



Contract for the Provision of a Cost/ Benefit Analysis on the Development of New Arrangements to Monitor and Evaluate the Impact of Pesticides on Human Health

Tender Reference: PS2625

April 2015

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procurement@defra.gsi.gov.uk

SECTION 1 FORM OF CONTRACT

PARTIES:

- (1) THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS of Nobel House, 17 Smith Square, London, SW1P 3JR (the "[Authority]");

AND

- (2) Risk and Policy Analysts Ltd (registered in England and Wales under number 2484467) whose registered office is Farthing Green House, 1 Beccles Road, Loddon, Norfolk, NR14 6LT (the "Contractor")

(each a "Party" and together the "Parties")

WHEREAS

- a) The Authority requires the Services set out in the attached Specification Schedule.
- b) Following a competitive tender process, the Authority has appointed the Contractor to provide the Services and the Contractor hereby agrees to provide those Services in accordance with these terms and conditions.
- c) The Authority enters into the Contract on the basis that it requires the Services for the Initial Contract Period. However, in entering into the Contract, both Parties acknowledge that circumstances may prevent the Authority from fulfilling the funding requirements of the Contract for the Initial Contract Period. In these circumstances, the Parties undertake to discuss the future scope of the Contract before the end of the relevant Project Year.

NOW IT IS HEREBY AGREED as follows:

1. TERMS OF CONTRACT

- 1.1 The Contractor shall provide the Authority with the Services in accordance with the "Contract" which comprises the following:
- | | |
|-------------|-----------------------|
| Section 1: | Form of Contract |
| Section 2: | General Conditions |
| Schedule 1: | Specification |
| Schedule 2: | Pricing |
| Schedule 3: | Change Control Notice |
- 1.2 Execution of the Contract is carried out in accordance with the 1999 EU Directive 99/93 (Community framework for electronic signatures) and the UK Electronic Communications Act 2000. The Contract is formed on the date on which both the Authority and the Contractor have communicated acceptance of its terms on the Authority's electronic contract management system ('Bravo').
- 1.3 The Contract shall start on 1st April 2015 (the "Commencement Date") and end on 30th October 2015 (the "End Date") unless it is terminated early or extended in accordance with the Contract.

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A GENERAL PROVISIONS

A1 Definitions and Interpretation

Unless the context otherwise requires the following terms shall have the meanings given to them below:

“Affected Party” means the Party seeking to claim relief in respect of a Force Majeure Event.

“Affiliate” means in relation to a body corporate, any other entity which directly or indirectly Controls is Controlled by, or is under direct or indirect common Control with, that body corporate from time to time.

“Approval” and **“Approved”** means the prior written consent of The Authority.

“Authorised Representative” means the Authority representative named in the CCN as authorised to approve agreed Variations.

“Authority Data” means

- (a) the data, text, drawings, diagrams, images or sounds (together with any database made up of any of these) which are embodied in any electronic, magnetic, optical or tangible media, and which are:
 - (i) supplied to the Contractor by or on behalf of the Authority; or (ii) which the Contractor is required to generate, process, store or transmit pursuant to the Contract; or
- (b) any Personal Data for which the Authority is the Data Controller.

“Authority Premises” means any premises owned, occupied or controlled by the Authority or any other Crown Body which are made available for use by the Contractor or its Sub-Contractors for provision of the Services.

“Authority Software” means software which is owned by or licensed to the Authority (other than under or pursuant to the Contract) and which is or will be used by the Contractor for the purposes of providing the Services.

“Authority System” means the Authority’s computing environment (consisting of hardware, software and/or telecommunications networks or equipment) used by the Authority or the Contractor in connection with the Contract which is owned by or licensed to the Authority by a third party and which interfaces with the Contractor System or which is necessary for the Authority to receive the Services.

“Biological Materials” means any material (including, without limitation, plants, animals, microbes or viruses) of biological origin which contains genetic information capable of reproduction and/or material derived from the same that is collected or produced through the Contract.

“BPSS” means the HMG Baseline Personnel Security Standard for Government employees.

“Bravo” means the Authority’s electronic contract management system.

“CCN” means a change control notice in the form set out in Schedule 3.

“Commencement Date” means the date set out in paragraph 1.3 of the Form of Contract.

“Commercially Sensitive Information” means the information listed in Schedule 4:

- (a) which is provided by the Contractor to the Authority in confidence for the period set out in Schedule 4; and/or
- (b) that constitutes a trade secret.

“Confidential Information” means any information which has been designated as confidential by either Party in writing or that ought to be considered as confidential (however it is conveyed or on whatever media it is stored) including information the disclosure of which would, or would be likely to, prejudice the commercial interests of any person or trade secrets or Intellectual Property Rights of either Party and all personal data and sensitive personal data within the meaning of the DPA. Confidential Information shall not include information which:

- (a) was public knowledge at the time of disclosure otherwise than by breach of clause E4;
- (b) was in the possession of the receiving Party, without restriction as to its disclosure, before receiving it from the disclosing Party;
- (c) is received from a third party (who lawfully acquired it) without restriction as to its disclosure; or
- (d) is independently developed without access to the Confidential Information.

“Contract Period” means the period from the Commencement Date to:

- (a) the End Date; or
- (b) following an extension the end date of the extended period

or such earlier date of termination or partial termination of the Contract in accordance with the Law or the Contract.

“Contracting Authority” means any contracting authority (other than the Authority) as defined in regulation 3 of the Public Contracts Regulations 2006 (SI 2006/5).

“Contractor Software” means software which is proprietary to the Contractor, including software which is or will be used by the Contractor for the purposes of providing the Services and which is set out in Schedule 6.

“Contractor System” means the information and communications technology system used by the Contractor in performing the Services including the Software, the Contractor Equipment and related cabling (but excluding the Authority System).

“Control” means that a person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of the other person (whether through the ownership of voting shares, by contract or otherwise) and “Controls” and “Controlled” shall be interpreted accordingly.

“Conventions” means any and all of: i) the Convention on Biological Diversity and the International Treaty on Plant Genetic Resources for Food and Agriculture, including any Protocols and other additions or amendments from time to time; ii) any guidelines adopted by the parties to the same (including, without limitation, the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization); and iii) any national legal or regulatory requirements made in pursuance of the provisions of the same in any territory.

“Crown” means the government of the United Kingdom (including the Northern Ireland Executive Committee and Northern Ireland Departments, the Scottish Executive and the National Assembly for Wales), including, but not limited to, government ministers, government departments, government offices and government agencies and “Crown Body” is an emanation of the foregoing.

“Default” means any breach of the obligations of the relevant Party (including abandonment of the Contract in breach of its terms, repudiatory breach or breach of a fundamental term) or any other default, act, omission, negligence or statement of the relevant Party or the Staff in connection with the subject-matter of the Contract and in respect of which such Party is liable to the other.

“DOTAS” means the Disclosure of Tax Avoidance Schemes rules which require a promotor of tax schemes to tell HMRC of any specified notifiable arrangements or proposals and to provide prescribed information on those arrangements or proposals within set time limits as contained in Part 7 of the Finance Act 2004 and in secondary legislation made under vires contained in Part 7 of the Finance Act 2004 and as extended to national insurance contributions by the National Insurance (Application of Part 7 of the Finance Act 2004) regulations 2012, SI 2012/1868 made under section 132A of the Social Security Administration Act 1992.

“DPA” means the Data Protection Act 1998 and any subordinate legislation made under that Act from time to time together with any guidance and/or codes of practice issued by the Information Commissioner or relevant government department in relation to such legislation.

“EIR” means the Environmental Information Regulations 2004 (SI 2004/3391) and any guidance and/or codes of practice issued by the Information Commissioner or relevant government department in relation to such regulations.

“End Date” means the date the Contract ends set out in paragraph 1.2 if the Form of Contract.

“Equipment” means the Contractor’s equipment, consumables, plant, materials and such other items supplied and used by the Contractor in the delivery of the Services.

“FOIA” means the Freedom of Information Act 2000 and any subordinate legislation made under that Act from time to time together with any guidance and/or codes of practice issued by the Information Commissioner or relevant government department in relation to such legislation.

“Force Majeure Event” means any event outside the reasonable control of either Party affecting its performance of its obligations under the Contract arising from acts, events, omissions, happenings or non-happenings beyond its reasonable control and which are not attributable to any wilful act, neglect or failure to take reasonable preventative action by that Party, including acts of God, riots, war or armed conflict, acts of terrorism, acts of government, local government or regulatory bodies, for flood, storm or earthquake, or

disaster but excluding any industrial dispute relating to the Contractor or the Staff or any other failure in the Contractor's supply chain.

"Form of Contract" means Section 1 of the Contract signed by the Parties confirming their intention to enter into the Contract.

"General Anti-Abuse Rule" means:

- (a) the legislation in Part 5 of the Finance Act 2013; and
- (b) any future legislation introduced into parliament to counteract tax advantages arising from abusive arrangements to avoid national insurance contributions;

"Good Industry Practice" means standards, practices, methods and procedures conforming to the Law and the degree of skill and care, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced person or body engaged in a similar type of undertaking under the same or similar circumstances.

"Goods" means any goods supplied by the Contractor (or by a Sub-Contractor) under the Contract as specified in Schedule 1 including any modified or alternative goods.

"Halifax Abuse Principle" means the principle explained in the CJEU Case C-255/02 Halifax and others.

"HMRC" means HM Revenue & Customs.

"ICT Environment" means the Authority System and the Contractor System.

"Income" means any revenues received by the Contractor (including, without limitation, the sale or disposal of products or services, royalties, payments for licences or options and stage payments) irrespective of whether such payment is in money or other consideration, arising from the use or exploitation of the Results or any part of the Results.

