



Department  
for Environment  
Food & Rural Affairs



T: 03459 335577  
helpline@defra.gov.uk  
[www.gov.uk/defra](http://www.gov.uk/defra)

  
Ricardo-AEA Ltd



Our ref: EV0492/31477

Date: 26 February 2021



Dear ,

**Award of Contract for the Supply of Batteries: Review of United Kingdom (UK) Legislation - Research Project**

Following your tender for the Supply of Batteries: Review of United Kingdom (UK) Legislation - Research Project, The Department for Environment, Food and Rural Affairs (Defra) are pleased to award this contract to you.

This letter (Award Letter) and its Annexes set out the terms of the contract between The **Department for Environment, Food and Rural Affairs (Defra)** as the Authority and **Ricardo-AEA Ltd** as the Supplier for the provision of the Services. Unless the context otherwise requires, capitalised expressions used in this Award Letter have the same meanings as in the terms and conditions of contract set out in Annex 1 to this Award Letter (the "**Conditions**"). In the event of any conflict between this Award Letter and the Conditions, this Award Letter shall prevail. Please do not attach any Supplier terms and conditions to this Award Letter as they will not be accepted by the Authority and may delay the conclusion of the Agreement.

For the purposes of the Agreement, the Authority and the Supplier agree as follows:

1. The Services shall be performed at **Ricardo-AEA Ltd** the Supplier's premises at   

2. The charges for the Services shall be as set out in Annex 2/the Supplier's tender dated **8<sup>th</sup> January 2021**

3. The specification of the Services to be supplied is as set out in Annex 3/the Supplier's tender dated **8<sup>th</sup> January 2021**
4. The Term shall commence on **1<sup>st</sup> March 2021** and the Expiry Date shall be **25<sup>th</sup> May 2021** unless extended **22<sup>nd</sup> June 2021** or subject to early termination.
5. The address for notices of the Parties are:

Authority	Supplier
Defra Waste and Recycling- Environment Quality Directorate - Environment and Rural DG [REDACTED] [REDACTED] [REDACTED]	Ricardo-AEA Ltd [REDACTED] [REDACTED] [REDACTED]

6. The following persons are Key Personnel for the purposes of the Agreement:

Name	Title
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

7. For the purposes of the Agreement the **data security requirements** as indicated in the Terms and Conditions **No11: Confidentiality, Transparency and Publicity and the Environmental Policy** is also mentioned in the attached Terms and Conditions as stated in **No:12 Freedom of Information**
8. The Authority may require the Supplier to ensure that any person employed in the provision of the Services has undertaken a Disclosure and Barring Service check. The Supplier shall ensure that no person who discloses that he/she has a conviction that is relevant to the nature of the Services, relevant to the work of the Authority, or is of a type otherwise advised by the Authority (each such conviction a "**Relevant Conviction**"), or is found by the Supplier to have a Relevant Conviction (whether as a result of a police check, a Disclosure and Barring Service check or otherwise) is employed or engaged in the provision of any part of the Services.

## Payment

Our preference is for all invoices to be sent electronically, quoting a valid purchase order number (PO Number), to [REDACTED]

Please also copy to [REDACTED] Alternatively, you may post to [REDACTED] (the Authority's preferred option); or [REDACTED] Within 10 working days of receipt of your countersigned copy of this letter, we will send you a unique PO Number. You must be in receipt of a valid PO Number before submitting an invoice.

To avoid delay in payment it is important that the invoice is compliant and that it includes a valid PO Number, PO Number item number (if applicable) and the details (name and telephone number) of your Authority contact (i.e. Contract Manager). Non-compliant invoices will be sent back to you, which may lead to a delay in payment. If you have a query regarding an outstanding payment please contact our Accounts Payable section either by email to [REDACTED] (the Authority's preferred option); or [REDACTED] between 09:00-17:00 Monday to Friday.

## Liaison

For general liaison your contact will continue to be [REDACTED] by email [REDACTED] or tel: [REDACTED] in their absence, [REDACTED] by email [REDACTED]

We thank you for your co-operation to date and look forward to forging a successful working relationship resulting in a smooth and successful delivery of the Services. The Authority would be grateful if you could arrange the contract to be executed, by way of electronic signature, on behalf of **Ricardo-AEA Ltd** Limited and within 7 days by **2<sup>nd</sup> March 2021**

**Execution of this award notification letter is carried out in accordance with EU Directive 99/93 (Community framework for electronic signatures) and the Electronic Communications Act 2000. The Contract will be formed on the date on which both Parties communicate acceptance of its terms on the Authority's eSourcing System.**

As of 23:00 of 31st December 2021 all future notices that are equal or above threshold relating to Defra group opportunities and awards will be advertised on the Finder a Tender Service (FTS), the replacement for the OJEU. The URL of the new UK e-notification service is [www.find-tender.service.gov.uk](http://www.find-tender.service.gov.uk). Access to this site will go live at 23:00 on 31st December 2020.





Department  
for Environment  
Food & Rural Affairs

# **Conditions of Contract Short Form – Services February 2021**

**EV0492 - 31477**

**Annex 1**  
**Terms and Conditions of Contract for Service**

**Interpretation**

In these terms and conditions:

“Agreement”	means the contract between (i) the Customer acting as part of the Crown and (ii) the Supplier constituted by the Supplier’s countersignature of the Award Letter and includes the Award Letter and Annexes;
“Award Letter”	means the letter from the Customer to the Supplier printed above these terms and conditions;
“Central Government Body”	<p>means a body listed in one of the following sub-categories of the Central Government classification of the Public Sector Classification Guide, as published and amended from time to time by the Office for National Statistics:</p> <ul style="list-style-type: none"><li>(a) Government Department;</li><li>(b) Non-Departmental Public Body or Assembly Sponsored Public Body (advisory, executive, or tribunal);</li><li>(c) Non-Ministerial Department; or</li><li>(d) Executive Agency;</li></ul>
“Charges”	means the charges for the Services as specified in the Award Letter;
“Confidential Information”	means all information, whether written or oral (however recorded), provided by the disclosing Party to the receiving Party and which (i) is known by the receiving Party to be confidential; (ii) is marked as or stated to be confidential; or (iii) ought reasonably to be considered by the receiving Party to be confidential;
“Customer”	means the person named as Customer in the Award Letter;
“DPA”	means the Data Protection Act 1998;
“Expiry Date”	means the date for expiry of the Agreement as set out in the Award Letter;
“FOIA”	means the Freedom of Information Act 2000;
“Information”	has the meaning given under section 84 of the FOIA;
“Key Personnel”	means any persons specified as such in the Award Letter or otherwise notified

as such by the Customer to the Supplier in writing;

“Party”	means the Supplier or the Customer (as appropriate) and “Parties” shall mean both of them;
“Personal Data”	means personal data (as defined in the DPA) which is processed by the Supplier or any Staff on behalf of the Customer pursuant to or in connection with this Agreement;
“Purchase Order Number”	means the Customer’s unique number relating to the supply of the Services;
“Request for Information”	has the meaning set out in the FOIA or the Environmental Information Regulations 2004 as relevant (where the meaning set out for the term “request” shall apply);
“Services”	means the services to be supplied by the Supplier to the Customer under the Agreement;
“Specification”	means the specification for the Services (including as to quantity, description and quality) as specified in the Award Letter;
“Staff”	means all directors, officers, employees, agents, consultants and contractors of the Supplier and/or of any sub-contractor of the Supplier engaged in the performance of the Supplier’s obligations under the Agreement;
“Staff Vetting Procedures”	means vetting procedures that accord with good industry practice or, where requested by the Customer, the Customer’s procedures for the vetting of personnel as provided to the Supplier from time to time;
“Supplier”	means the person named as Supplier in the Award Letter;
“Term”	means the period from the start date of the Agreement set out in the Award Letter to the Expiry Date as such period may be extended in accordance with clause 4.2 or terminated in accordance with the terms and conditions of the Agreement;
“VAT”	means value added tax in accordance with the provisions of the Value Added Tax Act 1994; and
“Working Day”	means a day (other than a Saturday or Sunday) on which banks are open for business in the City of London.

1.1 In these terms and conditions, unless the context otherwise requires:

- 1.1.1 references to numbered clauses are references to the relevant clause in these terms and conditions;
- 1.1.2 any obligation on any Party not to do or omit to do anything shall include an obligation not to allow that thing to be done or omitted to be done;
- 1.1.3 the headings to the clauses of these terms and conditions are for information only and

- do not affect the interpretation of the Agreement;
- 1.1.4 any reference to an enactment includes reference to that enactment as amended or replaced from time to time and to any subordinate legislation or byelaw made under that enactment; and
- 1.1.5 the word 'including' shall be understood as meaning 'including without limitation'.

## **2 Basis of Agreement**

- 2.1 The Award Letter constitutes an offer by the Customer to purchase the Services subject to and in accordance with the terms and conditions of the Agreement.
- 2.2 The offer comprised in the Award Letter shall be deemed to be accepted by the Supplier on receipt by the Customer of a copy of the Award Letter countersigned by the Supplier within [7] days of the date of the Award Letter.

## **3 Supply of Services**

- 3.1 In consideration of the Customer's agreement to pay the Charges, the Supplier shall supply the Services to the Customer for the Term subject to and in accordance with the terms and conditions of the Agreement.
- 3.2 In supplying the Services, the Supplier shall:
- 3.2.1 co-operate with the Customer in all matters relating to the Services and comply with all the Customer's instructions;
  - 3.2.2 perform the Services with all reasonable care, skill and diligence in accordance with good industry practice in the Supplier's industry, profession or trade;
  - 3.2.3 use Staff who are suitably skilled and experienced to perform tasks assigned to them, and in sufficient number to ensure that the Supplier's obligations are fulfilled in accordance with the Agreement;
  - 3.2.4 ensure that the Services shall conform with all descriptions and specifications set out in the Specification;
  - 3.2.5 comply with all applicable laws; and
  - 3.2.6 provide all equipment, tools and vehicles and other items as are required to provide the Services.
- 3.3 The Customer may by written notice to the Supplier at any time request a variation to the scope of the Services. In the event that the Supplier agrees to any variation to the scope of the Services, the Charges shall be subject to fair and reasonable adjustment to be agreed in writing between the Customer and the Supplier.

## **4 Term**

- 4.1 The Agreement shall take effect on the date specified in Award Letter and shall expire on the Expiry Date, unless it is otherwise extended in accordance with clause 4.2 or terminated in accordance with the terms and conditions of the Agreement.
- 4.2 The Customer may extend the Agreement for a period of up to 6 months by giving not less than 10 Working Days' notice in writing to the Supplier prior to the Expiry Date. The terms and conditions of the Agreement shall apply throughout any such extended period.

## **5 Charges, Payment and Recovery of Sums Due**

- 5.1 The Charges for the Services shall be as set out in the Award Letter and shall be the full and exclusive remuneration of the Supplier in respect of the supply of the Services. Unless otherwise agreed in writing by the Customer, the Charges shall include every cost and expense of the Supplier directly or indirectly incurred in connection with the performance of the Services.



