contract is let.
WP005/02	Overseeing the assessment of tenders that may be submitted and awarding contract(s) for research project WP5	Four weeks from the date that bids are received.
WP005/03	Project management of research under WP5 including overseeing the delivery of all research reports.	From date WP5 begins to December 2020.
WP005/04	Support DGD at the meetings specified in section 5 in disseminating and taking forward the WP5 research findings.	September 2019 to December 2020.
WP005/05	Delivery of draft summary report.	December 2020.
WP005/06	Support DGD at the meetings specified in section 5 in disseminating and taking forward the WP5 research findings.	January 2021 to March 2021.
WP005/07	Delivery of final summary report.	March 2021.

9. AUTHORITY'S RESPONSIBILITIES

9.1 Not applicable – no specific responsibilities owned by the Authority which may either affect the Potential Provider's ability to deliver the requirement or their costs.

10. REPORTING

10.1 The successful Project Manager shall submit a monthly report to the DfT project officer providing an update on the progress of research project WP5 and the status of any issues identified. It is anticipated that this report shall be in the form of an email and include a single internal document, updated each month, summarising key points of the research.

10.2 Quarterly project meetings will be arranged at either the Project Manager's site (if appropriate), at any other site(s) where the research may be conducted or at GMH. These will be arranged at mutually convenient times once the contract is in place.

11. CONTINUOUS IMPROVEMENT

11.1 Changes to the way in which the Services are to be delivered must be brought to the Authority's attention and agreed prior to any changes being implemented.

12. SUSTAINABILITY

- 12.1 Potential providers should be mindful during their submissions of the Department's priority to deliver safe, secure and sustainable travel. The submissions should detail any specific impacts on the sustainability of the transport of dangerous goods that are to be considered as part of this research.

13. QUALITY

- 13.1 The provider is required to be certified to operate an ISO 9001 accredited management system. Certification to other management systems such as health and safety and/or environment are desirable and should be referenced in the submission.

14. FINANCIAL ASPECTS

- 14.1 Please include a cost profile showing the anticipated expenditure for each deliverable (set out in the milestones in section 8.1 of this document) in your proposal along with overall cost. The final invoice should be at least 10% of the full cost of the contract and prices should be inclusive of all expenses and exclusive of VAT. Any Prices shall remain firm until the end of the contract.
- 14.2 Travel and accommodation costs shall be booked by the supplier. The cost for all travel and accommodation will be included in the contract value and shall not exceed civil service staff rates without prior agreement from the project officer. Guidance on the applicable rates will be provided by the project officer.
- 14.3 Prices are to be submitted on the Price Schedule via the price schedule response in the AWARD e-portal and should exclude VAT.

15. STAFF AND CUSTOMER SERVICE

- 15.1 The successful Project Manager should be reputable and independent with skills, knowledge and experience in the management of small-medium scale science and engineering research projects.
- 15.2 The successful Project Manager will need to have strong international presence in the standards making community and sufficient strength in depth to ensure appropriate representation at meetings of the relevant standards working groups.
- 15.3 The successful Project Manager will be expected to work with DGD officials in both inside and outside discussions with working group delegates, presenting the work as however may be appropriate to both the standards and legislative bodies. The skills and experience of those who are to undertake the work should be demonstrated by referencing publications, conference presentations, professional qualifications and descriptions of previous projects or case studies.
- 15.4 The Department considers the essential skills and experience required by the project manager are likely to be:
- 15.4.1 Proven experience in project management, particularly in science and engineering research projects, underpinning by experience in quality management.

15.4.2 Substantial experience of vehicle safety research, policy development and project leadership, ideally related to heavy/dangerous goods vehicles and the development of proposals/recommendations to amend international regulations/standards.

15.5 The Department considers the desirable skills and experience required by the project manager to be:

15.5.1 Experience in national and international cooperation (in particular on research projects, technical codes and standards).

15.5.2 Technical expertise in petroleum road fuel tanker safety issues, ideally with relevant recent expertise in safety assessments and testing of tankers.

15.5.3 Experience of working with the Department for Transport or its agencies in a senior technical and research management role and with appropriate security clearances.

15.5.4 Experience of working collaboratively in/with research consortia and the co-ordination of individual work packages from diverse partner organisations.

16. SERVICE LEVELS AND PERFORMANCE

16.1 The Authority will measure the quality of the Supplier’s delivery by:

16.1.1 Delivery of proposals, presentations and reports as detailed in the Milestones section, see section 8 above.

KPI/SLA	Service Area	KPI/SLA description	Target
#1	Delivery timescales and the quality requirements for deliverable WP005/01	Completion of research tender documents for WP5 and work with the DfT procurement team to identify a delivery route and ensure invitations to tender are released.	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.
#2	Delivery timescales and the quality requirements for deliverable WP005/02	Overseeing the assessment of tenders that may be submitted and working with the DfT procurement team to award contract(s) for research project WP5	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.
#3	Delivery timescales and the quality requirements for deliverable WP005/03	Project management of research under WP5 including overseeing the delivery of all research reports.	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.

OFFICIAL
Appendix A – Statement of Requirements
P4030012
Project Manager for Work Package 5 - Research on performance test procedures for
petroleum road fuel tankers

#4	Delivery timescales and the quality requirements for deliverable WP005/04	Support DGD at the meetings specified in section 5 in disseminating and taking forward the WP5 research findings.	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.
#5	Delivery timescales and the quality requirements for deliverable WP005/05	Delivery of draft summary report.	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.
#6	Delivery timescales and the quality requirements for deliverable WP005/06	Support DGD at the meetings specified in section 5 in disseminating and taking forward the WP5 research findings.	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.
#7	Delivery timescales and the quality requirements for deliverable WP005/07	Delivery of final summary report.	Delivered by the dates specified in the milestones table in section 8.1 and to the quality requirements set out in section 6.1.

17. SECURITY REQUIREMENTS

- 17.1 The work undertaken is at “official” level and therefore no specific security requirements are necessary.
- 17.2 “Official” level work is classified by the Department as including routine business operations and services, some of which could have damaging consequences if lost, stolen or published in the media, but are not subject to a heightened threat profile.

18. INTELLECTUAL PROPERTY RIGHTS (IPR)

- 18.1 The Department for Transport will own all Intellectual Property Rights (IPR) for work generated under this contract and any contracts relating to research under WP5.

19. PAYMENT

- 19.1 Payment can only be made following satisfactory delivery of pre-agreed products and deliverables.

- 19.2 Before payment can be considered, each invoice must include a detailed breakdown of work completed and the associated costs. Where reimbursement for any travel, accommodation and or subsistence is being claimed, invoices or similar evidence must be provided.
- 19.3 To ensure prompt payment, a draft copy of invoice must be provided to the Project Officer for clearance before the final invoice is submitted.
- 19.4 Once agreed with the project officer, the final invoice shall be sent, within 10 days of the end of the month to the period which the claim relates, to: Shared Service Centre, Accounts Payable Team, Sandringham Park, Swansea Vale, Swansea, SA7 0EA.

20. ADDITIONAL INFORMATION

- 20.1 None

21. LOCATION

- 21.1 Given the requirement to work closely with DfT officials, it is anticipated that the successful project manager will be based at a location that allows, in a single day, participation in and travel to and from inception, progress and closure meetings that will be held at GMH on the same day.