"Information" has the meaning given under section 84 of the FOIA.

"Initial Contract Period" means the period from the Commencement Date to the End Date.

"Intellectual Property Rights" means patents, utility models, inventions, trademarks, service marks, logos, design rights (whether registrable or otherwise), applications for any of the foregoing, copyright, database rights, domain names, plant variety rights, Know-How, trade or business names, moral rights and other similar rights or obligations whether registrable or not in any country (including but not limited to the United Kingdom) and the right to sue for passing off.

"ITEPA" means the Income Tax (Earnings and Pensions) Act 2003.

"Key Biological Materials" means Biological Materials held by or on behalf of the Contractor that are agreed by the Contractor, the Authority and (if relevant) the appropriate independent scientific advisory body (in each case acting reasonably) to be of national or international importance.

"Key Personnel" mean those persons named in the Specification as key personnel.

"Know-How" means all information not in the public domain held in any form (including without limitation that comprised in or derived from drawings, data formulae, patterns, specifications, notes, samples, chemical compounds, biological materials, computer software, component lists, instructions, manuals, brochures, catalogues and process descriptions and scientific approaches and methods).

"Law" means law, statute, subordinate legislation within the meaning of section 21(1) of the Interpretation Act 1978, bye-law, enforceable right within the meaning of section 2 of the European Communities Act 1972, regulation, order, mandatory guidance or code of practice, judgment of a relevant court of law, or directives or requirements of any Regulatory Body with which the Contractor is bound to comply.

“Malicious Software” means any software program or code intended to destroy, interfere with, corrupt, or cause undesired effects on program files, data or other information, executable code or application software macros, whether or not its operation is immediate or delayed, and whether the malicious software is introduced wilfully, negligently or without knowledge of its existence.

“Material Breach” means a breach (including an anticipatory breach) that is serious in the widest sense of having a serious effect on the benefit which the Authority would otherwise derive from:

- (a) a substantial portion of the Contract; or
- (b) any of the obligations set out in clauses A6, B16, D1, E1, E2, E3, E4, E7, E8 or E11.

“Month” means calendar month.

“NICs” means National Insurance Contributions.

“Occasion of Tax Non-Compliance” means:

- (a) any tax return of the Contractor submitted to a Relevant Tax Authority on or after 1 October 2012 which is found on or after 1 April 2013 to be incorrect as a result of:
 - i. a relevant Tax Authority successfully challenging the Contractor under the General Anti-Abuse Rule or the Halifax Abuse principle or under any tax rules or legislation that have an effect equivalent or similar to the General Anti-Abuse Rule or the Halifax Abuse Principle;
 - ii. the failure of an avoidance scheme which the Contractor was involved in, and which was, or should have been, notified to the Relevant Tax Authority under the DOTAS or any equivalent or similar regime; and/or
- (b) any tax return of the Contractor submitted to a Relevant Tax Authority on or after 1 October 2012 gives rise on or after 1 April 2013 to a criminal conviction in any jurisdiction for tax related offences which is not spent at the Commencement Date or to a civil penalty for fraud or evasion.

“Premises” means the location where the Services are to be supplied as set out in the Specification.

“Price” means the price (excluding any applicable VAT) payable to the Contractor by the Authority under the Contract, as set out in Schedule 2 for the full and proper performance by the Contractor of its obligations under the Contract.

“Prohibited Act” means:

- (a) to directly or indirectly offer, promise or give any person working for or engaged by the Authority a financial or other advantage to:
 - i. induce that person to perform improperly a relevant function or activity; or
 - ii. reward that person for improper performance of a relevant function or activity;
- (b) to directly or indirectly request, agree to receive or accept any financial or other advantage as an inducement or a reward for improper performance of a relevant function or activity in connection with the Contract;
- (c) an offence:
 - i. under the Bribery Act 2010 (or any legislation repealed or revoked by such Act);
 - ii. under legislation or common law concerning fraudulent acts; or

- iii. the defrauding, attempting to defraud or conspiring to defraud the Authority;
- (d) any activity, practice or conduct which would constitute one of the offences listed under (c) above if such activity, practice or conduct has been carried out in the UK.

“Project Year” means each period of 12 months during the Contract Period beginning with the Commencement Date.

“Property” means the property, other than real property, issued or made available to the Contractor by the Authority in connection with the Contract.

“Purchase Order” means the document in which the Authority specifies the Services which are to be supplied by the Contractor under the Contract.

“Quality Standards” means the quality standards published by BSI British Standards, the National Standards Body of the United Kingdom, the International Organisation for Standardization or other reputable or equivalent body (and their successor bodies) that a skilled and experienced operator in the same type of industry or business sector as the Contractor would reasonably and ordinarily be expected to comply with, and as may be further detailed in Schedule 1.

“Receipt” means the physical or electronic arrival of the invoice at the address specified in clause A4.4 or at any other address given by the Authority to the Contractor for the submission of invoices from time to time.

“Regulatory Body” means a government department and regulatory, statutory and other entities, committees, ombudsmen and bodies which, whether under statute, rules, regulations, codes of practice or otherwise, are entitled to regulate, investigate, or influence the matters dealt with in the Contract or any other affairs of the Authority.

“Relevant Conviction” means a conviction that is relevant to the nature of the Services or as listed by the Authority and/or relevant to the work of the Authority.

“Relevant Requirements” means all applicable Law relating to bribery, corruption and fraud, including the Bribery Act 2010 and any guidance issued by the Secretary of State for Justice pursuant to section 9 of the Bribery Act 2010.

“Relevant Tax Authority” means HMRC or, if applicable, a tax authority in the jurisdiction in which the Contractor is established.

“Replacement Contractor” means any third party supplier appointed by the Authority to supply any goods and/or services which are substantially similar to any of the Services in substitution for any of the Services following the expiry, termination or partial termination of the Contract.

“Request for Information” means a request for information under the FOIA or the EIR.

“Results” means the Intellectual Property Rights in any guidance, specifications, reports, studies, instructions, toolkits, plans, data, drawings, databases, patents, patterns, models, designs or other material which is:

- a) prepared by or for the Contractor for use in relation to the performance of its obligations under the Contract; or
- b) the result of any work done by the Contractor, the Staff or any Sub-Contractor in relation to the provision of the Services.

“Returning Employees” means those persons agreed by the Parties to be employed by the Contractor (and/or any Sub-Contractor) wholly or mainly in the supply of the Services immediately before the end of the Contract Period.

“Security Policy Framework” means the HMG Security Policy Framework (available from the Cabinet Office’s Government Security Secretariat) as updated from time to time.

“Services” means the services set out in Schedule 1 (including any modified or alternative services and, if the context so requires, includes Goods).

“Specification” means the description of the Services to be supplied under the Contract as set out in Schedule 1 including, where appropriate, the Key Personnel, the Premises and the Quality Standards.

“SSCBA” means the Social Security Contributions and Benefits Act 1992.

“Staff” means all persons employed by the Contractor to perform its obligations under the Contract together with the Contractor’s servants, agents, students, suppliers and Sub-Contractors used in the performance of its obligations under the Contract.

“Sub-Contractor” means a third party directly or indirectly contracted to the Contractor (irrespective of whether such person is an agent or company within the same group of companies as the Contractor) whose services and/or goods are used by the Contractor (either directly or indirectly) in connection with the provision of the Services, and “Sub-Contract” shall be construed accordingly.

“Tender” means the document submitted by the Contractor to the Authority in response to the Authority’s invitation to suppliers for formal offers to supply the Services.

“Third Party IP Claim” has the meaning given to it in clause E8.7 (Intellectual Property Rights).

“Third Party Software” means software which is proprietary to any third party which is or will be used by the Contractor to provide the Services including the software and which is specified as such in Schedule 6.

“TUPE” means the Transfer of Undertakings (Protection of Employment) Regulations 2006.

“TUPE Information” means the information set out in clause B17.1.

“Valid Invoice” means an invoice containing the information set out in clause C2.5.

“Variation” means any variation to the Contract.

“VAT” means value added tax charged or regulated in accordance with the provisions of the Value Added Tax Act 1994.

“Working Day” means a day (other than a Saturday or Sunday) on which banks are open for general business in the City of London.

In the Contract, unless the context implies otherwise:

- (a) the singular includes the plural and vice versa;
- (b) words importing the masculine include the feminine and the neuter;
- (c) reference to a clause is a reference to the whole of that clause unless stated otherwise;
- (d) references to a person include an individual, company, body corporate, corporation, unincorporated association, firm, partnership or other legal entity or central Government body;
- (e) the words “other”, “in particular”, “for example”, “including” and similar words shall not limit the generality of the preceding words and shall be construed as if they were immediately followed by the words “without limitation”;
- (f) headings are included for ease of reference only and shall not affect the interpretation or construction of the Contract;

- (g) a reference to any Law includes a reference to that Law as amended, extended, consolidated or re-enacted from time to time;
- (h) references to the Contract are references to the Contract as amended from time to time; and
- (i) if there are no Co-funders, references to the Co-funders shall have no meaning or effect.

A2 The Authority's Obligations

- A2.1 Save as otherwise expressly provided, the obligations of the Authority under the Contract are obligations of the Authority in its capacity as a contracting counterparty and nothing in the Contract shall operate as an obligation upon, or in any other way fetter or constrain the Authority in any other capacity, and the exercise by the Authority of its duties and powers in any other capacity shall not lead to any liability (howsoever arising) on the part of the Authority to the Contractor.