- 5.2 All amounts stated are exclusive of VAT which shall be charged at the prevailing rate. The Customer shall, following the receipt of a valid VAT invoice, pay to the Supplier a sum equal to the VAT chargeable in respect of the Services.
- 5.3 The Supplier shall invoice the Customer as specified in the Agreement. Each invoice shall include such supporting information required by the Customer to verify the accuracy of the invoice, including the relevant Purchase Order Number and a breakdown of the Services supplied in the invoice period.
- 5.4 In consideration of the supply of the Services by the Supplier, the Customer shall pay the Supplier the invoiced amounts no later than 30 days after verifying that the invoice is valid and undisputed and includes a valid Purchase Order Number. The Customer may, without prejudice to any other rights and remedies under the Agreement, withhold or reduce payments in the event of unsatisfactory performance.
- 5.5 If the Customer fails to consider and verify an invoice in a timely fashion the invoice shall be regarded as valid and undisputed for the purpose of paragraph 5.4 after a reasonable time has passed.
- 5.6 If there is a dispute between the Parties as to the amount invoiced, the Customer shall pay the undisputed amount. The Supplier shall not suspend the supply of the Services unless the Supplier is entitled to terminate the Agreement for a failure to pay undisputed sums in accordance with clause 16.4. Any disputed amounts shall be resolved through the dispute resolution procedure detailed in clause 19.
- 5.7 If a payment of an undisputed amount is not made by the Customer by the due date, then the Customer shall pay the Supplier interest at the interest rate specified in the Late Payment of Commercial Debts (Interest) Act 1998.
- 5.8 Where the Supplier enters into a sub-contract, the Supplier shall include in that sub-contract:
- 5.8.1 provisions having the same effects as clauses 5.3 to 5.7 of this Agreement; and
  - 5.8.2 a provision requiring the counterparty to that sub-contract to include in any sub-contract which it awards provisions having the same effect as 5.3 to 5.8 of this Agreement.
  - 5.8.3 In this clause 5.8, "sub-contract" means a contract between two or more suppliers, at any stage of remoteness from the Authority in a subcontracting chain, made wholly or substantially for the purpose of performing (or contributing to the performance of) the whole or any part of this Agreement.
- 5.9 If any sum of money is recoverable from or payable by the Supplier under the Agreement (including any sum which the Supplier is liable to pay to the Customer in respect of any breach of the Agreement), that sum may be deducted unilaterally by the Customer from any sum then due, or which may come due, to the Supplier under the Agreement or under any other agreement or contract with the Customer. The Supplier shall not be entitled to assert any credit, set-off or counterclaim against the Customer in order to justify withholding payment of any such amount in whole or in part.

## **6 Premises and equipment**

- 6.1 If necessary, the Customer shall provide the Supplier with reasonable access at reasonable times to its premises for the purpose of supplying the Services. All equipment, tools and vehicles brought onto the Customer's premises by the Supplier or the Staff shall be at the Supplier's risk.
- 6.2 If the Supplier supplies all or any of the Services at or from the Customer's premises, on completion of the Services or termination or expiry of the Agreement (whichever is the earlier) the Supplier shall vacate the Customer's premises, remove the Supplier's plant, equipment and unused materials and all rubbish arising out of the provision of the Services and leave the Customer's premises in a clean, safe and tidy condition. The Supplier shall be solely

responsible for making good any damage to the Customer's premises or any objects contained on the Customer's premises which is caused by the Supplier or any Staff, other than fair wear and tear.

- 6.3 If the Supplier supplies all or any of the Services at or from its premises or the premises of a third party, the Customer may, during normal business hours and on reasonable notice, inspect and examine the manner in which the relevant Services are supplied at or from the relevant premises.
- 6.4 The Customer shall be responsible for maintaining the security of its premises in accordance with its standard security requirements. While on the Customer's premises the Supplier shall, and shall procure that all Staff shall, comply with all the Customer's security requirements.
- 6.5 Where all or any of the Services are supplied from the Supplier's premises, the Supplier shall, at its own cost, comply with all security requirements specified by the Customer in writing.
- 6.6 Without prejudice to clause 3.2.6, any equipment provided by the Customer for the purposes of the Agreement shall remain the property of the Customer and shall be used by the Supplier and the Staff only for the purpose of carrying out the Agreement. Such equipment shall be returned promptly to the Customer on expiry or termination of the Agreement.
- 6.7 The Supplier shall reimburse the Customer for any loss or damage to the equipment (other than deterioration resulting from normal and proper use) caused by the Supplier or any Staff. Equipment supplied by the Customer shall be deemed to be in a good condition when received by the Supplier or relevant Staff unless the Customer is notified otherwise in writing within 5 Working Days.

## **7 Staff and Key Personnel**

- 7.1 If the Customer reasonably believes that any of the Staff are unsuitable to undertake work in respect of the Agreement, it may, by giving written notice to the Supplier:
  - 7.1.1 refuse admission to the relevant person(s) to the Customer's premises;
  - 7.1.2 direct the Supplier to end the involvement in the provision of the Services of the relevant person(s); and/or
  - 7.1.3 require that the Supplier replace any person removed under this clause with another suitably qualified person and procure that any security pass issued by the Customer to the person removed is surrendered,and the Supplier shall comply with any such notice.
- 7.2 The Supplier shall:
  - 7.2.1 ensure that all Staff are vetted in accordance with the Staff Vetting Procedures;
  - 7.2.2 if requested, provide the Customer with a list of the names and addresses (and any other relevant information) of all persons who may require admission to the Customer's premises in connection with the Agreement; and
  - 7.2.3 procure that all Staff comply with any rules, regulations and requirements reasonably specified by the Customer.
- 7.3 Any Key Personnel shall not be released from supplying the Services without the agreement of the Customer, except by reason of long-term sickness, maternity leave, paternity leave, termination of employment or other extenuating circumstances.
- 7.4 Any replacements to the Key Personnel shall be subject to the prior written agreement of the Customer (not to be unreasonably withheld). Such replacements shall be of at least equal status or of equivalent experience and skills to the Key Personnel being replaced and be suitable for the responsibilities of that person in relation to the Services.

## **8 Assignment and sub-contracting**

- 8.1 The Supplier shall not without the written consent of the Customer assign, sub-contract, novate or in any way dispose of the benefit and/ or the burden of the Agreement or any part of

the Agreement. The Customer may, in the granting of such consent, provide for additional terms and conditions relating to such assignment, sub-contract, novation or disposal. The Supplier shall be responsible for the acts and omissions of its sub-contractors as though those acts and omissions were its own.

- 8.2 Where the Customer has consented to the placing of sub-contracts, the Supplier shall, at the request of the Customer, send copies of each sub-contract, to the Customer as soon as is reasonably practicable.
- 8.3 The Customer may assign, novate, or otherwise dispose of its rights and obligations under the Agreement without the consent of the Supplier provided that such assignment, novation or disposal shall not increase the burden of the Supplier's obligations under the Agreement.

## **9 Intellectual Property Rights**

- 9.1 All intellectual property rights in any materials provided by the Customer to the Supplier for the purposes of this Agreement shall remain the property of the Customer but the Customer hereby grants the Supplier a royalty-free, non-exclusive and non-transferable licence to use such materials as required until termination or expiry of the Agreement for the sole purpose of enabling the Supplier to perform its obligations under the Agreement.
- 9.2 All intellectual property rights in any materials created or developed by the Supplier pursuant to the Agreement or arising as a result of the provision of the Services shall vest in the Supplier. If, and to the extent, that any intellectual property rights in such materials vest in the Customer by operation of law, the Customer hereby assigns to the Supplier by way of a present assignment of future rights that shall take place immediately on the coming into existence of any such intellectual property rights all its intellectual property rights in such materials (with full title guarantee and free from all third party rights).
- 9.3 The Supplier hereby grants the Customer:
  - 9.3.1 a perpetual, royalty-free, irrevocable, non-exclusive licence (with a right to sub-license) to use all intellectual property rights in the materials created or developed pursuant to the Agreement and any intellectual property rights arising as a result of the provision of the Services; and
  - 9.3.2 a perpetual, royalty-free, irrevocable and non-exclusive licence (with a right to sub-license) to use:
    - (a) any intellectual property rights vested in or licensed to the Supplier on the date of the Agreement; and
    - (b) any intellectual property rights created during the Term but which are neither created or developed pursuant to the Agreement nor arise as a result of the provision of the Services,

including any modifications to or derivative versions of any such intellectual property rights, which the Customer reasonably requires in order to exercise its rights and take the benefit of the Agreement including the Services provided.

- 9.4 The Supplier shall indemnify, and keep indemnified, the Customer in full against all costs, expenses, damages and losses (whether direct or indirect), including any interest, penalties, and reasonable legal and other professional fees awarded against or incurred or paid by the Customer as a result of or in connection with any claim made against the Customer for actual or alleged infringement of a third party's intellectual property arising out of, or in connection with, the supply or use of the Services, to the extent that the claim is attributable to the acts or omission of the Supplier or any Staff.

## **10 Governance and Records**

- 10.1 The Supplier shall:
  - 10.1.1 attend progress meetings with the Customer at the frequency and times specified by

the Customer and shall ensure that its representatives are suitably qualified to attend such meetings; and

10.1.2 submit progress reports to the Customer at the times and in the format specified by the Customer.

10.2 The Supplier shall keep and maintain until 6 years after the end of the Agreement, or as long a period as may be agreed between the Parties, full and accurate records of the Agreement including the Services supplied under it and all payments made by the Customer. The Supplier shall on request afford the Customer or the Customer's representatives such access to those records as may be reasonably requested by the Customer in connection with the Agreement.

## **11 Confidentiality, Transparency and Publicity**

11.1 Subject to clause 11.2, each Party shall:

11.1.1 treat all Confidential Information it receives as confidential, safeguard it accordingly and not disclose it to any other person without the prior written permission of the disclosing Party; and

11.1.2 not use or exploit the disclosing Party's Confidential Information in any way except for the purposes anticipated under the Agreement.

11.2 Notwithstanding clause 11.1, a Party may disclose Confidential Information which it receives from the other Party:

11.2.1 where disclosure is required by applicable law or by a court of competent jurisdiction;

11.2.2 to its auditors or for the purposes of regulatory requirements;

11.2.3 on a confidential basis, to its professional advisers;

11.2.4 to the Serious Fraud Office where the Party has reasonable grounds to believe that the other Party is involved in activity that may constitute a criminal offence under the Bribery Act 2010;

11.2.5 where the receiving Party is the Supplier, to the Staff on a need to know basis to enable performance of the Supplier's obligations under the Agreement provided that the Supplier shall procure that any Staff to whom it discloses Confidential Information pursuant to this clause 11.2.5 shall observe the Supplier's confidentiality obligations under the Agreement; and

11.2.6 where the receiving Party is the Customer:

(a) on a confidential basis to the employees, agents, consultants and contractors of the Customer;

(b) on a confidential basis to any other Central Government Body, any successor body to a Central Government Body or any company to which the Customer transfers or proposes to transfer all or any part of its business;

(c) to the extent that the Customer (acting reasonably) deems disclosure necessary or appropriate in the course of carrying out its public functions; or

(d) in accordance with clause 12.

and for the purposes of the foregoing, references to disclosure on a confidential basis shall mean disclosure subject to a confidentiality agreement or arrangement containing terms no less stringent than those placed on the Customer under this clause 11.

11.3 The Parties acknowledge that, except for any information which is exempt from disclosure in

accordance with the provisions of the FOIA, the content of the Agreement is not Confidential Information and the Supplier hereby gives its consent for the Customer to publish this Agreement in its entirety to the general public (but with any information that is exempt from disclosure in accordance with the FOIA redacted) including any changes to the Agreement agreed from time to time. The Customer may consult with the Supplier to inform its decision regarding any redactions but shall have the final decision in its absolute discretion whether any of the content of the Agreement is exempt from disclosure in accordance with the provisions of the FOIA.

- 11.4 The Supplier shall not, and shall take reasonable steps to ensure that the Staff shall not, make any press announcement or publicise the Agreement or any part of the Agreement in any way, except with the prior written consent of the Customer.