A3 Contractor's Status

- A3.1 The Contractor shall be an independent contractor and nothing in the Contract shall create a contract of employment, a relationship of agency or partnership or a joint venture between the Parties and accordingly neither Party shall be authorised to act in the name of, or on behalf of, or otherwise bind the other Party save as expressly permitted by the terms of the Contract.
- A3.2 The Contractor shall not (and shall ensure that any other person engaged in relation to the Contract shall not) say or do anything that might lead any other person to believe that the Contractor is acting as the agent or employee of the Authority.

A4 Notices and Communications

- A4.1 Subject to clause A4.3, where the Contract states that a notice or communication between the Parties must be "written" or "in writing" it is not valid unless it is made by letter (sent by hand, first class post, recorded delivery or special delivery) or by email or by communication via Bravo.
- A4.2 If it is not returned as undelivered a notice served:
- (a) in a letter is deemed to have been received 2 Working Days after the day it was sent; and
 - (b) in an email is deemed to have been received 4 hours after the time it was sent provided it was sent on a Working Day
- or when the other Party acknowledges receipt, whichever is the earlier.
- A4.3 Notices pursuant to clauses G3 (Force Majeure), I2 (Dispute Resolution) or to terminate the Contract or any part of the Services are valid only if served in a letter by hand, recorded delivery or special delivery.
- A4.4 Notices shall be sent to the addresses set out below or at such other address as the relevant Party may give notice to the other Party for the purpose of service of notices under the Contract:
- (a) For the Authority:

Contact Name: [REDACTED];

Address: Chemicals Regulation Directorate, Ground Floor, Mallard House, Kings Pool, 3 Peasholme Green, York, YO1 7PX; and

Email: [REDACTED]

(b) For the Contractor:

Contact Name: [REDACTED];

Address: Farthing Green House, 1 Beccles Road, Loddon, Norfolk, NR14 6LT; and

Email: [REDACTED]

A5 Mistakes in Information

A5.1 The Contractor is responsible for the accuracy of all drawings, documentation and information supplied to the Authority by the Contractor in connection with the Services and shall pay the Authority any extra costs occasioned by any discrepancies, errors or omissions therein.

A6 Conflicts of Interest

A6.1 The Contractor shall take appropriate steps to ensure that neither the Contractor nor any Staff is placed in a position where, in the reasonable opinion of the Authority, there is or may be an actual conflict, or a potential conflict, between the pecuniary or personal interests of the Contractor and the duties owed to the Authority under the provisions of the Contract. The Contractor will notify the Authority without delay giving full particulars of any such conflict of interest which may arise.

A6.2 The Authority may terminate the Contract immediately by notice and/or take or require the Contractor to take such other steps it deems necessary if, in the Authority's reasonable opinion, there is or may be an actual conflict, or a potential conflict, between the pecuniary or personal interests of the Contractor and the duties owed to the Authority under the provisions of the Contract. The actions of the Authority pursuant to this clause 6 shall not prejudice or affect any right of action or remedy which shall have accrued or shall thereafter accrue to the Authority.

B. THE SERVICES

B1 Specification

B1.1 In consideration of the Contractor supplying the Services the Contractor shall be paid the Price.

B2 Samples

B2.1 If requested by the Authority, the Contractor shall provide the Authority with samples of Goods for evaluation and Approval, at the Contractor's cost and expense.

B2.2 The Contractor shall ensure that the Goods are fully compatible with any equipment, to the extent specified in the Specification.

B2.3 The Contractor acknowledges that the Authority relies on the skill and judgment of the Contractor in the supply of the Goods and the performance of the Contractor's obligations under the Contract.

B3 Delivery

B3.1 Unless otherwise stated in the Specification, where the Goods are delivered by the Contractor, the point of delivery shall be when the Goods are removed from the transporting vehicle at the Premises. If the Goods are collected by the Authority, the point of delivery shall be when the Goods are loaded on the Authority's vehicle.

B3.2 Except where otherwise provided in the Contract, delivery shall include the unloading, stacking or installation of the Goods by the Staff or the Contractor's suppliers or carriers at such place as the Authority or duly authorised person shall reasonably direct.

- B3.3 Any access to the Premises and any labour and equipment that may be provided by the Authority in connection with delivery shall be provided without acceptance by the Authority of any liability whatsoever to the extent permitted by law.
- B3.4 Where access to the Premises is necessary in connection with delivery or installation of the Goods, the Contractor and its Sub-Contractors shall at all times comply with the security requirements of the Authority.
- B3.5 The Authority shall be under no obligation to accept or pay for any Goods supplied earlier than the date for delivery stated in the Specification.
- B3.6 The Authority is under no obligation to accept or pay for any Goods delivered in excess of the quantity ordered. If the Authority elects not to accept such over-delivered Goods it shall give notice to the Contractor to remove them within 5 Working Days and to refund to the Authority any expenses incurred by it as a result of such over-delivery (including but not limited to the costs of moving and storing the Goods), failing which the Authority may dispose of such Goods and charge the Contractor for the costs of such disposal. The risk in any over-delivered Goods shall remain with the Contractor unless they are accepted by the Authority.
- B3.7 Unless expressly agreed to the contrary, the Authority shall not accept delivery by instalments. If, however, the Authority does specify or agree to delivery by instalments, delivery of any instalment later than the date specified or agreed for its delivery shall, without prejudice to any other rights or remedies of the Authority, entitle the Authority to terminate the whole of any unfulfilled part of the Contract without further liability to the Authority.
- B3.8 The Authority may inspect and examine the manner in which the Contractor supplies the Services at the Premises during normal business hours on reasonable notice. The Contractor shall provide free of charge all such facilities as the Authority may reasonably require for such inspection and examination. In this clause B3, Services include planning or preliminary work in connection with the supply of the Services.
- B3.9 If reasonably requested to do so by the Authority, the Contractor shall co-ordinate its activities in supplying the Services with those of the Authority and other contractors engaged by the Authority.
- B3.10 Subject to Approval timely supply of the Services is of the essence of the Contract, including in relation to commencing the supply of the Services within the time agreed or on a specified date. If the Contractor fails to deliver the Services within the time promised or specified in the Specification, the Authority is released from any obligation to accept and pay for the Services and may terminate the Contract, in either case without prejudice to any other rights and remedies of the Authority.

B4 Risk and Ownership

- B4.1 Subject to clauses B3.5 and B3.6, risk in the Goods shall, without prejudice to any other rights or remedies of the Authority (including the Authority's rights and remedies under clause F1 (Failure to meet Requirements)), pass to the Authority at the time of delivery.
- B4.2 Ownership in the Goods shall, without prejudice to any other rights or remedies of the Authority (including the Authority's rights and remedies under clause F1), pass to the Authority at the time of delivery (or payment, if earlier).

B5 Non-Delivery

- B5.1 On dispatch of any consignment of the Goods the Contractor shall send the Authority an advice note specifying the means of transport, the place and date of dispatch, the number of packages and their weight and volume.
- B5.2 If the Authority has been informed in writing of the despatch of the Goods and, having been placed in transit, the Goods are not delivered to the Authority on the due date for delivery, the Authority

shall, within 10 Working Days of the notified date of delivery, give notice to the Contractor that the Goods have not been delivered and may request the Contractor to deliver substitute Goods free of charge within the timescales specified by the Authority or terminate the Contract in accordance with clause B3.10.

B6 Labelling and Packaging

- B6.1 The Contractor shall ensure that the Goods are labelled and packaged in accordance with the Contract.
- B6.2 The Contractor shall comply with the Packaging & Packaging Waste Directive (94/62/EC), implemented in the UK by the Packaging (Essential Requirements) Regulations 2003. The container in which the Goods are held shall be labelled with the Contractor's name, the net, gross and tare weights, and contain a description of its contents. All containers of hazardous Goods (and all documents relating thereto) shall bear prominent and adequate warnings.
- B6.3 The Contractor is responsible for the removal and disposal of all packaging materials from the Premises within the period specified by the Authority and at no cost to the Authority.
- B6.4 If no period for collection and disposal is specified by the Authority, the Contractor shall collect the packaging from the Premises no later than 10 Working Days from the date of delivery of the Goods. The Authority shall be entitled to dispose of any packaging materials which have not been collected by the Contractor within those 10 Working Days or such other period specified by the Authority for collection. The Contractor shall be responsible for the payment of any costs incurred by the Authority in connection with its collection and disposal of that packaging material.
- B6.5 The Contractor shall:
- (a) use packaging capable of easy recovery for further use or recycling. Packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile);
 - (b) reuse the packaging and, where reuse is not practicable, recycle the materials in the manufacture of crates, pallets, boxes, cartons, cushioning and other forms of packaging, where these fulfil other packaging specifications;
 - (c) make maximum use of materials taken from renewable sources, if recycled materials are not suitable or not readily available;
 - (d) if using wooden pallets or timber derived products for the packaging and supply of Goods, comply with the UK timber procurement policy and the provisions in clause D5;
 - (e) review packaging specifications periodically to ensure that no unnecessary limitations on the use of recycled materials exist; and
 - (f) if requested to do so, provide the Authority with a description of the product packaging and evidence to satisfy the Authority that it is reusing, recycling and reviewing its use of packaging. The evidence should provide proof of compliance with BS EN 13430 on recyclability or BS EN 13429 on reusability, or equivalent.

B7 Training

- B7.1 If included in the Specification, the Price includes the cost of instruction of the Authority's personnel in the use and maintenance of the Goods and such instruction shall be in accordance with the requirements detailed in the Specification.

B8 Provision and Removal of Equipment

- B8.1 The Contractor shall provide all the Equipment and resource necessary for the supply of the Services.
- B8.2 The Contractor shall not deliver any Equipment to nor begin any work on the Premises without obtaining Approval.
- B8.3 All Equipment brought onto the Premises shall be at the Contractor's own risk and the Authority shall have no liability for any loss of or damage to any Equipment unless the Contractor is able to demonstrate that such loss or damage was caused or contributed to by the Authority's Default. The Contractor shall provide for the haulage or carriage thereof to the Premises and the removal of Equipment when no longer required at its sole cost.
- B8.4 Unless otherwise agreed, Equipment brought onto the Premises will remain the property of the Contractor.
- B8.5 If the cost of any Equipment is reimbursed to the Contractor such Equipment shall be the property of the Authority and shall on request be delivered to the Authority as directed by the Authority. The Contractor will keep a full and accurate inventory of such Equipment and will deliver that inventory to the Authority on request and on completion of the Services.
- B8.6 The Contractor shall maintain all Equipment in a safe, serviceable and clean condition.
- B8.7 The Contractor shall, at the Authority's written request, at its own expense and as soon as reasonably practicable:
- (a) remove immediately from the Premises Equipment which is, in the Authority's opinion, hazardous, noxious or not supplied in accordance with the Contract; and
 - (b) replace such item with a suitable substitute item of Equipment.
- B8.8 Within 20 Working Days of the End Date, the Contractor shall remove the Equipment together with any other materials used by the Contractor to supply the Services and shall leave the Premises in a clean, safe and tidy condition. The Contractor shall make good any damage to those Premises and any fixtures and fitting in the Premises which is caused by the Contractor or Staff.

B9 Goods Delivery

- B9.1 The Contractor shall perform its obligations under the Contract:
- (a) with appropriately experienced, qualified and trained personnel with all due skill, care and diligence;
 - (b) in accordance with Good Industry Practice; and
 - (c) in compliance with all applicable Laws.
- B9.2 The Contractor shall ensure the Goods:
- (a) conform in all respects with the Specification and, where applicable, with any sample approved by the Authority;
 - (b) operate in accordance with the relevant technical specifications and correspond with the requirements of the Specification;
 - (c) conform in all respects with all applicable Laws; and

- (d) are free from defects in design, materials and workmanship and are fit and sufficient for all the purposes for which such goods are ordinarily used and for any particular purpose made known to the Contractor by the Authority.

B10 Service Delivery

- B10.1 The Contractor shall at all times comply with the Quality Standards and, where applicable, shall maintain accreditation with the relevant Quality Standards authorisation body. To the extent that the standard of the Service has not been specified in the Contract, the Contractor shall agree the relevant standard of the Services with the Authority prior to the supply of the Services and, in any event, the Contractor shall perform its obligations under the Contract in accordance with the Law and Good Industry Practice.
- B10.2 The Contractor shall ensure that all Staff supplying the Services do so with all due skill, care and diligence and shall possess such qualifications, skills and experience as are necessary for the proper supply of the Services. The Contractor shall ensure that those Staff are properly managed and supervised.
- B10.3 If the Specification includes installation of equipment the Contractor shall notify the Authority in writing when it has completed installation. Following receipt of such notice, the Authority shall inspect the installation and shall, by giving notice to the Contractor:
 - (a) accept the installation; or
 - (b) reject the installation and inform the Contractor why, in the Authority's reasonable opinion, the installation does not satisfy the Specification.
- B10.4 If the Authority rejects the installation pursuant to clause B10.3(b), the Contractor shall immediately rectify or remedy any defects and if, in the Authority's reasonable opinion, the installation does not, within 2 Working Days or such other period agreed by the Parties, satisfy the Specification, the Authority may terminate the Contract with immediate effect by notice.
- B10.5 The installation shall be complete when the Contractor receives a notice issued by the Authority in accordance with clause B10.3(a). Notwithstanding acceptance of any installation in accordance with clause B10.3(a), the Contractor shall remain solely responsible for ensuring that the Services and the installation conform to the Specification. No rights of estoppel or waiver shall arise as a result of the acceptance by the Authority of the installation.
- B10.6 During the Contract Period, the Contractor shall:
 - (a) at all times have all licences, approvals and consents necessary to enable the Contractor and Staff to carry out the installation;
 - (b) provide all tools and equipment (or procure the provision of all tools and equipment) necessary for completion of the installation; and
 - (c) not, in delivering the Services, in any manner endanger the safety or convenience of the public.

B11 Key Personnel

- B11.1 The Contractor acknowledges that the Key Personnel are essential to the proper provision of the Services.
- B11.2 The Key Personnel shall not be released from supplying the Services without the agreement of the Authority, except by reason of long-term sickness, maternity leave, paternity leave or termination of employment or other similar extenuating circumstances.

- B11.3 Any replacements to the Key Personnel shall be subject to Approval. Such replacements shall be of at least equal status, experience and skills to the Key Personnel being replaced and be suitable for the responsibilities of that person in relation to the Services.
- B11.4 The Authority shall not unreasonably withhold its agreement under clauses B11.2 or B11.3. Such agreement shall be conditional on appropriate arrangements being made by the Contractor to minimise any adverse effect on the Services which could be caused by a change in Key Personnel.
- B11.5 The Authority may, by notice to the Contractor, ask it to remove any Staff whose presence is, in the Authority's reasonable opinion, undesirable. The Contractor shall comply with any such request immediately.

B12 Contractor's Staff

- B12.1 The Authority may, by notice to the Contractor, refuse to admit onto, or withdraw permission to remain on, the Authority's Premises:
 - (a) any member of the Staff; or
 - (b) any person employed or engaged by any member of the Staff
 whose admission or continued presence would, in the Authority's reasonable opinion, be undesirable.
- B12.2 At the Authority's written request, the Contractor shall provide a list of the names and addresses of all persons who may require admission in to the Authority's Premises, specifying the capacities in which they are concerned with the Contract and giving such other particulars as the Authority may reasonably request.
- B12.3 The decision of the Authority as to whether any person is to be refused access to the Authority's Premises and as to whether the Contractor has failed to comply with clause B12.2 shall be final.
- B12.4 The Contractor shall ensure that all Staff who have access to the Authority's Premises, the Authority System or the Authority Data have been cleared in accordance with the BPSS.

B13 Inspection of Premises

- B13.1 Save as the Authority may otherwise direct, the Contractor is deemed to have inspected the Premises before submitting its Tender and to have complete due diligence in relation to all matters connected with the performance of its obligations under the Contract.

B14 Licence to Occupy Premises

- B14.1 Any land or Premises made available from time to time to the Contractor by the Authority in connection with the Contract shall be on a non-exclusive licence basis free of charge and shall be used by the Contractor solely for the purpose of performing its obligations under the Contract. The Contractor shall have the use of such land or Premises as licensee and shall vacate the same on termination of the Contract.
- B14.2 The Contractor shall limit access to the land or Premises to such Staff as is necessary for it to perform its obligations under the Contract and the Contractor shall co-operate (and ensure that its Staff co-operate) with such other persons working concurrently on such land or Premises as the Authority may reasonably request.
- B14.3 Should the Contractor require modifications to the Authority's Premises, such modifications shall be subject to Approval and shall be carried out by the Authority at the Contractor's expense. The Authority shall undertake approved modification work without undue delay.

- B14.4 The Contractor shall (and shall ensure that any Staff on the Authority's Premises shall) observe and comply with such rules, regulations and requirements (including those relating to security arrangements) as may be in force from time to time for the conduct of personnel when on the Authority's Premises as determined by the Authority.
- B14.5 The Contract does not create a tenancy of any nature whatsoever in favour of the Contractor or its Staff and no such tenancy has or shall come into being and, notwithstanding any rights granted pursuant to the Contract, the Authority retains the right at any time to use the Premises owned or occupied by it in any manner it sees fit.

B15 Property

- B15.1 All Property is and shall remain the property of the Authority and the Contractor irrevocably licenses the Authority and its agents to enter any Premises of the Contractor during normal business hours on reasonable notice to recover any such Property. The Contractor shall not in any circumstances have a lien or any other interest on the Property and the Contractor shall at all times possess the Property as fiduciary agent and bailee of the Authority. The Contractor shall take all reasonable steps to ensure that the title of the Authority to the Property and the exclusion of any such lien or other interest are brought to the notice of all Sub-Contractors and other appropriate persons and shall, at the Authority's request, store the Property separately and ensure that it is clearly identifiable as belonging to the Authority.
- B15.2 The Property shall be deemed to be in good condition when received by or on behalf of the Contractor unless the Contractor notifies the Authority otherwise within 5 Working Days of receipt.
- B15.3 The Contractor shall maintain the Property in good order and condition (excluding fair wear and tear), and shall use the Property solely in connection with the Contract and for no other purpose without Approval.
- B15.4 The Contractor shall ensure the security of all the Property whilst in its possession, either on the Premises or elsewhere during the supply of the Services, in accordance with the Authority's reasonable security requirements as required from time to time.
- B15.5 The Contractor shall be liable for all loss of or damage to the Property, unless such loss or damage was caused by the Authority's negligence. The Contractor shall inform the Authority immediately of becoming aware of any defects appearing in, or losses or damage occurring to, the Property.