## **12 Freedom of Information**

- 12.1 The Supplier acknowledges that the Customer is subject to the requirements of the FOIA and the Environmental Information Regulations 2004 and shall:

12.1.1 provide all necessary assistance and cooperation as reasonably requested by the Customer to enable the Customer to comply with its obligations under the FOIA and the Environmental Information Regulations 2004;

12.1.2 transfer to the Customer all Requests for Information relating to this Agreement that it receives as soon as practicable and in any event within 2 Working Days of receipt;

12.1.3 provide the Customer with a copy of all Information belonging to the Customer requested in the Request for Information which is in its possession or control in the form that the Customer requires within 5 Working Days (or such other period as the Customer may reasonably specify) of the Customer's request for such Information; and

12.1.4 not respond directly to a Request for Information unless authorised in writing to do so

12.1.5

12.1.6 by the Customer.

- 12.2 The Supplier acknowledges that the Customer may be required under the FOIA and the Environmental Information Regulations 2004 to disclose Information concerning the Supplier or the Services (including commercially sensitive information) without consulting or obtaining consent from the Supplier. In these circumstances the Customer shall, in accordance with any relevant guidance issued under the FOIA, take reasonable steps, where appropriate, to give the Supplier advance notice, or failing that, to draw the disclosure to the Supplier's attention after any such disclosure.

- 12.3 Notwithstanding any other provision in the Agreement, the Customer shall be responsible for determining in its absolute discretion whether any Information relating to the Supplier or the Services is exempt from disclosure in accordance with the FOIA and/or the Environmental Information Regulations 2004.

## **13 Protection of Personal Data and Security of Data**

- 13.1 The Supplier shall, and shall procure that all Staff shall, comply with any notification requirements under the DPA and both Parties shall duly observe all their obligations under the DPA which arise in connection with the Agreement.

- 13.2 Notwithstanding the general obligation in clause 13.1, where the Supplier is processing Personal Data for the Customer as a data processor (as defined by the DPA) the Supplier shall:

13.2.1 ensure that it has in place appropriate technical and organisational measures to ensure the security of the Personal Data (and to guard against unauthorised or unlawful processing of the Personal Data and against accidental loss or destruction of, or damage to, the Personal Data), as required under the Seventh Data Protection

Principle in Schedule 1 to the DPA;

13.2.2 provide the Customer with such information as the Customer may reasonably request to satisfy itself that the Supplier is complying with its obligations under the DPA;

13.2.3 promptly notify the Customer of:

- (a) any breach of the security requirements of the Customer as referred to in clause 13.3; and
- (b) any request for personal data; and

13.2.4 ensure that it does not knowingly or negligently do or omit to do anything which places the Customer in breach of the Customer's obligations under the DPA.

13.3 When handling Customer data (whether or not Personal Data), the Supplier shall ensure the security of the data is maintained in line with the security requirements of the Customer as notified to the Supplier from time to time.

## **14 Liability**

14.1 The Supplier shall not be responsible for any injury, loss, damage, cost or expense suffered by the Customer if and to the extent that it is caused by the negligence or wilful misconduct of the Customer or by breach by the Customer of its obligations under the Agreement.

14.2 Subject always to clauses 14.3 and 14.4:

14.2.1 the aggregate liability of the Supplier in respect of all defaults, claims, losses or damages howsoever caused, whether arising from breach of the Agreement, the supply or failure to supply of the Services, misrepresentation (whether tortious or statutory), tort (including negligence), breach of statutory duty or otherwise shall in no event exceed a sum equal to 125% of the Charges paid or payable to the Supplier; and

14.2.2 except in the case of claims arising under clauses 9.4 and 18.3, in no event shall the Supplier be liable to the Customer for any:

- (a) loss of profits;
- (b) loss of business;
- (c) loss of revenue;
- (d) loss of or damage to goodwill;
- (e) loss of savings (whether anticipated or otherwise); and/or
- (f) any indirect, special or consequential loss or damage.

14.3 Nothing in the Agreement shall be construed to limit or exclude either Party's liability for:

14.3.1 death or personal injury caused by its negligence or that of its Staff;

14.3.2 fraud or fraudulent misrepresentation by it or that of its Staff; or

14.3.3 any other matter which, by law, may not be excluded or limited.

14.4 The Supplier's liability under the indemnity in clause 9.4 and 18.3 shall be unlimited.

## **15 Force Majeure**

Neither Party shall have any liability under or be deemed to be in breach of the Agreement for any delays or failures in performance of the Agreement which result from circumstances beyond the reasonable control of the Party affected. Each Party shall promptly notify the other Party in writing when such circumstances cause a delay or failure in performance and when they cease to do so. If such circumstances continue for a continuous period of more than two months, either Party may terminate the Agreement by written notice to the other Party.

## **16 Termination**

- 16.1 The Customer may terminate the Agreement at any time by notice in writing to the Supplier to take effect on any date falling at least 1 month (or, if the Agreement is less than 3 months in duration, at least 10 Working Days) later than the date of service of the relevant notice.
- 16.2 Without prejudice to any other right or remedy it might have, the Customer may terminate the Agreement by written notice to the Supplier with immediate effect if the Supplier:
- 16.2.1 (without prejudice to clause 16.2.5), is in material breach of any obligation under the Agreement which is not capable of remedy;
  - 16.2.2 repeatedly breaches any of the terms and conditions of the Agreement in such a manner as to reasonably justify the opinion that its conduct is inconsistent with it having the intention or ability to give effect to the terms and conditions of the Agreement;
  - 16.2.3 is in material breach of any obligation which is capable of remedy, and that breach is not remedied within 30 days of the Supplier receiving notice specifying the breach and requiring it to be remedied;
  - 16.2.4 undergoes a change of control within the meaning of section 416 of the Income and Corporation Taxes Act 1988;
  - 16.2.5 breaches any of the provisions of clauses 7.2, 11, 12, 13 and 17;
  - 16.2.6 becomes insolvent, or if an order is made or a resolution is passed for the winding up of the Supplier (other than voluntarily for the purpose of solvent amalgamation or reconstruction), or if an administrator or administrative receiver is appointed in respect of the whole or any part of the Supplier's assets or business, or if the Supplier makes any composition with its creditors or takes or suffers any similar or analogous action (to any of the actions detailed in this clause 16.2.6) in consequence of debt in any jurisdiction; or
  - 16.2.7 fails to comply with legal obligations in the fields of environmental, social or labour law.
- 16.3 The Supplier shall notify the Customer as soon as practicable of any change of control as referred to in clause 16.2.4 or any potential such change of control.
- 16.4 The Supplier may terminate the Agreement by written notice to the Customer if the Customer has not paid any undisputed amounts within 90 days of them falling due.
- 16.5 Termination or expiry of the Agreement shall be without prejudice to the rights of either Party accrued prior to termination or expiry and shall not affect the continuing rights of the Parties under this clause and clauses 2, 3.2, 6.1, 6.2, 6.6, 6.7, 7, 9, 10.2, 11, 12, 13, 14, 16.6, 17.4, 18.3, 19 and 20.7 or any other provision of the Agreement that either expressly or by implication has effect after termination.
- 16.6 Upon termination or expiry of the Agreement, the Supplier shall:
- 16.6.1 give all reasonable assistance to the Customer and any incoming supplier of the Services; and
  - 16.6.2 return all requested documents, information and data to the Customer as soon as reasonably practicable.

## **17 Compliance**

- 17.1 The Supplier shall promptly notify the Customer of any health and safety hazards which may arise in connection with the performance of its obligations under the Agreement. The Customer shall promptly notify the Supplier of any health and safety hazards which may exist or arise at the Customer's premises and which may affect the Supplier in the performance of its obligations under the Agreement.

17.2 The Supplier shall:

- 17.2.1 comply with all the Customer's health and safety measures while on the Customer's premises; and
- 17.2.2 notify the Customer immediately in the event of any incident occurring in the performance of its obligations under the Agreement on the Customer's premises where that incident causes any personal injury or damage to property which could give rise to personal injury.

17.3 The Supplier shall:

- 17.3.1 perform its obligations under the Agreement in accordance with all applicable equality Law and the Customer's equality and diversity policy as provided to the Supplier from time to time; and
- 17.3.2 take all reasonable steps to secure the observance of clause 17.3.1 by all Staff.

17.4 The Supplier shall supply the Services in accordance with the Customer's environmental policy as provided to the Supplier from time to time.

17.5 The Supplier shall comply with, and shall ensure that its Staff shall comply with, the provisions of:

- 17.5.1 the Official Secrets Acts 1911 to 1989; and
- 17.5.2 section 182 of the Finance Act 1989.

## 18 Prevention of Fraud and Corruption

18.1 The Supplier shall not offer, give, or agree to give anything, to any person an inducement or reward for doing, refraining from doing, or for having done or refrained from doing, any act in relation to the obtaining or execution of the Agreement or for showing or refraining from showing favour or disfavour to any person in relation to the Agreement.

18.2 The Supplier shall take all reasonable steps, in accordance with good industry practice, to prevent fraud by the Staff and the Supplier (including its shareholders, members and directors) in connection with the Agreement and shall notify the Customer immediately if it has reason to suspect that any fraud has occurred or is occurring or is likely to occur.

18.3 If the Supplier or the Staff engages in conduct prohibited by clause 18.1 or commits fraud in relation to the Agreement or any other contract with the Crown (including the Customer) the Customer may:

- 18.3.1 terminate the Agreement and recover from the Supplier the amount of any loss suffered by the Customer resulting from the termination, including the cost reasonably incurred by the Customer of making other arrangements for the supply of the Services and any additional expenditure incurred by the Customer throughout the remainder of the Agreement; or
- 18.3.2 recover in full from the Supplier any other loss sustained by the Customer in consequence of any breach of this clause.

## 19 Dispute Resolution

19.1 The Parties shall attempt in good faith to negotiate a settlement to any dispute between them arising out of or in connection with the Agreement and such efforts shall involve the escalation of the dispute to an appropriately senior representative of each Party.

19.2 If the dispute cannot be resolved by the Parties within one month of being escalated as referred to in clause 19.1, the dispute may by agreement between the Parties be referred to a neutral adviser or mediator (the "**Mediator**") chosen by agreement between the Parties. All negotiations connected with the dispute shall be conducted in confidence and without prejudice to the rights of the Parties in any further proceedings.



- 19.3 If the Parties fail to appoint a Mediator within one month, or fail to enter into a written agreement resolving the dispute within one month of the Mediator being appointed, either Party may exercise any remedy it has under applicable law.

## **20 General**

- 20.1 Each of the Parties represents and warrants to the other that it has full capacity and authority, and all necessary consents, licences and permissions to enter into and perform its obligations under the Agreement, and that the Agreement is executed by its duly authorised representative.
- 20.2 A person who is not a party to the Agreement shall have no right to enforce any of its provisions which, expressly or by implication, confer a benefit on him, without the prior written agreement of the Parties.
- 20.3 The Agreement cannot be varied except in writing signed by a duly authorised representative of both the Parties.
- 20.4 The Agreement contains the whole agreement between the Parties and supersedes and replaces any prior written or oral agreements, representations or understandings between them. The Parties confirm that they have not entered into the Agreement on the basis of any representation that is not expressly incorporated into the Agreement. Nothing in this clause shall exclude liability for fraud or fraudulent misrepresentation.
- 20.5 Any waiver or relaxation either partly, or wholly of any of the terms and conditions of the Agreement shall be valid only if it is communicated to the other Party in writing and expressly stated to be a waiver. A waiver of any right or remedy arising from a breach of contract shall not constitute a waiver of any right or remedy arising from any other breach of the Agreement.
- 20.6 The Agreement shall not constitute or imply any partnership, joint venture, agency, fiduciary relationship or other relationship between the Parties other than the contractual relationship expressly provided for in the Agreement. Neither Party shall have, nor represent that it has, any authority to make any commitments on the other Party's behalf.
- 20.7 Except as otherwise expressly provided by the Agreement, all remedies available to either Party for breach of the Agreement (whether under the Agreement, statute or common law) are cumulative and may be exercised concurrently or separately, and the exercise of one remedy shall not be deemed an election of such remedy to the exclusion of other remedies.
- 20.8 If any provision of the Agreement is prohibited by law or judged by a court to be unlawful, void or unenforceable, the provision shall, to the extent required, be severed from the Agreement and rendered ineffective as far as possible without modifying the remaining provisions of the Agreement, and shall not in any way affect any other circumstances of or the validity or enforcement of the Agreement.