B16 Biological Materials

- B16.1 The Contractor shall ensure that any Biological Materials collected by or on behalf of the Contractor in the course of performance of the Services are:
- (a) collected and used in accordance with the Conventions, where relevant;
 - (b) made available to the Authority (or such other person as the Authority may specify) whenever and wherever and in whatever format the Authority may reasonably require for any purpose (including, without limitation, handover on termination of the Services); and
 - (c) stored for whatever period is reasonably required by the Authority (or, in the absence of any such requirement, an appropriate period in all the circumstances taking into account the nature of the relevant Biological Materials) following termination of the Contract.
- B16.2 The Contractor recognises and acknowledges for the purposes of clause B16.1 (c) that Key Biological Materials in its possession are likely to require long term maintenance and shall put in place appropriate procedures for ensuring that relevant samples are selected for this purpose where applicable.
- B16.3 The Contractor shall identify any requirements of the Conventions (including, without limitation, benefit-sharing requirements arising from use of Biological Materials) which may apply in

connection with the Services. The Contractor shall comply with any such requirements and inform the Authority of the same. This clause B16.3 shall be without prejudice to the generality of clause B10.1.

- B16.4 Failure to comply with any obligation in clause B16 shall amount to a Material Breach for the purpose of clause H2 (Termination on Default). For the avoidance of doubt, where no Biological Materials are, or are to be, collected by or on behalf of the Contractor in the course of performance of the Contract all references to Biological Materials in this clause B16 or elsewhere in the Contract shall have no effect.

B17 Offers of Employment

- B17.1 Except in respect of any transfer of Staff under TUPE, for the Contract Period and for 12 Months thereafter the Contractor shall not employ or offer employment to any of the Authority's staff who have been associated with the Services and/or the Contract without Approval.

B18 Employment Provisions

- B18.1 Not later than 12 Months prior to the end of the Contract Period, the Contractor shall fully and accurately disclose to the Authority all information that the Authority may reasonably request in relation to the Staff including the following:
- (a) the total number of Staff whose employment/engagement shall terminate at the end of the Contract Period, save for any operation of Law;
 - (b) the age, gender, salary or other remuneration, future pay settlements and redundancy and pensions entitlement of the Staff referred to in clause B18.1(a);
 - (c) the terms and conditions of employment/engagement of the Staff referred to in clause B18.1(a), their job titles and qualifications;
 - (d) details of any current disciplinary or grievance proceedings ongoing or circumstances likely to give rise to such proceedings and details of any claims current or threatened; and
 - (e) details of all collective agreements with a brief summary of the current state of negotiations with any such bodies and with details of any current industrial disputes and claims for recognition by any trade union.
- B18.2 At intervals determined by the Authority (which shall not be more frequent than once every 30 days) the Contractor shall give the Authority updated TUPE Information.
- B18.3 Each time the Contractor supplies TUPE Information to the Authority it shall warrant its completeness and accuracy and the Authority may assign the benefit of this warranty to any Replacement Contractor.
- B18.4 The Authority may use TUPE Information it receives from the Contractor for the purposes of TUPE and/or any retendering process in order to ensure an effective handover of all work in progress at the end of the Contract Period. The Contractor shall provide the Replacement Contractor with such assistance as it shall reasonably request.
- B18.5 If TUPE applies to the transfer of the Services on termination of the Contract, the Contractor shall indemnify and keep indemnified the Authority and the Crown (both for themselves and any Replacement Contractor) against all actions, suits, claims, demands, losses, charges, damages, costs and expenses and other liabilities which the Authority or the Crown or any Replacement Contractor may suffer or incur as a result of or in connection with:
- (a) the provision of TUPE Information;

- (b) any claim or demand by any Returning Employee (whether in contract, tort, under statute, pursuant to EU Law or otherwise) in each case arising directly or indirectly from any act, fault or omission of the Contractor or any Sub-Contractor in respect of any Returning Employee on or before the end of the Contract Period;
 - (c) any failure by the Contractor or any Sub-Contractor to comply with its obligations under regulations 13 or 14 of TUPE or any award of compensation under regulation 15 of TUPE save where such failure arises from the failure of the Authority or a Replacement Contractor to comply with its duties under regulation 13 of TUPE;
 - (d) any claim (including any individual employee entitlement under or consequent on such a claim) by any trade union or other body or person representing any Returning Employees arising from or connected with any failure by the Contractor or any Sub-Contractor to comply with any legal obligation to such trade union, body or person; and
 - (e) any claim by any person who is transferred by the Contractor to the Authority and/or a Replacement Contractor whose name is not included in the list of Returning Employees.
- B18.6 If the Contractor becomes aware that TUPE Information it provided has become inaccurate or misleading, it shall notify the Authority and provide the Authority with up to date TUPE Information.
- B18.7 This clause B18 applies during the Contract Period and indefinitely thereafter.
- B18.8 The Contractor undertakes to the Authority that, during the 12 Months prior to the end of the Contract Period the Contractor shall not (and shall procure that any Sub-Contractor shall not) without Approval (such Approval not to be unreasonably withheld or delayed):
- (a) amend or vary (or purport to amend or vary) the terms and conditions of employment or engagement (including, for the avoidance of doubt, pay) of any Staff (other than where such amendment or variation has previously been agreed between the Contractor and the Staff in the normal course of business and where any such amendment or variation is not in any way related to the transfer of the Services);
 - (b) terminate or give notice to terminate the employment or engagement of any Staff (other than in circumstances in which the termination is for reasons of misconduct or lack of capability);
 - (c) transfer away, remove, reduce or vary the involvement of any other Staff from or in the provision of the Services (other than where such transfer or removal: (i) was planned as part of the individual's career development; (ii) takes place in the normal course of business; and (iii) will not have any adverse impact upon the delivery of the Services by the Contractor, (provided that any such transfer, removal, reduction or variation is not in any way related to the transfer of the Services); or
 - (d) recruit or bring in any new or additional individuals to provide the Services who were not already involved in providing the Services prior to the relevant period.

C PAYMENT

C1 Price

- C1.1 In consideration of the Contractor's performance of its obligations under the Contract, the Authority shall pay the Price in accordance with clause C2.

C2 Payment and VAT

- C2.1 The Contractor shall submit invoices to the Authority on the dates set out in Schedule 2.

- C2.2 The Authority shall, in addition to the Price and following Receipt of a Valid Invoice, pay the Contractor a sum equal to the VAT chargeable on the value of the Services supplied in accordance with the Contract.
- C2.3 The Contractor shall add VAT to the Price at the prevailing rate as applicable and shall show the amount of VAT payable separately on all invoices as an extra charge. If the Contractor fails to show VAT on an invoice, the Authority will not, at any later date, be liable to pay the Contractor any additional VAT.
- C2.4 All Contractor invoices shall be expressed in sterling or such other currency as shall be permitted by the Authority in writing.
- C2.5 Valid Invoices shall include:
- (a) the Contractor's full name, address and title of the Contract;
 - (b) (if Goods are included in the Specification) the name and quantity of the Goods delivered including batch numbers;
 - (c) the Purchase Order number
- and, if requested by the Authority:
- (d) timesheets for Staff engaged in providing the Services signed and dated by the Authority's representative on the Premises on the day;
 - (e) the name of the individuals to whom the timesheet relates and hourly rates for each;
 - (f) identification of which individuals are Contractor's staff and which are Sub-Contractors;
 - (g) the address of the Premises and the date on which work was undertaken;
 - (h) the time spent working on the Premises by the individuals concerned;
 - (i) details of the type of work undertaken by the individuals concerned;
 - (j) details of plant or materials operated and on standby;
 - (k) separate identification of time spent travelling and/or meal or rest breaks; and
 - (l) where appropriate, details of journeys made and distances travelled.
- C2.6 The Authority shall not pay Contractor time spent on meal or rest breaks and the Contractor shall ensure that all workers take adequate meal or rest breaks.
- C2.7 The Authority shall not pay for plant which is not in use during a meal or rest break.
- C2.8 Meal and rest breaks will include breaks both in or outside an individual's workplace along with any time taken in travelling to or from the break location and/or any facilities for cleaning/changing/washing in preparation for or return from a meal or rest break.
- C2.9 Timesheets must include a minimum of 30 minutes break for each shift of 8 hours, a minimum of 45 minutes break in a shift of between 8 and 12 hours and a minimum of one hour break will be taken within a shift in excess of 12 hours and the Contractor's rates and Contract Price must include such breaks.
- C2.10 The Authority shall not pay the Contractor's overhead costs unless specifically agreed in writing by the Authority and overhead costs shall include, without limitation; facilities, utilities, insurance, tax,

head office overheads, indirect staff costs and other costs not specifically and directly ascribable solely to the provision of the Services.

- C2.11 If Schedule 2 expressly provides that the Authority may be charged for plant which is on standby then in circumstances where plant was waiting to be transferred between Premises or where the Authority has instructed that the plant is retained on the Premises then a standby charge of 60% of agreed rates may be made in respect of such relevant periods if supported by timesheets.
- C2.12 The Authority shall pay only for the time spent by Staff working on the Premises.
- C2.13 The Authority shall not pay a stand-by rate if plant is on standby because no work was being carried out on the Premises at that time or no operator or other relevant staff were available (unless the standby is because the Contractor is awaiting licensing of the Premises on the Authority's instructions).
- C2.14 The Authority shall not pay for plant or equipment which is stood down during any notice period pursuant to clauses H1, H2 and/or H3 and the Contractor shall mitigate such costs as far as is reasonably possible, for example, by reutilising Staff, plant, materials and services on other contracts.
- C2.15 The Contractor may claim expenses only if they are clearly identified, supported by original receipts and Approved.
- C2.16 If the Authority pays the Contractor prior to the submission of a Valid Invoice this payment shall be on account of and deductible from the next payment to be made.
- C2.17 If any overpayment has been made or the payment or any part is not supported by a Valid Invoice the Authority may recover this payment against future invoices raised or directly from the Contractor. All payments made by the Authority to the Contractor shall be on an interim basis pending final resolution of an account with the Contractor in accordance with the terms of this clause C2.
- C2.18 The Authority shall pay all sums due to the Contractor within 30 days of Receipt of a Valid Invoice. Valid Invoices should be submitted for payment to the following address:
- Room 211, 2nd floor Foss House, 1,2 Peasholme Green York YO1 7PX
- C2.19 Any late payment of undisputed invoices by the Authority will be subject to interest at the rate of a maximum of 3% above the base rate from time to time of Barclays Bank plc.
- C2.20 If the Contractor enters into a Sub-Contract with a supplier for the purpose of performing its obligations under the Contract, it shall ensure that a provision is included in the Sub-Contract which requires payment to be made of all sums due from it to the Sub-Contractor within 30 days from the receipt of a valid invoice.
- C2.21 The Contractor shall indemnify the Authority on a continuing basis against any liability, including any interest, penalties or costs incurred, which is levied, demanded or assessed on the Authority at any time in respect of the Contractor's failure to account for or to pay any VAT relating to payments made to the Contractor under the Contract. Any amounts due under this clause C2.21 shall be paid by the Contractor to the Authority not less than 5 Working Days before the date upon which the tax or other liability is payable by the Authority.
- C2.22 The Contractor shall not suspend the Services unless the Contractor is entitled to terminate the Contract under clause H2.3 for failure to pay undisputed sums of money.
- C2.23 The Authority shall not pay an invoice which is not Valid Invoice.

C3 Recovery of Sums Due

- C3.1 If under the Contract any sum of money is recoverable from or payable by the Contractor to the Authority (including any sum which the Contractor is liable to pay to the Authority in respect of any breach of the Contract), the Authority may unilaterally deduct that sum from any sum then due, or which at any later time may become due to the Contractor from the Authority under the Contract or under any other agreement with the Authority or the Crown.
- C3.2 Any overpayment by either Party, whether of the Price or of VAT or otherwise, shall be a sum of money recoverable by the Party who made the overpayment from the Party in receipt of the overpayment.
- C3.3 The Contractor shall make all payments due to the Authority without any deduction whether by way of set-off, counterclaim, discount, abatement or otherwise unless the Contractor has a valid court order requiring an amount equal to such deduction to be paid by the Authority to the Contractor.
- C3.4 All payments due shall be made within a reasonable time unless otherwise specified in the Contract, in cleared funds, to such bank or building society account as the recipient Party may from time to time direct.

C4 Price During Extension of the Initial Contract Period

- C4.1 Subject to Schedule 2 and clause F7 (Variation), the Price shall apply for the Initial Contract Period and until the end date of any extension or such earlier date of termination or partial termination of the Contract in accordance with the Law or the Contract.

D. STATUTORY OBLIGATIONS

D1 Prevention of Fraud and Bribery

- D1.1 The Contractor represents and warrants that neither it, nor to the best of its knowledge any Staff, have at any time prior to the Commencement Date:
- (a) committed a Prohibited Act or been formally notified that it is subject to an investigation or prosecution which relates to an alleged Prohibited Act; and/or
 - (b) been listed by any government department or agency as being debarred, suspended, proposed for suspension or debarment, or otherwise ineligible for participation in government procurement programmes or contracts on the grounds of a Prohibited Act.
- D1.2 The Contractor shall not during the Contract Period:
- (a) commit a Prohibited Act; and/or
 - (b) do or suffer anything to be done which would cause the Authority or any of its employees, consultants, contractors, sub-contractors or agents to contravene any of the Relevant Requirements or otherwise incur any liability in relation to the Relevant Requirements.
- D1.3 The Contractor shall, during the Contract Period:
- (a) establish, maintain and enforce, and require that its Sub-Contractors establish, maintain and enforce, policies and procedures which are adequate to ensure compliance with the Relevant Requirements and prevent the occurrence of a Prohibited Act; and
 - (b) keep appropriate records of its compliance with its obligations under clause D1.3(a) and make such records available to the Authority on request.

- D1.4 The Contractor shall immediately notify the Authority in writing if it becomes aware of any breach of clauses D1.1 and/or D1.2, or has reason to believe that it has or any of the Staff have:
- (a) been subject to an investigation or prosecution which relates to an alleged Prohibited Act;
 - (b) been listed by any government department or agency as being debarred, suspended, proposed for suspension or debarment, or otherwise ineligible for participation in government procurement programmes or contracts on the grounds of a Prohibited Act; and/or
 - (c) received a request or demand for any undue financial or other advantage of any kind in connection with the performance of the Contract or otherwise suspects that any person directly or indirectly connected with the Contract has committed or attempted to commit a Prohibited Act.
- D1.5 If the Contractor notifies the Authority pursuant to clause D1.4, the Contractor shall respond promptly to the Authority's enquiries, co-operate with any investigation, and allow the Authority to Audit any books, records and/or any other relevant documentation.
- D1.6 If the Contractor is in Default under clauses D1.1 and/or D1.2, the Authority may by notice:
- (a) require the Contractor to remove from performance of the Contract any Staff whose acts or omissions have caused the Default; or
 - (b) immediately terminate the Contract.
- D1.7 Any notice served by the Authority under clause D1.6 shall specify the nature of the Prohibited Act, the identity of the party who the Authority believes has committed the Prohibited Act and the action that the Authority has taken (including, where relevant, the date on which the Contract shall terminate).

D2 Discrimination

- D2.1 The Contractor shall:
- (a) perform its obligations under the Contract in accordance with:
 - i) all applicable equality Law (whether in relation to race, sex, gender reassignment, age, disability, sexual orientation, religion or belief, pregnancy maternity or otherwise);
 - ii) the Authority's equality and diversity policy as given to the Contractor from time to time;
 - iii) any other requirements and instructions which the Authority reasonably imposes in connection with any equality obligations imposed on the Authority at any time under applicable equality Law; and
 - (b) take all necessary steps and inform the Authority of the steps taken to prevent unlawful discrimination designated as such by any court or tribunal, or the Equality and Human Rights Commission (or any successor organisation).

D3 Rights of Third Parties

- D3.1 A person who is not a Party to the Contract 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 both Parties. This clause does not affect any right or remedy of any person which exists or is available apart from the Contracts (Rights of Third Parties) Act 1999 and does not apply to the Crown.

D4 Environmental Requirements

- D4.1 The Contractor shall in the performance of the Contract have due regard to the Authority's environmental, sustainable and ethical procurement policies ("Environmental Policies") which require the Authority through its procurement and management of suppliers:
- (a) conserve energy, water, wood, paper and other resources and reduce waste;
 - (b) phase out the use of ozone depleting substances;
 - (c) minimise the release of greenhouse gases, volatile organic compounds and other substances damaging to health and the environment;
 - (d) minimise the use of products harmful to health and the environment such as hazardous substances and solvents, replacing them with more benign substances where feasible and, where such substances are necessary, to ensure that they are stored in properly labelled containers, used and disposed of in compliance with legal and regulatory requirements and any instructions from the Authority;
 - (e) reduce fuel emissions wherever possible;
 - (f) maximise the use of recovered materials and, if recycled materials are not suitable or not readily available, to maximise the use of materials taken from renewable sources; and
 - (g) promote the design of products that are capable of reuse or remanufacture or easily separable into recyclable parts consisting of one material (e.g. steel, plastic, textile).
- D4.2 The Contractor shall ensure that any equipment and materials used in the provision of the Services do not contain:
- (a) ozone depleting substances such as hydrochlorofluorocarbons (HCFCs), halons, carbon tetrachloride, 111 trichloroethane, bromochloromethane or any other damaging substances; and/or
 - (b) HFCs and other gaseous and non-gaseous substances with a high global warming potential;
- unless given written permission by the Authority to do so.
- D4.3 The Contractor shall conserve energy and water; reduce carbon emissions and other greenhouse gases; minimise the use of substances damaging or hazardous to health and the environment and reduce waste by, for example, using resources more efficiently and reusing, recycling and composting and respecting biodiversity.
- D4.4 If required by the Authority the Contractor shall provide the Authority with information about its compliance with its obligations under clause D4.3.
- D4.5 The Contractor shall ensure that its Staff are aware of the Authority's Environmental Policies.
- D4.6 The Contractor shall comply with the minimum environmental mandatory standards in the "Government Buying Standards" and in addition where required by the Authority, comply with any relevant "Best Practice" and "Class Leader" standards in relation to any goods on that list which are supplied to the Authority by or on behalf of the Contractor under the Contract.
- D4.7 The Contractor shall:
- (a) identify any risks from climate change and variable weather such as higher temperatures, droughts, flooding, sea and river level rises, coastal and riparian erosion, water scarcity, and loss of water quality which may disrupt and/or affect the supply of the Services; and

- (b) if such risks have been identified, enhance the resilience of its organisation to enable it to adapt and deal with the effects of such extreme events, including by having the necessary awareness-raising, evaluation, preventive, preparatory, recovery measures and support systems in place in order to minimise any disruption to the supply of the Services.