## **21 Notices**

- 21.1 Any notice to be given under the Agreement shall be in writing and may be served by personal delivery, first class recorded or, subject to clause 21.3, e-mail to the address of the relevant Party set out in the Award Letter, or such other address as that Party may from time to time notify to the other Party in accordance with this clause:
- 21.2 Notices served as above shall be deemed served on the Working Day of delivery provided delivery is before 5.00pm on a Working Day. Otherwise delivery shall be deemed to occur on the next Working Day. An email shall be deemed delivered when sent unless an error message is received.
- 21.3 Notices under clauses 15 (Force Majeure) and 16 (Termination) may be served by email only if the original notice is then sent to the recipient by personal delivery or recorded delivery in the manner set out in clause 21.1.

## **22 Governing Law and Jurisdiction**

The validity, construction and performance of the Agreement, and all contractual and non-contractual matters arising out of it, shall be governed by English law and shall be subject to the exclusive jurisdiction of the English courts to which the Parties submit.

## Annex 2 - Costs

The Customer, will pay to the Contractor no more than the fixed sum of **£34,500** (exclusive of VAT)

Year	Amount
2020/2021	£34,500
Total	<b>£34,500</b>

1. Subject to any variation of the Project, the amount in paragraph 1, above, shall remain firm throughout the duration of the Agreement.
2. In the event that the Agreement is varied, the amount in paragraph 3.3 shall be adjusted by such reasonable sum as may be agreed, in writing, between the Customer and the Contractor.
3. The Contractor will be paid by invoice following satisfactory completion of all the deliverables in the Deliverable Table below
4. Within 30 days of receiving an invoice satisfactory to the Customer, the Customer shall pay to the Contractor the amount of the Eligible Costs which the Customer reasonably consider to have been properly incurred by the Contractor in the carrying out of the Project during the relevant period.

**Table 1: Milestone**

Column1	Task	Target date (dd/mm/yyyy)	Description of milestone	Cost (£)
1	WP1 – 1a Data mapping	26/02/2021	Data Sourcing	9100
2	WP1 – 1b Literature review and stakeholder engagement	26/02/2021	Desk-based regulatory study Stakeholder engagement	2850
3	WP1 – Data management and report writing	26/02/2021	Completion of WP1 and submission of draft report Presentation of WP1 findings & recommendations	7000
4	WP2 – Economic assessment	31/03/2021	Defining intervention options Quantitative & qualitative analysis Sensitivity & scenario analysis Completion of WP2 & submission of draft final report	4050
5	Final report	16/04/2021	Submission of final draft report Completion of Final report	8750
6	Project management & QA	16/04/2021	Project management and QA	2750
			<b>Total</b>	<b>34500.00</b>

## **Annex 2/3 – Specification**

### **Batteries: Research into Policy Options**

#### **1) Overview of Requirement**

### **Batteries: Research into Policy Options**

#### **Aim**

To gather information on new batteries placed on the market and waste battery flows and interpret that data to inform the review of current Batteries Policy, which seeks to reduce the environmental impact of batteries, as given effect under the [Batteries and Accumulators \(Placing on the Market\) Regulations 2008](#)<sup>1</sup> (as amended) and the [Waste Batteries and Accumulators Regulations 2009](#)<sup>2</sup> (as amended). The findings of this Project will help in the development of recommendations for future Policy and in the production of supporting economic analysis of the impacts of potential changes.

#### **Background**

United Kingdom Batteries Legislation as stated above sets a range of requirements at different stages of a battery's life, and dependant on the type of battery.

New batteries are subject to substance restrictions covering mercury and cadmium, marking and labelling requirements to show certain battery chemistries, battery capacity and the crossed-out wheeled bin. Batteries are also required to be readily removable from electrical appliances to aid their recycling at end-of-life, with exceptions for safety, performance, medical or data integrity reasons. These requirements are set out in the [Batteries and Accumulators \(Placing on the Market\) Regulations 2008](#)<sup>3</sup> (as amended). There are also complementary requirements applying to waste batteries to encourage their collection and appropriate treatment. These are set out in the [Waste Batteries and Accumulators Regulations 2009](#)<sup>4</sup> (as amended).

Batteries are currently categorised as either portable, industrial or automotive and separated by chemistry as either Lead-acid, Ni-Cad, or Other<sup>1</sup> (everything else including lithium, alkaline and zinc carbon chemistries). The obligations attached to portable, industrial and automotive batteries are different.

#### **Portable Batteries**

---

<sup>1</sup> The "Other" definition is a reporting category set under the Batteries Directive and covers all battery chemistries that are not lead-acid or Ni-Cad. As a result of this there is insufficient visibility of the various chemistries of batteries that are placed on the market or subsequently treated under existing reporting requirements.

Producers are required to register with the relevant Environment Agency<sup>2</sup>.

### **Small Producers**

Small Producers (those placing 1 tonne of portable batteries or less on UK market in a year) register directly with the relevant Environmental Agency and are only required to report annually the weight of batteries they have placed on the market according to the three chemistry types as stated above.

Small Producers have no obligation to fund the collection and treatment of batteries they place on the market.

### **Large Producers**

Businesses placing more than one tonne of batteries on the market are classed as large Producers. They must join a compliance scheme of which there are presently five [Compliance Schemes](#)<sup>5</sup>.

Large producers and their Compliance Schemes are presently obligated to collect 45% by weight, of a rolling three-year average of batteries they have placed on the market. There are related reporting requirements for the tonnages of waste batteries that compliance schemes have been responsible for collecting and treating according to lead-acid, nickel cadmium and other chemistries. Distributors (retailers) supplying more than 32kg of portable batteries to end-users in a year must provide free take-back to end-users at any premises from which they supply batteries.

### **Industrial batteries**

Producers of industrial batteries register with the [Office of Product Safety and Standards](#).<sup>6</sup> Industrial (and automotive) batteries are not subject to a collection rate requirement. Rather, there is a complete ban on their disposal to landfill and incineration. Industrial battery producers are obligated to take-back industrial batteries on request from end-users free of charge. Lithium-ion batteries used for traction power in vehicles are classed as industrial batteries.

### **Automotive Batteries**

The requirements applying to automotive batteries are very similar to industrial batteries. A key difference is that automotive producers must **collect** such batteries free of charge from final holders on request. An automotive battery is one that is used for automotive starter, lighting or ignition power.

---

<sup>2</sup> England – The Environment Agency  
Northern Ireland – Northern Ireland Environment Agency  
Scotland – Scottish Environment Protection Agency  
Wales – Natural Resources Wales

## Review of Batteries Regulations

The government's December 2018 [Resources and Waste Strategy](#) committed (pages 37 and 38) to review the existing battery regulations and consult on proposed changes. It is proposed to revise these regulations, subject to consultation, to improve fairness, ensure that the regulations are achieving the intended policy objectives and incentivising positive behaviours at the appropriate points in the batteries supply and treatment chains. The implementation of a modulated fees approach will be part of that.

This research will inform this review. The review will need to address several key issues. Foremost is to resolve the imbalance in the recycling of portable batteries between chemistry types. The position of internet sellers also needs careful consideration.

The Waste Batteries and Accumulators Regulations have led to a reported increase in the collection and recycling of portable batteries, alongside a ban on the disposal of industrial and automotive batteries to landfill. However, the real effectiveness of the approach across portable, industrial and automotive batteries is questionable. The table below illustrates the position for portable batteries

### **Batteries Placed on Market and Collected (tonnes)**

#### **Placed on market**

	2014	2015	2016	2017	2018	2019
<b>Pb</b>	2,330	2,199	1,916	1,676	1,397	1,224
<b>Ni-Cad</b>	890	713	470	309	298	335
<b>Other</b>	34,438	35,784	36,272	37,029	38,480	38,152

#### **Collected**

2014	2015	2016	2017	2018	2019
10,051	10,626	8,745	9,520	9,488	10,755
289	324	479	984	902	786
2.827	3.929	7.646	6.923	7.421	6.144

The contribution of lead-acid batteries to the portable collection target is out of all proportion to its position in the market, that has a corresponding impact on the collection of true portables, where the levels gathered from the household are minimal.

For industrial and automotive batteries, the current approach is largely predisposed on the positive value of lead-acid batteries at end-of-life. The increasing penetration of other chemistry batteries, particularly lithium-ion batteries which carry significant handling and treatment costs at end-of-life, require that approach to be reconsidered.

A key weakness of informing decisions in this area is the lack of detailed data on the types and chemistries that are placed on the market and the waste batteries that arise for treatment. The existing reporting requirements simply provide a split between Lead-acid, Ni-Cads and Other batteries. This study is intended to help fill that data gap as well as set out the various costs of treating the differing battery chemistries which drives present market behaviours.

To assist in identifying ways to address the issues raised above, The Authority needs to have a better understanding of the nature of the present batteries market and how those markets are developing and likely to develop over the period to 2030.

(The tables at Annex 1 and 2 (As Attached in the ITT) show the level of data that should be relatively easy to collect, comprising first the information provided routinely by battery producers in Ireland and second [Combined Nomenclature](#) codes. Both battery producers and those involved in battery treatment will typically already hold information along these lines and accordingly should be receptive to providing the data required, subject to the usual commercial sensitivity considerations). Greater granularity of battery chemistry data will be available on new batteries placed on the market as against batteries arising as waste

## **Objectives**

### **Work Package 1 – Sourcing Data**

To source data in terms of ‘**Placed on Market**’ and ‘**End of Life**’ as follows:

#### **Portable Batteries**

##### **Placed on Market by reference to:**

- Chemistry – see tables at Annex 1 Primary or rechargeable/accumulator
- Size (most popular formats, AA, AAA, C, D, PP3, 18650, button cell, etc)
- As a battery or In Equipment
- Retailer
- On-line retailer: Mainstream or other
- Typical applications – particularly portable lead-acids

#### **Anticipated battery life across various battery types**

##### **For waste batteries**

- Where they emerge: Retailer, HWRC, Householder, Other
- As batteries or in appliances



- Chemistries of batteries
- Sizes of batteries
- Treatment destinations according to battery chemistry
- Indicative collection costs
- Indicative treatment costs

### **Automotive Batteries**

- Lead-acid
- Other
- In vehicles
- Replacement
  - Online
  - Views on emergence of other chemistries
  - As waste at garages
  - At Authorised Treatment Facilities (ATFs) in End of Life Vehicles (ELVs)
  - Retailers on replacement
  - Typical life
  - Value of lead-acid battery for recycling
  - Treatment destinations

### **Industrial Batteries**

- By chemistry
- As battery
- In appliances
- For applications
- Online
- Typical life
- Predicted future growth of lithium chemistry batteries
- Collection costs
- Shipping costs (overseas reprocessors)
- Treatment costs
- Location and capability of reprocessors

Annex 1 is based on information collected in Ireland and illustrates the level of data granularity required in terms of types of batteries.