D5 Timber

D5.1 For the purposes of this clause D6, the following terms shall have the following meanings:

- (a) "Timber" means any product that contains wood or wood fibre, with the exception of "recycled" materials (see below). Such products range from solid wood to those where the manufacturing processes obscure the wood element (e.g. paper). Timber and wood-derived products supplied or used in performance of the Services that have been recycled or reclaimed are referred to as "recycled" timber, which is defined below. Timber and wood-derived products supplied or used in performance of the Services that are not recycled are referred to as "virgin" timber when the distinction needs to be made for clarity. Short-rotation coppice is exempt from the requirements for timber and wood-derived products and falls under agricultural regulation and supervision rather than forestry.
- (b) "Legal and Sustainable" means production and process methods, also referred to as timber production standards, and in the context of social criteria, contract performance conditions (only), as defined by the document titled "UK Government timber procurement policy: Definition of Legal and Sustainable for timber procurement" (available from the Authority on request and from the CPET website). The edition current on the day the Contract is awarded shall apply.
- (c) "FLEGT" means Forest Law Enforcement, Governance and Trade, and is a reference to the EU scheme to address the problem of illegally logged timber.
- (d) "FLEGT-licensed" means production and process methods, also referred to as timber production standards, and in the context of social criteria, contract performance conditions (only), as defined by a bilateral Voluntary Partnership Agreement ("VPA") between the European Union and a timber-producing country under the FLEGT scheme, where both Parties have agreed to establish a system under which timber that has been produced in accordance with the relevant laws of the producing country, and other criteria stipulated by the VPA, are licensed for export by the producing country government. This may also include any timber that has been independently verified as meeting all the producing country's requirements for a FLEGT licence, where a VPA has been signed but the FLEGT licensing system is not fully operational. Evidence from a country that has not signed up to a VPA which demonstrates that all of the requirements equivalent to FLEGT-licensed timber have been met will also be acceptable. CPET will produce further guidance on FLEGT-licensed or equivalent timber in due course.
- (e) "Recycled" means recovered wood that prior to being supplied to the Authority had an end use as a standalone object or as part of a structure. The term "recycled" is used to cover the following categories: pre-consumer recycled wood and wood fibre or industrial by products but excluding sawmill co-products (sawmill co-products are deemed to fall within the category of virgin timber), post-consumer recycled wood and wood fibre, and drift wood. It also covers reclaimed timber which was abandoned or confiscated at least ten years previously. Documentary evidence and independent verification also apply to recycled materials, but will focus on the use to which the timber was previously put rather than the forest source.
- (f) "Short-rotation coppice" means a specific management regime whereby the poles of trees are cut every one to two years and which is aimed at producing biomass for energy. It is exempt from the UK government timber procurement policy requirements and falls

under agricultural regulation and supervision rather than forestry. The exemption only refers to short-rotation coppice, and not 'conventional' coppice which is forest management and therefore subject to the timber policy.

(g) "CPET" means the UK Government's Central Point of Expertise on Timber.

D5.2 All Timber supplied or used by the Contractor in providing the Services (including all Timber supplied or used by Sub-Contractors) shall comply with Schedule 1 and shall originate from a forest source where management of the forest has full regard for:

- (a) identification, documentation and respect of legal, customary and traditional tenure and use rights related to the forest;
- (b) mechanisms for resolving grievances and disputes including those relating to tenure and use rights, to forest management practices and to work conditions; and
- (c) safeguarding the basic labour rights and health and safety of forest workers

(the "Social Criteria").

D5.3 If requested by the Authority and not already provided in its Tender, the Contractor shall give the Authority evidence that the Timber supplied or used in providing the Services complies with the requirements of Schedule 1 and with the requirements of the Social Criteria.

D5.4 The Authority may at any time during the Contract Period and for 6 years after final delivery under the Contract require the Contractor to produce the evidence required for the Authority's inspection within 14 days of the Authority's written request.

D5.5 The Contractor shall maintain records of all Timber delivered to and accepted by the Authority for 6 years from final delivery under the Contract.

D5.6 The Authority shall decide whether the evidence submitted to it demonstrates legality and sustainability, or FLEGT-licence or equivalent, and is adequate to satisfy the Authority that the Timber complies with Schedule 1 and complies with the requirements of the Social Criteria. If the Authority is not satisfied, the Contractor shall commission and meet the costs of an "independent verification" and resulting report that will: (a) verify the forest source of the timber or wood; and (b) assess whether the source meets the relevant criteria.

D5.7 In the Contract, "Independent Verification" means that an evaluation is undertaken and reported by an individual or body whose organisation, systems and procedures conform to ISO Guide 65:1996 (EN 45011:1998) General requirements for bodies operating product certification systems (as amended from time to time) or equivalent, and who is accredited to audit against forest management standards by a body whose organisation, systems and procedures conform to ISO 17011: 2004 General Requirements for Providing Assessment and Accreditation of Conformity Assessment Bodies (as amended from time to time) or equivalent.

D5.8 The Authority may reject Timber that does not comply with Schedule 1 or with the Social Criteria. If the Authority rejects any Timber the Contractor shall supply alternative Timber which does comply at no additional cost to the Authority and without causing delay to delivery of the Services.

D6 Health and Safety

D6.1 The Contractor shall perform its obligations under the Contract in accordance with:

- (a) all applicable Law regarding health and safety; and
- (b) the Authority's health and safety policy while at the Authority's Premises.

- D6.2 Each Party shall notify the other as soon as practicable of any health and safety incidents or material health and safety hazards at the Authority's Premises of which it becomes aware and which relate to or arise in connection with the performance of the Contract. The Contractor shall instruct Staff to adopt any necessary associated safety measures in order to manage any such material health and safety hazards.

E PROTECTION OF INFORMATION

E1 Authority Data

- E1.1 For the purposes of clauses E1 and 2, the terms "Data Controller", "Data Processor", "Data Subject", "Personal Data", "Process" and "Processing" shall have the meanings prescribed in the DPA.
- E1.2 The Contractor shall not delete or remove any proprietary notices contained within or relating to the Authority Data.
- E1.3 The Contractor shall not store, copy, disclose, or use the Authority Data except as necessary for the performance by the Contractor of its obligations under this Contract or as otherwise expressly authorised in writing by the Authority.
- E1.4 To the extent that Authority Data is held and/or Processed by the Contractor, the Contractor shall supply Authority Data to the Authority as requested by the Authority in the format specified in the Specification.
- E1.5 The Contractor shall preserve the integrity of Authority Data and prevent the corruption or loss of Authority Data.
- E1.6 The Contractor shall perform secure back-ups of all Authority Data and shall ensure that up-to-date back-ups are stored securely off-site. The Contractor shall ensure that such back-ups are made available to the Authority immediately upon request.
- E1.7 The Contractor shall ensure that any system on which the Contractor holds any Authority Data, including back-up data, is a secure system that complies with the Security Policy Framework.
- E1.8 If Authority Data is corrupted, lost or sufficiently degraded as a result of the Contractor's Default so as to be unusable, the Authority may:
- (a) require the Contractor (at the Contractor's expense) to restore or procure the restoration of Authority Data and the Contractor shall do so promptly; and/or
 - (b) itself restore or procure the restoration of Authority Data, and shall be repaid by the Contractor any reasonable expenses incurred in doing so.
- E1.9 If at any time the Contractor suspects or has reason to believe that Authority Data has or may become corrupted, lost or sufficiently degraded in any way for any reason, then the Contractor shall notify the Authority immediately and inform the Authority of the remedial action the Contractor proposes to take.

E2 Data Protection Act

- E2.1 The Contractor shall (and shall ensure that all its Staff) comply with any notification requirements under the DPA and both Parties will duly observe all their obligations under the DPA which arise in connection with the Contract.
- E2.2 Notwithstanding the general obligation in clause E2.1, if the Contractor is Processing Personal Data as a Data Processor for the Authority the Contractor shall:

- (a) Process the Personal Data only in accordance with instructions from the Authority (which may be specific instructions or instructions of a general nature) as set out in the Contract or as otherwise notified by the Authority;
- (b) comply with all applicable Laws;
- (c) Process the Personal Data only to the extent and in such manner as is necessary for the provision of the Contractor's obligations under the Contract or as is required by Law or any Regulatory Body;
- (d) implement and maintain appropriate technical and organisational measures to protect the Personal Data against unauthorised or unlawful Processing and against accidental loss, destruction, damage, alteration or disclosure. These measures shall be appropriate to the harm which might result from any unauthorised or unlawful Processing, accidental loss, destruction or damage to the Personal Data and having regard to the nature of the Personal Data which is to be protected;
- (e) take reasonable steps to ensure the reliability of its Staff who may have access to the Personal Data;
- (f) not transfer the Personal Data to any Sub-Contractor and/or Affiliates for the provision of the Services without Approval;
- (g) not cause or permit the Personal Data to be transferred outside of the European Economic Area without Approval;
- (h) ensure that all Staff required to access the Personal Data are informed of the confidential nature of the Personal Data and comply with the obligations set out in this clause E2;
- (i) ensure that none of the Staff publish disclose or divulge any of the Personal Data to any third parties unless directed in writing to do so by the Authority;
- (j) not disclose Personal Data to any third parties in any circumstances other than with Approval or in compliance with a legal obligation imposed upon the Authority;
- (k) notify the Authority (within 5 Working Days) if it receives:
 - i) a request from a Data Subject to have access to that person's Personal Data; or
 - (ii) a complaint or request relating to the Authority's obligations under the DPA;
- (l) provide the Authority with full cooperation and assistance in relation to any complaint or request made, including by:
 - i) providing the Authority with full details of the complaint or request;
 - ii) complying with a data access request within the relevant timescales set out in the DPA and in accordance with the Authority's instructions;
 - iii) providing the Authority with any Personal Data it holds in relation to a Data Subject (within the timescales required by the Authority); and
 - iv) providing the Authority with any information requested by the Authority
- (m) permit the Authority (subject to reasonable and appropriate confidentiality undertakings), to inspect and audit, in accordance with clause E10 (Audit), the Contractor's data Processing activities (and/or those of its agents, subsidiaries and Sub-Contractors) and comply with all reasonable requests or directions by the Authority to enable the Authority

to verify and/or procure that the Contractor is in full compliance with its obligations under the Contract;

- (n) provide a written description of the technical and organisational methods employed by the Contractor for Processing Personal Data (within the timescales required by the Authority); and
- (o) not Process Personal Data outside the European Economic Area without Approval and, if the Authority consents to a transfer, to comply with:
 - i) the obligations of a Data Controller under the Eighth Data Protection Principle set out in schedule 1 of the DPA by providing an adequate level of protection to any Personal Data that is transferred; and
 - (ii) any reasonable instructions notified to it by the Authority.