## **Work Package 1 – Current Regulations and Requirements**

To review the Current Regulations and requirements with a view to:

- Identifying how effective the Regulations has been in terms of meeting its objectives and in what ways could the Regulations be improved to drive more circularity.
- Assess the extent to which the substance restrictions, marking and labelling and removability placing on the market requirements under the Batteries Regulations

(2008) remain appropriate and whether the objectives here could be achieved in a less burdensome way

- Determining whether the Regulations have driven battery producers to innovate (e.g. design changes/improvements, notwithstanding that design improvements was not an overt objective of the Regulations), or do they simply just ignore the Regulations, e.g. because of lack of enforcement?
- Consider the scope for the Regulations to explicitly support battery reuse, particularly recognising the potential for spent lithium ion batteries from electric vehicles to be used in energy storage applications, and how that might be achieved including producer liability issues.
- Identifying how eco-modulation mechanisms could support a future batteries regime, not only ensuring that treatment across all battery types is appropriately incentivised (rather than just the lowest cost as at present), but also providing upstream signals where that is appropriate e.g. rechargeable vs primary.
- How could the Regulations legally incentivise domestic processing? For example, is there scope for Smaller Producers to pay a one-off fee to cover their liability and contribute to processing costs?
- Examining the feasibility of establishing some form of deposit return scheme for batteries and to consider how effectively such a policy measure might support and incentivise domestic processing.
- What scope is there to recover more of the rarer materials?
- Should targets be increased?
- Reviewing the current enforcement regime including:
  - are the current arrangements in England the right ones?
  - what are the main reasons behind any lack of enforcement?
  - what is the impact of online sales in context of the Regulations and their enforcement?
  - should enforcement transfer to a regulator better able to undertake market surveillance and enforcement?
- Identifying any specific implications of European Union (EU) exit including opportunities to amend the regulations and implications of the arrangements for Northern Ireland.

## **Work Package 2 – Economic Assessment and Recommendations**

To undertake an economic assessment of some of the changes recommended by the review which are agreed by The Authority should be considered to amend the regulations. This would probably mean an analysis of between 3 and 5 recommendations resulting from WP1.

Any proposals and/or recommendations that the consultants make should be supported with a preliminary cost-benefit analysis and the economic value of any such benefits arising should be quantified.

Note there will be a Break Clause inserted into the Contract so that the Research can potentially terminate on completion of WP 1.

The Authority is not committed or legally obliged to progress with WP2 and in the event that WP2 is not required, the Authority will not be liable for any costs relating to WP2.

### **Approach and Methodology**

The Authority would prefer this project to finish by the end of March but if required to allow for effective research and stakeholder engagement, tenders for delivery to a later date (but not later than 30th April 2021) will still be considered. A commitment to deliver by the end of March will be taken into account as part of the evaluation process by the panel to arrive at an overall score for each tender.

### **Work Package 1 (WP1)**

It is expected that much of the Research will be undertaken via evidence review and stakeholder consultation. Researchers should take account of any relevant information, including

the recent recommendations for [Extended Producer Responsibility \(EPR\) guidance<sup>7</sup>](#) and any international examples of effective regulations.

There will also need for engagement, preferably remotely via interview, with enforcement bodies<sup>3</sup> and the Devolved Administrations<sup>4</sup>. The Researchers should determine how many enforcement actions there have been and any accompanying data that is available. For example, numbers of cases that were started, dropped, taken to court, resulted in fines or other action.

The Tenderer should set out details of intended stakeholder engagement.

### **Work Package 2 (WP2)**

For Work Package 2 (WP2), the economic assessment of possible policy changes coming out of WP1 and any others agreed with Authority. This would probably mean an analysis of between 3 and 5 recommendations resulting from WP1. Any proposals and/or recommendations that the consultants make should be supported with a preliminary cost-benefit analysis and the economic value of any such benefits arising should be quantified.

There will be a need for clearly documented workings, including all assumptions, and demonstration of the level of sensitivity of output results and conclusions to the assumptions made. All spreadsheets and modelling tools must be handed over to The Authority on completion of Work Package 2 so that, if necessary, further work can be undertaken, either within Defra or externally commissioned.

---

<sup>3</sup> Environment Agency, Natural Resources Wales, Northern Ireland Environment Agency, Scottish Environment Protection Agency, The Office of Product Safety and Standards

<sup>4</sup> Northern Ireland Assembly, Scottish Government, Welsh Government

In terms of data analysis, the approaches used should include a product flow (s) type paradigm so that the research quantifies as much as possible the volumes of the various inflows and outflows, including online and illicit channels.

### **Deliverables**

This should include a brief report (approx. 10 sides of A4, Arial font 11) at end of WP1 and then full report, with executive summary in a Word Document, plus a summary slide pack in PowerPoint with key points. Researchers would also be expected to undertake a 45-minute presentation with 15 minutes for discussion (probably virtual) to key parties with The Authority on completion, to ensure that the outcomes of this are understood across the Department.

### **Timetable**

The Authority would prefer the Final report to be received by close **31 March 2021** or within 7 working days of receipt of the Authority's comments on the draft report, whichever is the later, but would accept the Final report to be received by close **30 April 2021** by prior arrangement with the Authority.

(Please note that Tenders for delivery to the later timetable as shown in the Project Milestones and Deliverable Table below (but no later than end April 2021) will still be considered but commitment to deliver the final report by 31<sup>st</sup> March 2021 will be one of the criteria used by the evaluation panel when deriving an overall score for each tender).

### **Project Milestones and Deliverables**

Milestone Number	Milestone	Deliverable	Delivery Date
1.	Project Inception Meeting (assume by conference call /Zoom)	Note of meeting to be prepared by the contractor	w/c 1 March 2021
2	Progress updates	Fortnightly teleconference/phone call to update the Defra Project Officer on progress.	Fortnightly or as issues arise.
3.	Completion of Work Package 1 and submission of draft report	Draft report setting out review findings and recommendations. To be provided by e-mail to the Defra Project Officer	By 9 April 2021, unless agreed otherwise with Defra and no later than close 30 April 2021

4.	Project review meeting (assume by conference call /Zoom)	Presentation of WP1 findings and recommendations	By 9 April 2021  unless agreed otherwise with Defra and no later than close 30 April 2021
5.	Defra confirmation to proceed to WP2  Defra confirmation of the policy options to be assessed	Defra to confirm by email	By 13 April 2021  unless agreed otherwise with Defra and no later than close 6 May 2021
6.	Completion of WP2 and submission of draft final report	Draft final report (DFR) incorporating the findings from WP1 and the results of WP2. To be provided by e-mail to the Defra Project Officer	By 11 May 2021  unless agreed otherwise with Defra and no later than 15 June 2021
7.	Completion of Final report	Final report that addresses Defra's comments on the DFR.  To be provided by e-mail to the Defra Project Officer	By 25 May 2021 unless agreed otherwise with Defra and no later than 22 June 2021, or within 10 working days of receipt of Defra's comments, whichever is the later.

## Payment

All payment will be made to successful Contractor according to the agreed milestones. However, where there has been an overpayment made by the Authority to the Contractor, such monies shall be recoverable.

There will be two payment stages. The first payment (40% of total cost) will be made on completion of work package 1. The second and final payment (60% of total cost) will be on delivery of work package 2 and final report.

## Ricardo-AEA Ltd Tender Response

### E01 - Organisational experience, capability and resources

This document is structured in two sections covering: 1) proposed team capabilities and resources; and 2) references of relevant publications and projects by our organisation and project team.

#### Proposed team capability and resources

**Ricardo Energy & Environment (Ricardo) has been supporting government policymaking** for over 30 years both at the UK, EU and international level. We have a dedicated, multidisciplinary team of policy specialist and economists who have decades of experience designing, reviewing, assessing and evaluating policy internationally. This team has conducted social, economic and environmental assessments in line with UK Green Book and the European Commission's Better Regulation guidelines. Ricardo's economists and technical experts have been supporting Defra in economic evaluations for many years, including, for example, our advice on the framework for the assessment of impacts of best available techniques reference documents (BREFs) established under the Industrial Emissions Directive. This includes economists who have been members of the UK Government Economic Service.

**The team also have a deep understanding the UK battery regulatory, data and producer responsibility requirements.** Ricardo is currently delivering a project for Zero Waste Scotland mapping and forecasting battery arisings in Scotland. In addition to data mapping this project also involves a review of the regulatory and policy environment surrounding batteries. We are also engaging with the wider battery value chain to understand the existing business models and economic market conditions. This study has provided our team with significant access to data and also the opportunity to engage with the key stakeholders across the UK. This insight will provide significant added value to Defra. In delivering this project we have developed: **a battery flow model** covering the UK with a deep dive of Scotland for all battery types, **a long list of engaged stakeholders** and a **library of literature searches** covering policy and regulations. The long list of engaged stakeholder across the whole value chain will be a real asset to this study.

**Ricardo also brings significant knowledge and insight of the automotive sector through our colleagues within Ricardo Automotive (RA).** RA has been operating at the forefront of transport engineering for over 100 years. The dedicated batteries team has extensive engineering design and development experience in the field of hybrid and electric vehicle battery pack ranging from applying new chemistries and formats, to designing and building prototype packs and supporting our clients through full production programmes. The battery team utilise the latest tools and techniques to ensure robust design and development and are integrated with RA's vehicle engineering team to ensure optimal mechanical, structural and thermal design, maximising volumetric and gravimetric density, be it for a power or energy dense application.

There are other, specific skills required to successfully deliver this project, including understanding the UK battery regulatory, data and producer responsibility requirements, stakeholder engagement and data handling. We have detailed these in the following paragraphs.

**Stakeholder engagement.** We have extensive experience of deriving information from external sources, including the private sector, local and national government, professional bodies and other non-government organisations. As mentioned above, the Zero Waste Scotland project is highly relevant to this study and a significant advantage is our familiarity with the key stakeholders having already engaged with the majority of them. Not only will this save time in identifying the relevant contacts but we have already established a relationship with the stakeholders and have **data sharing agreements in place.**

**Data handling, security and quality.** We take the security of data very seriously at Ricardo. Ricardo plc is certified under the Cyber Essentials scheme, issued on 29 October 2018. In addition, Ricardo Group is accredited under ISO 27001 giving our clients assurances that their data is well secured in our environment. Ricardo has met the requirements of supplier audits on data security/data protection since January 2017.

Ricardo has extensive experience of building technical models at many levels of detail and have developed plenty of guidance on best practice in this discipline. Our Ricardo teams manage data ranging from small data relating to individual businesses up to managing the UK's greenhouse gas emissions inventory which involves millions of data points. Our quality management processes are all in accordance to the requirements of the International Standard ISO 9001:2008. Our processes allow us to identify, plan, implement, manage and continuously improve the effectiveness of our services and this includes project and data management.

In summary, our assembled team and the wide range and depth of skills and knowledge available from the wider Ricardo Group represent the experience and expertise required for all aspects of this project.

## References

We have outlined five examples of our battery experience delivered by members of our project team. In addition, the Ricardo team has broader knowledge of batteries and their markets. Many of the projects delivered by the team are for private sector clients and are confidential. However, the knowledge and insight within this team will be extremely valuable for this project. We can access knowledge covering chemistry and cell format selection, technology foresighting, regulatory developments, market benchmarking and market drivers and incentives.

### Battery sector & producer responsibility expertise

#### **Zero Waste Scotland, Mapping & Forecasting Battery Use in Scotland, 2020 – ongoing**

**Sectors covered:** Portable, industrial and automotive

The research project is split into 3 phases. Phase 1 maps the current level of battery use in Scotland extracted from UK data, analysing available data for batteries placed on the market and end-of-life stages, and conducts a high-level SWOT analysis incorporation desktop literature review and research and targeted stakeholder engagement. Phase 2 and 3 will run concurrently and build on the Phase 1 baseline to make short to medium-term projections for all battery types including electric vehicle batteries. This will be completed via further data modelling, stakeholder engagement and desktop research. The final reports will detail our projections and make recommendations for potential policy interventions at the Scottish level to improve the sustainability and support greater circularity across the whole battery supply chain.

#### **European Commission Joint Research Centre, Circular Economy for Batteries, 2017 – 2019 (<https://ec.europa.eu/jrc/en/publication/circular-economy-perspectives-management-batteries-used-electric-vehicles>)**

The European Commission's Joint Research Centre (JRC) wanted to investigate the circular economy perspectives for electric vehicle (EV) battery management. Ricardo was commissioned to create a comprehensive report on the EV battery value chain across the full lifecycle and to identify possible EU policy interventions. The study examined the value chain for traction batteries and how the EU could take advantage of the capability that exists within the region and where it may support development of a circular economy for

## **Battery sector & producer responsibility expertise**

traction batteries. It encompassed re-use (second life in applications such as energy storage) and recycling programmes that can be utilised, as well as the potential environmental impacts mitigated through these actions. It explored the design stage in terms of the potential future battery chemistries, potential production methods and potential variations of the design that will support the end of life management for traction batteries in the future. The study also made suggestions for policy measures that may support the development of the circular economy within the EU.

### **On Pack Recycling Labelling (OPRL) Scheme, Packaging Producer Responsibility Compliance Audit Programme, 2015 – present**

Ricardo are responsible for monitoring the scheme and auditing the members against the scheme's guidelines every three years. The auditing process assesses the packaging materials used against the recycling logos on the package to ensure that the instruction to consumers is accurate and to ensure the ongoing integrity of the labelling system.

Ricardo have delivered this service since 2015 when we took the auditing from Valpak. The scheme has over 600 members and continuing to grow. The label is used by all major retailers including ASDA, Tesco, Sainsbury's, Morrisons, Aldi, Lidl, Iceland as well as a range of smaller producers. The ongoing support Ricardo provides to the OPRL and their members is key to ensuring the integrity of the labelling system, especially during a rapidly changing packaging legislation landscape.

### **Confidential client, Lead Battery Automotive Technology Trends Review, 2020**

This study assessed the short and medium-term technical requirements for low-voltage batteries; it provided an independent consideration of the relative merits of key commercial and emerging battery technologies. Using expert workshops, interviews with technical specialists, and Ricardo's expertise and experience, the Ricardo team conducted an independent review of battery technologies for these low-voltage automotive applications. Our comprehensive review focused on the consideration of the following interrelated questions: vehicle mix, battery technology, and technical requirements.

### **Department for Infrastructure, States of Jersey, Advice on the Collection, Storage and Dispatch of Domestic Batteries in Jersey, 2017**

The Department for Infrastructure (DfI) has in place a scheme for the collection and recycling of portable batteries from householders. DfI commissioned Ricardo to undertake a review of each step in this process to ensure that the management of batteries in Jersey is compliant with domestic and international legislation and, where appropriate, follows best practice to maximise recycling and protect the environment and human health. This review considered all aspects of portable battery collection, transport, storage and recycling for which the legislative requirements and best practice guidance (where available) had been identified and presented. This included small batteries including button batteries, as well as rechargeable batteries including those used in laptops and power tools.

In addition, this report also sought to address a number of specific issues including: whether batteries of different chemistries should be separated at any point in the process, how damaged batteries should be managed (and what constitutes a damaged battery), and whether damaged batteries can be exported.



## E02. Project Team

We are pleased to be able to provide Defra with the same core team that is delivering the battery mapping and policy review study for Zero Waste Scotland (ZWS). The only change is we have added [REDACTED] for the economics and policy assessment Work Package, as this was not required for the ZWS study. The team will bring considerable value to this project through having existing relationships with the key stakeholders and experience of accessing and manipulating relevant battery data. These aspects will be very important given the challenging timeframes for this study as we are able to mobilise extremely quickly. The Ricardo team will bring:

- A thorough understanding of the data sources with established contacts with the relevant individuals.
- Established and very current relationships with the key stakeholders across the battery value chain including policy, regulators and processors.
- Through Ricardo Automotive we have unique access to the automotive and industrial sector.

### **Staff retention and ensuring continuity of service**

Given the current Covid-19 situation and other unforeseen occurrences some staff changes may be inevitable. In these circumstances, Ricardo will immediately notify Defra, will identify appropriate alternative suitable candidates, and will ensure the full involvement of Defra in the selection of suitably qualified alternative staff. Ricardo deployed a larger team for the ZWS Battery Project, so will be able to call upon these resources if required as they are familiar with subject area and stakeholders. Ricardo prides itself on our retention and development of our employees which results in low levels of staff leaving the business. We also deploy a robust resourcing process which means individuals are committed for the duration of the project. We can confirm that the time commitments of named individuals for this project have been secured.

## E03 Proposed approach and methodology

Ricardo are currently delivering a battery mapping study in Scotland and we have developed our method based on the learnings and insights from the Zero Waste Scotland (ZWS) study. Although the study is Scotland focused the data is at the UK level and we have also engaged stakeholders across the devolved administrations. There are a number of key challenges within the UK battery market at the moment which have been raised during the ZWS study. Under the current UK data declaration requirements there is a lack of granularity on battery chemistries, especially for the portable batteries 'Other' category, and there is a bleeding of battery types being reported between portable and industrial – specifically Lead Acid batteries. Another challenge is the issue of online retail free-riders (domestic and distance sellers) who place an unknown quantity of batteries on to the UK the market and do not contribute financially to the collection and waste management infrastructure in the UK. Poor consumer awareness regarding safe battery disposal is a significant issue when trying to increase the collection rates of portable batteries to meet recovery targets.

Our approach is structured in three sub- work packages: 1a - sourcing data, 1b - reviewing current regulations and requirements, and 2 - assessing policy options and developing recommendations.

### 1.2 Work Package 1a: Sourcing data

In order to source data of 'Placed on Market' and 'End of Life' portable, industrial and automotive batteries, the project team will use a number of approaches.

#### **Primary approach**

Our approach is based on the view that the data is best originating from the manufacturers and retailers as this provides the most accurate and real data. Our approach differs for the three battery types and is informed by who holds the relationship with the producers and how best we can access the data within the timeframes. We feel using the known and trusted 'managers' of the data will provide a much more successful and effective way of accessing the data than engaging with the producers directly which would take much longer and involve a significant amount of data handling. Our view, having spoken to the compliance scheme administrators, is that the producers are likely to request the data from them anyway.

### Portable

We appreciate that the compliance schemes have the existing relationships with the manufacturers and retailers. So, our approach involves engaging with the compliance scheme administrators to engage directly with their largest (in terms of volumes of batteries POM) 10-15 members to provide greater detail on the battery chemistry, application, size and method of sale. This approach is very collaborative and will allow the largest producers to contribute to the project providing Defra with a more comprehensive overview of the types of batteries being placed on to the market.

In preparation of this project we have spoken to four out of the five battery compliance scheme administrators and gained their support (in writing) for this approach – we were not able to talk to one of the scheme administrators in time but have no reason to believe why they would not take part. Even with the four that we have we feel we can achieve approximately 80% average of batteries by weight for portable batteries POM. We have included £5,500 to support the administration time for the schemes.

We will consult with Defra on the precise nature of the data to be collected but we feel having delivered the ZWS battery project, and having looked at other EU country data, that the data requirements in the Republic of Ireland is a very good starting point.

We will work with Defra to draft a formal letter to each of the compliance schemes seeking their formal support. We will then ask Defra to provide an introductory letter for the scheme administrators to send to their largest members requesting them to take part in the data gathering exercise. We have also agreed with the scheme administrators that we will put in place a non-disclosure agreement (NDA) to facilitate data sharing but as the data will be aggregated and anonymised the risks will be negligible.

We appreciate that some of the information we will be seeking may be outside the remit of current compliance scheme activities. There are some administrative issues that will need to be considered including:

- Some of the information may be confidential – we will put an NDA in place.
- Schemes will need to obtain permission from the producers – Ricardo will provide a letter of support from Defra.
- Consistent information – Ricardo will develop a standard data collection spreadsheet.
- Direct engagement with producers – we will build the ability into the information request from the schemes that we may want to follow-up directly with the producer.

### Industrial & Automotive

Ricardo will source POM data for industrial and automotive batteries from the Office of Product Safety & Standards (OPS&S). We have established a good working relationship with OPS&S via the ongoing ZWS study. In order to provide clarity on Lithium-Ion batteries used in Electric Vehicles (EVs), Ricardo will request that OPS&S engage with those producers who submit industrial battery declarations to provide greater granularity on the 'Other' chemistry category.

In order to gather data for 'End of Life' batteries, Ricardo will utilise the network of connections built up from the current ZWS study to engage with collection, sorting and treatment operators to gain insight into the tonnage of batteries once they reach end-of-life. This data will include details of

where the battery waste arises, chemistry type, size, application, and treatment destinations. See below our approach to stakeholder engagement with a focus on the operators and value chain.

Additional engagement will be undertaken with those operators involved in the collection, sorting and treatment of waste batteries to gain insight into the indicative costs associated with collection, treatment, and shipping waste batteries. All data gathered by the compliance schemes and from the OPS&S will be anonymised and accumulated prior to being provided to Ricardo in line with GDPR requirements.

## **Secondary approach**

Whilst working with the compliance scheme administrators under the primary approach will provide an initial level of sense checking on the data provided for portable batteries, we believe that a secondary approach would also be of value. Ricardo will conduct a comparative data analysis of the figures provided the compliance schemes against the tonnages of portable batteries declared in other European countries where they require more granularity on chemistry types, such as Republic of Ireland and France, which we have from the ZWS study. The added due diligence will provide a level of comfort as to the accuracy of the data collected.

### **1.2 Work package 1b: Current regulations and requirements**

To understand the impacts of the current regulations on the battery market, Ricardo proposes a two-step approach.

#### **Step 1 – Desk-based regulatory study**

Ricardo will conduct a desk-based review of the relevant regulatory and policy documents to understand what effective policy mechanisms may be needed to encourage the development of infrastructure to support circular economy approaches for batteries, particularly when the economics may not favour implementation. We will analyse the policy mechanisms that could impact on second life applications and recycling opportunities. It will also be important to consider the future regulatory mechanisms, especially the design and manufacturing stages, which will be integral to the development of a circular economy for batteries. Note, for example, the recent proposal for a regulation on batteries and waste from the EU.

At a UK level, evidence suggests that the breakdown of chemistry type for portable and industrial batteries required under the Extended Producer Responsibility (EPR) system may no longer be fit for purpose, especially due to the growth of the lithium-ion battery market.

#### **Step 2 – Stakeholder engagement**

To compliment the desk-based study and to gain further insight into the battery market, a stakeholder engagement exercise will be undertaken. From the stakeholder interviews, we will gather detailed insights into the current waste management infrastructure, market conditions and enforcement activity. The interviews will also allow us to explore the opportunities and challenges for increasing circularity within the battery supply and disposal chains in the UK (technical and economic). Understanding the predicted changes in manufacturing practices, battery chemistries, size/capacity and use, will allow Defra to appreciate the likely implications for end-of-life battery waste in the future.

Through the stakeholder engagement, Ricardo will gather further information about the organisations operating in the battery sector in the UK. The stakeholder engagement will be used to gather expert views on several key areas summarised in the table below:

Legislation	Operational Systems & Enforcement	Circular Design Principles
-------------	-----------------------------------	----------------------------

<b>The effectiveness of the current Regulations and the appetite for more stretching targets in future. Effectiveness incl fines etc</b>	Examine different operational systems which could improve the collection and treatment of batteries in the UK (e.g. eco-modulation and deposit return schemes)	Examine the trends in battery design and material use since the Regulations were implemented and how the Regulations have influenced battery manufacturers in their decision-making process
<b>Understanding what incentives could help drive domestic processing and treatment of batteries</b>	Review the current enforcement regime, including gathering data on actions which have been undertaken and the impact of increased online activity	Understanding the potential for battery re-use – specifically for waste lithium ion batteries
<b>Review of the implications of EU exit on the Regulations including the arrangements for Northern Ireland</b>	Value chain - Waste management infrastructure, market/economic conditions and current challenges (e.g. mechanisms for separate collection & treatment capacity)	Consider the implications of continued raw material use and whether greater recovery from waste batteries is viable

### Stakeholder engagement preparation

Our experience of conducting many stakeholder engagement exercises is that preparation is key. It is important to provide a concise introduction to the project which details the value in taking part and what the expectations of the project are.

Requesting interviews will initially be done via email (followed up by an email reminder when we do not receive a reply within five working days). We will request a 'support letter' from Defra that can act as endorsement for the project and our request to stakeholders for cooperation.

In advance of the interview we will prepare and send an interview guide to participants. This will help to guide the discussions and will allow for specific data and information to be captured. We will develop and refine the set of questions to be asked together with Defra and will aim to contact potential interviewees early during the project. It will also confirm that the information captured will be anonymised and managed in accordance with GDPR requirements.

**Targeting key stakeholders** – Given that we have engaged with many of the key stakeholders already, we are able to bring this insight to the benefit of this study. As such, we are able to select how best we use the stakeholder engagement budget depending on Defra's priorities. At the beginning of this task we will work with Defra to review the insight we have already gained and agree which stakeholders will provide the most value. Added to this will be engagement with all regulators across the devolved administrations to seek insight into the effectiveness of the regulations including information on fines etc.

**Value chain analysis** – One area that we did not cover in great detail for the ZWS study was the operational side of the battery value chain. We propose that we use some of the stakeholder engagement time to focus on this area. Having reviewed the National Packaging Waste Database (NPWD) there are approximately 16 exporters and approximately 50 treatment organisations operating in the UK. We propose to conduct between 5-8 interviews across exporters and treatment operators with a coverage across the UK.

During the stakeholder engagement tasks, we propose to hold up to 20 structured interviews, conducted by teleconferencing. The categories of stakeholders are listed in the table below together with a few examples of organisations we would aim to contact.

Stakeholder Category	Example of organisations
<b>Regulators &amp; Policy makers</b>	Defra, OPS&S, BEIS, ZWS, Environment Agency, Natural Resources Wales, Northern Ireland Environment Agency, SEPA
<b>Compliance Administrators</b> <b>Scheme</b>	BatteryBack, ERP UK, Valpak, Ecosurety, REPIC
<b>Trade Associations</b>	British Battery Industry Federation, British & Irish Portable Battery Association, Society of Motor Manufacturers & Traders (SMMT)
<b>Value Chain Actors</b>	Battery manufacturers (Panasonic, Duracel, Energise) & retailers (Tesco, B&Q), waste battery collectors, approved treatment operators (CCL)
<b>Academic Researchers</b>	Faraday Institution, University of Birmingham, University of Strathclyde

#### Outputs:

- **a concise report** (approximately 10 sides of A4, Arial font 11) at end of Work Package 1).
- **Microsoft Excel database** containing underlying data used for the data analysis.

### 1.3 Work Package 2: Economic assessment and recommendations

We propose to develop a shortlist of policy options that could address the challenges evidenced in earlier sub- work packages and, if agreed by Defra, use **Multi-Criteria Analysis (MCA)** to assess whether and how they may contribute to UK Government objectives in a cost-effective way. This will be key to develop evidence-based policy recommendations. Our understanding is that this work package is meant to comprise a preliminary assessment of key costs and benefits, rather than a full impact assessment or comprehensive cost-benefit analysis. As such, we propose to deliver it in the following four steps.

**Step 1: Defining policy options.** This step will build on the work carried out in work package 1 to develop a short list of 3-5 policy options that: a) are legally and technically possible and deliverable, based on the work carried out in sub-work packages 1a and 1b; b) could contribute to further reducing the environmental impact of batteries; and c) meet wider UK Government objectives. These could include, for example:

- Option 1: Business as usual (“BAU”) under current and announced government policies.
- Option 2: Reviewing and updating existing reporting requirements, for example, going beyond the current chemistry split (e.g. Lead-acid, Nickel Cadmium and Other batteries) and updating and detailing it based on the latest and expected developments.
- Option 3: Reviewing and expanding existing EPR schemes<sup>5</sup>, including, but not only via, a modulated fee approach.

---

<sup>5</sup> [Our waste, our resources: a strategy for England \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674442/Our_waste_our_resources_a_strategy_for_England.pdf)

- The final list of options to take forward for the assessment will be agreed with Defra. The detail of the assessments described in steps 2 to 4 will depend on the final number of options taken forward.

**Step 2: Quantitative and qualitative analysis of options.** We will construct a bottom-up tool in Microsoft Excel that brings together the quantitative and qualitative evidence available to map and assess the impacts of each measure and compare the short list of policies with the BAU scenario under current and announced policies. We propose to assess each option, at least, against the following three criteria (these can be revised at the start of work package 2 in light of feedback from Defra on the expected depth of the analysis and budget available for this task):

1. **Preliminary Costs and Benefits** of each option will be assessed by employing a quantitative and/or qualitative approach adapted from the latest Green Book<sup>6</sup> and our wealth of experience in delivering appraisals of policy options for the UK Government and the European Commission. The table below illustrates some of the costs and benefits that we may assess (the final list to be agreed with Defra in line with their priorities, data available and budget available for the task). We will aim to appraise and monetise the most significant costs and benefits in a proportionate way, where possible given the timetable and budget available, while recognising this is intended to be a preliminary assessment.

Parameter	Potential impacts of regulatory amendments
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Economic activity associated with new technologies and/or battery chemistries and their supply chains, recycling and other circular efforts</li> <li>• Green and other jobs supported</li> <li>• GHG emissions avoided and/or captured</li> <li>• Reduction in environmental pollution including of water bodies</li> <li>• Other environmental impacts such as reduction in waste</li> <li>• Reduced risk to human health</li> </ul>
<b>Costs</b>	<ul style="list-style-type: none"> <li>• Governmental costs (e.g. enforcement costs)</li> <li>• Compliance costs (e.g. familiarisation costs, waste management and recycling, etc.)</li> <li>• Administrative costs (e.g. monitoring and reporting costs)</li> <li>• Business costs associated with product substitutes</li> </ul>

2. **Competitiveness** (e.g. relative export prices, relative share of domestic vs international market for a sector's goods, and relative labour/resource/energy costs per unit of output).
3. **Distributional impacts**, i.e. how impacts of the intervention options affect different stakeholders (e.g. residents, SMEs, large firms, and the government) and how these impacts spread across the UK, taking account of the "levelling up" agenda (e.g. split of above criteria by area, income group or type of business).

We propose ranking policy options against each criterion, using the evidence available to identify the preferred policy option(s). This process will include comparing quantitative evidence. For

---

<sup>6</sup> [The Green Book \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)



There are risks that the MCA methodology could become complex. We will mitigate this by maintaining a focus on criteria selection (i.e. we have suggested three as a proposal at this stage) and ensure that each step is rooted in the available evidence and best practice.

**Step 4: Recommendations.** We will summarise our recommendations for future policy and supporting evidence, including the results of the preliminary impact assessment and MCA. If work package 2 is agreed by Defra, we would share a draft and interim output of this analysis for Defra's views and will facilitate a virtual working session to gather any feedback and views from the pertinent teams initially and other stakeholders as necessary.

- **a full report** (approximately 25 sides of A4, Arial font 11 plus technical annex as required and executive summary in Microsoft Word) at the end of the project (including Work Package 1, and Work Package 2 if Defra agreed to take this Work Package forward).
- **Summary slide pack in PowerPoint with key points.**
- **Microsoft Excel document workings**, which will be shared with Defra as requested although not as a formal deliverable.
- **60-minute session** (45-minute presentation and 15-minute discussion).

The findings gathered in Work Package 1 will be included in both a brief and full report in Microsoft Word. If work package 2 is finally taken forward, the outputs will also be included in the full report. A summary of the key points will also be provided in Microsoft PowerPoint and the Excel calculations will be shared. The project team will present the findings to key parties on completion.

[illegible]

Task	2021															
2. Quantitative & qualitative analysis																
3. Uncertainties & further research required																
4. Recommendations, completion of WP2 & submission of draft final report																
<b>Reporting</b>																
Submission of final draft report																
Completion of Final report																

Milestone

Progress Meetings

Progress of tasks



## 1.5 Breakdown of Tasks and staff time

N.o.	Milestone	Name of Staff Member (if not yet appointed enter the task to be performed e.g. Research assistant)							Total Days Per Milestone
		Jamie Pitcairn	Rob Snaith	Fiona Thompson	Julie Bonfait	Brais Louro	Lauren Doyle	Jack Dubey	
1	WP1 – 1a Data mapping	1.0	0.0	3.0	3.0	0.0	0.0	0.0	7.0
2	WP1 – 1b Literature review and stakeholder engagement	1.5	0.0	8.0	0.0	0.0	3.0	0.0	12.5
3	WP1 – Data management and report writing	2.0	0.0	3.0	0.5	0.0	0.0	0.0	5.5
4	WP2 – Economic assessment	0.0	0.0	0.0	0.0	7.0	0.0	7.0	14.0
5	Final report	0.5	0.0	2.0	0.0	0.5	0.0	2.0	5.0
6	Project management & QA	1.0	3.0	0.0	0.0	0.0	0.0	0.0	4.0
	<b>Total Staff Time on the Project</b>	6.0	3.0	16.0	3.5	7.5	3.0	9.0	48.0

## E04. Risk Management and Mitigation

We have included a traffic light with Red indicating a high risk, Amber a medium risk and Green a low risk) system to indicate the level of risk. Ricardo has a digital fist policy to counter act the risk of Covid and we envisage all engagement will be virtual. This involves the use of digital tools for all communication and also being flexible when requiring input from stakeholders. Our resourcing plans also include flexibility for unplanned team absences.

Risk & Rationale	Mitigation
Lack of data preventing the project team from quantifying battery waste by application	<ul style="list-style-type: none"> <li>Following the delivery of the Zero Waste Scotland battery data mapping study we have already collated a significant amount of data.</li> <li>Use a secondary comparison approach using proxy data from other exemplar countries like Republic of Ireland &amp; France.</li> <li>Our approach is to work collaboratively with the compliance schemes</li> </ul>



Risk & Rationale	Mitigation
<p>and chemistry</p> <p>Rationale: affect quality and/or validity of our outputs, or could delay project outputs.</p>	<p>and data 'owners' to access data as opposed to relying on the producers which would be much more time consuming.</p> <ul style="list-style-type: none"> <li>• Our approach includes reviewing other more granular data sources from other EU countries (France, Republic of Ireland) to help compare the data we collect and to provide a proxy if needed.</li> <li>• Any gaps or limitations with the available data will be highlighted early in the project process and discussed with the Project team to identify alternative options.</li> <li>• Where gaps cannot be filled or limitations overcome, any extrapolations, estimates and assumptions necessary to complete the data analysis will be agreed with Defra and clearly identified in the deliverables.</li> </ul>
<p>Data gaps in literature especially for industrial and portable batteries</p> <p>Rationale: legitimacy of findings is poor</p>	<ul style="list-style-type: none"> <li>• The project team includes experts with direct experience of working with the battery sector and value chain and have a strong understanding of the technological, policy and market landscape, as well as challenges and opportunities associated with the move towards circularity.</li> <li>• One of the findings of the research may be the identification of knowledge gaps and further research needs and this will form part of the findings and recommendations.</li> </ul>
<p>Consultation does not allow filling all data gaps on battery waste</p> <p>Rationale: poor quality findings</p>	<ul style="list-style-type: none"> <li>• The project team includes experts with direct experience of working with the battery sector and waste management industry and have a strong understanding of the technological, policy and market landscape, as well as challenges and opportunities associated with the move towards circular economy.</li> <li>• One of the findings of the research may be the identification of knowledge gaps and further research needs and this will form part of the findings and recommendations.</li> </ul>
<p>Lack of responses in stakeholder consultation</p> <p>Rationale: study loses validity and robustness of findings</p>	<ul style="list-style-type: none"> <li>• Through the Zero Waste Scotland project we have already engaged with a significant number of the key stakeholders and have developed strong relationships which will significantly reduce this risk.</li> <li>• The project team will reach out early to stakeholders to give as much notice as possible to conduct the interviews.</li> </ul>
<p>Final project report does not meet Defra's expectations</p> <p>Rationale: objectives not met</p>	<ul style="list-style-type: none"> <li>• The final report will be evolving throughout the study thus leaving plenty of opportunity for Defra to comment on the deliverable. This should reduce the risk of extensive re-working of the report at a later stage of the project.</li> <li>• The findings will be presented to Defra. Following the meeting, we will collate the feedback and discuss the action points with Defra to agree the structure of the final report.</li> </ul>
<p>Outcomes not meeting Defra's requirements</p>	<ul style="list-style-type: none"> <li>• Our team has long-lasting experience delivering similar type of studies. This ensures that the team members are in place to deliver outputs of high quality and presented in the correct format and style</li> </ul>

Risk & Rationale	Mitigation
Rationale: objectives not met	<ul style="list-style-type: none"> <li>so that they meet the client's needs.</li> <li>Our quality control and team management approach will ensure that all of the research, analysis and reporting is carefully and closely managed so that outputs are of a high quality.</li> </ul>
Contested or poorly evidenced findings Rationale: poor quality outputs	<ul style="list-style-type: none"> <li>We have included extensive stakeholder engagement of the expert community and the relevant stakeholders to be agreed with Defra. This includes close working with academia and trade bodies.</li> <li>Robust internal peer review process to be put in place.</li> </ul>
Delivery of the work falls behind schedule Rationale: timescales missed	<ul style="list-style-type: none"> <li>A clear time plan has been prepared and will be observed during the assignment. Our Project Manager will track project progress to ensure that all steps are planned and executed, and that deliverables are on time. Further, they will follow up with Defra to make sure all comments/feedback on reports are received on time to respect final deadlines and avoid delays.</li> </ul>
Planned resources unavailable for delivery Rationale: timescales and quality not met	<ul style="list-style-type: none"> <li>The project team has been put together to provide sufficient depth of core skills. Staff availability already been internally secured and ring-fenced.</li> <li>We have sufficient flexibility in the team to be able to progress work according to timetable (skills, numbers of staff).</li> <li>Ricardo will also identify additional suitable resource if required at short notice (substitutability of personnel). Our Contract Management Plan will include a replacement plan for key staff personnel.</li> </ul>
Poor communication with Defra Rationale: scope not met and poor outputs not meeting client needs	<ul style="list-style-type: none"> <li>The Project Director and Project Manager and most of our team members have extensive experience with working our clients and stakeholders, ensuring in every case an efficient and close collaboration between our team and Defra.</li> <li>If problems do occur, however, an official communication channel between the project team and Defra will be agreed upon. This way our Project Manager will be the key link between the team and Defra, which will minimise any miscommunication.</li> </ul>

## E05 Project Management Plan

At the start of the contract, the Project Manager will develop a Project Management Plan (PMP) covering key objectives, deliverables, milestones and performance metrics and other key elements agreed on at the inception meeting. The PMP will set out our understanding of the Defra's requirements, our approach to effective mobilisation, managing resources across the individual tasks and phases to meet the milestones.

### Contract commencement meeting

Our Project Director and Project Manager will attend a virtual meeting with Defra the week commencing 18<sup>th</sup> January. An agenda will be developed and circulated prior to the meeting - we envisage covering some of the following key items:

- Background of the work including any ongoing work of relevance to this study.
- Aims and objectives of the study including any specific interests or focus areas.
- Research approach for workstreams 1 and 2.
- List of potential data sources, and the anticipated gaps and barriers with the data sources.
- Agree the focus areas and key list of stakeholders to consult.
- Project plan including exact dates for review points, presentation of findings and submitting project deliverables.
- Project risks and our approach to mitigating them.
- Project outputs, the target audiences and the contents.

Ricardo will issue the meeting minutes and actions within one week of the Contract Commencement Meeting. The draft Project Management Plan will be submitted within four weeks of the Contract Commencement Meeting.

### Project set-up

Following the Contract Commencement Meeting, we will arrange an internal call for the Ricardo project team to pass on Defra's feedback on the study methodology, update the team on the work plan, as well as explain roles and tasks for each team member. This will also involve discussion of key project risks and mitigation measures.

The Project Manager will put in place the following controls:

- Project Risk Register. Enable risks to be actively managed and controlled during project delivery. The risk register will consider project delivery, commercial issues, financial issues and technical issues. The risk register will be reviewed every two weeks or following any significant events.
- Project Issue Log. Enable any specific issues to be actively managed and controlled during project delivery.

### Communications with Defra

The Project Manager will be responsible for liaison with Defra on a day-to-day basis. Communication will be key to the successful delivery of this project and we will ensure clear lines of communication between all members of the project team. Our Project Manager has an excellent track record of building and maintaining strong relationships with our clients and will be responsible for all project related monitoring, controls and communication during the project.

The Project Manager will have responsibility for ensuring that Defra's requirements are communicated to the wider project team and for reporting Defra's feedback from the progress meetings, as well as any informal communications. We will circulate the notes from meetings with Defra to the Ricardo project team.

Throughout the project, we will make use of a clear project plan Gantt chart to confirm that the project is progressing as planned, that Defra's expectations are being met and that outputs are

delivered in a timely manner and to a high quality. This will be shared at the regular progress calls, with full transparency on progress against tasks and time/budget.

### Fortnightly and monthly contract status meetings

Additional to the mandatory commencement and presentation meetings, Ricardo proposes fortnightly project status meetings with our Project Manager and Defra to assess progress with the project delivery tasks, discuss the deliverables and resolve any project concerns or issues. We have assumed that the fortnightly and monthly contract status meetings will be by teleconference or videoconference.

These meetings will be preceded by an e-mail update on project status, to form the basis of the discussion. In our experience, an early heads-up discussion can reduce risks significantly and result in simple but effective changes that suit all parties.

### Report preparation and quality control

Ricardo has significant experience of producing quality reports with many being published. Furthermore, Ricardo also has many examples of producing reports using the Defra brand guidelines should this be required. For reasons of quality, transparency and auditability, we have clear procedures in place to manage the review process for both reports with Defra. This will include procedures for document control and logging of comments. Our Project Director, who has over 20 years' experience will be responsible for ensuring quality of all outputs.

Quality management is in accordance to the requirements of the International Standard ISO 9001:2008. This approach allows us to identify, plan, implement, manage and continuously improve the effectiveness of our services and of the processes, and to manage the interactions of these processes in order to achieve our objectives.

We understand that the Work Package 1 report must be submitted to Defra no later than 26<sup>th</sup> February and the Draft Final Report by 26<sup>th</sup> March 2021. We will work closely and seamlessly with Defra to meet these milestones. We have allowed for two sets of consolidation comments from Defra. The Draft Final Report will be submitted by the 26<sup>th</sup> March then reviewed, amended and updated in accordance with the comments within one week.

### Dissemination

To support wider dissemination we will produce deliverables that are of high quality and in a style and format that is informative but clear and engaging. We will ensure:

- Draft report: The draft will include a non-technical executive summary of the project and conclusions, its potential relevance to policy and intended use of results. Jargon will be avoided, and any acronyms used will be explained;
- Final report: The final report will include a non-technical executive summary that can be distributed within Defra to publicise internally what has been done and the recommendations for policy
- All graphics, charts and data will be clearly presented and designed suitable for external communication across multiple stakeholders

### Project closure

At the end of the project we will conduct a formal project closure process. This will include ensuring that all invoices have been raised and all relevant project data and deliverables are issued to Defra.

# ANNEX 1 Battery Chemistry Tables

Table based on Reporting Categories in Ireland

		TOTAL		In Equipment		Out of Equipment	
		Quantity	Weight	Qty	Weight	Qty	Weight
<b>Portable Batteries</b>							
	Lead Acid	0	0				
TOTAL Lead Acid		0	0	0	0	0	0
	Nickel Cadmium	0	0				
TOTAL Nickel Cadmium		0	0	0	0	0	0
	Zinc Carbon	0	0				
	Alkaline	0	0				
	Lithium	0	0				
	Zinc Air	0	0				
	Mercury Oxide	0	0				
	Silver Oxide	0	0				
	All Other Non-Rechargeable	0	0				
	Nickel Metal Hydride	0	0				
	Lithium Ion	0	0				
	Lithium Polymer	0	0				
	All Other Rechargeable	0	0				
TOTAL Other Portable		0	0	0	0	0	0
TOTAL Non-Rechargeable		0	0	0	0	0	0
TOTAL Rechargeable		0	0	0	0	0	0
TOTAL Portable		0	0	0	0	0	0
<b>Automotive Batteries</b>							
	Lead Acid						
TOTAL Lead Acid		0	0				
	Nickel Cadmium						
TOTAL Nickel Cadmium		0	0				
	All Other Automotive						
TOTAL Other Automotive		0	0				
TOTAL Automotive		0	0				

## Annex 2: Combined Nomenclature Codes

85061011	Manganese dioxide cells and batteries, alkaline, in the form of cylindrical cells (excl. spent)
85061018	Manganese dioxide cells and batteries, alkaline (excl. spent, and cylindrical cells)
85061091	Manganese dioxide cells and batteries, non-alkaline, in the form of cylindrical cells (excl. spent)
85061098	Manganese dioxide cells and batteries, non-alkaline (excl. spent, and cylindrical cells)
85063000	Mercuric oxide cells and batteries (excl. spent)
85064000	Silver oxide cells and batteries (excl. spent)
85065010	Lithium cells and batteries, in the form of cylindrical cells (excl. spent)
85065030	Lithium cells and batteries, in the form of button cells (excl. spent)
85065090	Lithium cells and batteries (excl. spent, and in the form of cylindrical or button cells)

85066000	Air-zinc cells and batteries (excl. spent)
85068005	Dry zinc-carbon batteries of a voltage of $\geq 5,5$ V but $\leq 6,5$ V (excl. spent)
85068080	Primary cells and primary batteries, electric (excl. spent, dry zinc-carbon batteries of a voltage of $\geq 5,5$ V but $\leq 6,5$ V, and those of manganese dioxi
85069000	Parts of primary cells and primary batteries, n.e.s.
85071020	Lead-acid accumulators of a kind used for starting piston engines (starter batteries), working with liquid electrolyte (excl. spent)
85071080	Lead-acid accumulators of a kind used for starting piston engines (starter batteries), working with non-liquid electrolyte (excl. spent)
85072020	Lead-acid accumulators, working with liquid electrolyte (excl. spent and starter batteries)
85072080	Lead-acid accumulators, working with non-liquid electrolyte (excl. spent and starter batteries)
85073020	Hermetically sealed nickel-cadmium accumulators (excl. spent)
85073080	Nickel-cadmium accumulators, not hermetically sealed (excl. spent)



85074000	Nickel-iron accumulators (excl. spent)
85075000	Nickel-metal hydride accumulators (excl. spent)
85076000	Lithium-ion accumulators (excl. spent)
85078000	Electric accumulators (excl. spent and lead-acid, nickel-cadmium, nickel-iron, nickel-metal hydride and lithium-ion accumulators)
85079030	Separators for electric accumulators (excl. separators of vulcanised rubber other than hard rubber or of textiles)
85079080	Parts of electric accumulators (excl. separators)
85481010	Spent primary cells and spent primary batteries, electrical
85481021	Spent electric lead-acid accumulators
85481029	Spent electric accumulators (excl. lead-acid accumulators)
85481091	Waste and scrap of electric primary cells, primary batteries and accumulators, containing lead
85481099	Waste and scrap of electric primary cells, primary batteries and accumulators (excl. those containing lead)