E2.3 The Contractor shall comply at all times with the DPA and shall not perform its obligations under the Contract in such a way as to cause the Authority to breach any of its applicable obligations under the DPA.

E2.4 The provision of this clause E2 shall apply during the Contract Period and indefinitely after its expiry.

E3 Official Secrets Acts and Finance Act 1989

E3.1 The Contractor shall comply with the provisions of:

- (a) the Official Secrets Acts 1911 to 1989; and
- (b) section 182 of the Finance Act 1989.

E4 Confidential Information

E4.1 Except to the extent set out in this clause E4 or if disclosure or publication is expressly permitted elsewhere in the Contract each Party shall treat all Confidential Information belonging to the other Party as confidential and shall not disclose any Confidential Information belonging to the other Party to any other person without the other party's consent, except to such persons and to such extent as may be necessary for the performance of the Party's obligations under the Contract.

E4.2 The Contractor hereby gives its consent for the Authority to publish the whole Contract (but with any information which is Confidential Information belonging to the Authority redacted) including from time to time agreed changes to the Contract, to the general public.

E4.3 If required by the Authority, the Contractor shall ensure that Staff, professional advisors and consultants sign a non-disclosure agreement prior to commencing any work in connection with the Contract in substantially the form attached in Schedule 5. The Contractor shall maintain a list of the non-disclosure agreements completed in accordance with this clause E4.3.

E4.4 If requested by the Authority, the Contractor shall give the Authority a copy of the list and, subsequently upon request by the Authority, copies of such of the listed non-disclosure agreements as required by the Authority. The Contractor shall ensure that its Staff, professional advisors and consultants are aware of the Contractor's confidentiality obligations under the Contract.

E4.5 The Contractor may only disclose the Authority's Confidential Information to the Staff who are directly involved in the provision of the Services and who need to know the information, and shall ensure that such Staff are aware of and shall comply with these obligations as to confidentiality.

- E4.6 The Contractor shall not, and shall procure that the Staff do not, use any of the Authority's Confidential Information received otherwise than for the purposes of this Contract.
- E4.7 Clause E4.1 shall not apply to the extent that:
- (a) such disclosure is a requirement of Law placed upon the Party making the disclosure, including any requirements for disclosure under the FOIA or the EIR;
 - (b) such information was in the possession of the Party making the disclosure without obligation of confidentiality prior to its disclosure by the information owner;
 - (c) such information was obtained from a third party without obligation of confidentiality;
 - (d) such information was already in the public domain at the time of disclosure otherwise than by a breach of the Contract; or
 - (e) it is independently developed without access to the other Party's Confidential Information.
- E4.8 Nothing in clause E4.1 shall prevent the Authority disclosing any Confidential Information obtained from the Contractor:
- (a) for the purpose of the examination and certification of the Authority's accounts;
 - (b) for the purpose of any examination pursuant to section 6(1) of the National Audit Act 1983 of the economy, efficiency and effectiveness with which the Authority has used its resources;
 - (c) to any Crown Body or any Contracting Authority and the Contractor hereby acknowledges that all government departments or Contracting Authorities receiving such Confidential Information may further disclose the Confidential Information to other government departments or other Contracting Authorities on the basis that the information is confidential and is not to be disclosed to a third party which is not part of any government department or any Contracting Authority;
 - (d) to any consultant, contractor or other person engaged by the Authority
- provided that in disclosing information under clauses E4.8 (c) and (d) the Authority discloses only the information which is necessary for the purpose concerned and requests that the information is treated in confidence and that a confidentiality undertaking is given where appropriate.
- E4.9 Nothing in clauses E4.1 to E4.6 shall prevent either Party from using any techniques, ideas or Know-How gained during the performance of its obligations under the Contract in the course of its normal business, to the extent that this does not result in a disclosure of the other Party's Confidential Information or an infringement of the other Party's Intellectual Property Rights.
- E4.10 The Authority shall use all reasonable endeavours to ensure that any government department, Contracting Authority, employee, third party or Sub-Contractor to whom the Contractor's Confidential Information is disclosed pursuant to clause E4.6 is made aware of the Authority's obligations of confidentiality.
- E4.11 If the Contractor does not comply with clauses E4.1 to E4.6 the Authority may terminate the Contract immediately on notice to the Contractor.
- E4.12 In order to ensure that no unauthorised person gains access to any Confidential Information or any data obtained in the supply of the Services, the Contractor shall maintain adequate security arrangements that meet the requirements of professional standards and best practice.
- E4.13 The Contractor will immediately notify the Authority of any breach of security in relation to Confidential Information and all data obtained in the supply of the Services and will keep a record

of such breaches. The Contractor will use its best endeavours to recover such Confidential Information or data however it may be recorded. The Contractor will co-operate with the Authority in any investigation as a result of any breach of security in relation to Confidential Information or data.

- E4.14 The Contractor shall, at its own expense, alter any security systems at any time during the Contract Period at the Authority's request if the Authority reasonably believes the Contractor has failed to comply with clause E4.12.

E5 Freedom of Information

- E5.1 The Contractor acknowledges that the Authority is subject to the requirements of the FOIA and the EIR.
- E5.2 The Contractor shall transfer to the Authority all Requests for Information that it receives as soon as practicable and in any event within 2 Working Days of receipt:
- (a) give the Authority a copy of all Information in its possession or control in the form that the Authority requires within 5 Working Days (or such other period as the Authority may specify) of the Authority's request;
 - (b) provide all necessary assistance as reasonably requested by the Authority to enable the Authority to comply with its obligations under the FOIA and EIR; and
 - (c) not respond to directly to a Request for Information unless authorised to do so in writing by the Authority.
- E5.3 The Authority shall determine in its absolute discretion and notwithstanding any other provision in the Contract or any other agreement whether the Commercially Sensitive Information and any other Information is exempt from disclosure in accordance with the provisions of the FOIA and/or the EIR.

E6 Publicity, Media and Official Enquiries

- E6.1 Without prejudice to the Authority's obligations under the FOIA, the EIR or any obligations under the Public Contracts Regulations 2006, or any policy requirements as to transparency, neither Party shall make any press announcement or publicise the Contract or any part thereof in any way, except with the written consent of the other Party.
- E6.2 The Contractor shall use its best endeavours to ensure that its Staff, professional advisors and consultants comply with clause E6.1.
- E6.3 Notwithstanding clause E6.1 but subject to clause E4 (Confidential Information) and Schedule 4, the Contractor shall endeavour to make the Results generally available (including in scientific journals where reasonably appropriate) and shall acknowledge in any public statement the financial support of the Authority and the Co-funders. The Contractor shall send details of any proposed publication to the Authority at least 2 weeks prior to the proposed publication and shall notify the Authority immediately if approached by the media about the Services.
- E6.4 Subject to clause E4 (Confidential Information) and Schedule 4 the Authority may disclose, copy and otherwise distribute to the public or use in any way any information arising out of the Services or comprised in any work relating to the Services.
- E6.5 Nothing in the Contract shall permit or require the Contractor or the Co-funders to make any disclosure of information which would jeopardise any commercial exploitation of the Results.

E7 Security

- E7.1 The Authority shall be responsible for maintaining the security of the Authority's Premises in accordance with its standard security requirements. The Contractor shall comply with all security requirements of the Authority while on the Authority's Premises, and shall ensure that all Staff comply with such requirements.
- E7.2 The Authority shall give the Contractor upon request copies of its written security procedures.
- E7.3 The Contractor shall, as an enduring obligation during the Contract Period, use the latest versions of anti-virus definitions available from an industry accepted anti-virus software vendor to check for and delete Malicious Software from the ICT Environment.
- E7.4 Notwithstanding clause E7.3, if Malicious Software is found, the Parties shall co-operate to reduce the effect of the Malicious Software and, particularly if Malicious Software causes loss of operational efficiency or loss or corruption of the Authority Data, assist each other to mitigate any losses and to restore the provision of Services to their desired operating efficiency.
- E7.5 Any cost arising out of the actions of the Parties taken in compliance with clause E7.4 shall be borne by the Parties as follows:
- (a) by the Contractor where the Malicious Software originates from the Contractor Software, the Third Party Software or the Authority Data (whilst the Authority Data was under the control of the Contractor); and
 - (b) by the Authority if the Malicious Software originates from the Authority Software or Authority Data (whilst the Authority Data was under the control of the Authority).

E8 Intellectual Property Rights

- E8.1 All Intellectual Property Rights in:
- (a) the Results; or
 - (b) any guidance, specifications, reports, studies, instructions, toolkits, plans, data, drawings, databases, patents, patterns, models, designs or other material which is furnished to or made available to the Contractor by or on behalf of the Authority (together with the Results, the "IP Materials")
- shall vest in the Authority and the Contractor shall not, and shall ensure that the Staff shall not, use or disclose any IP Materials without Approval save to the extent necessary for performance by the Contractor of its obligations under the Contract.
- E8.2 The Contractor hereby assigns to the Authority, with full title guarantee, all Intellectual Property Rights which may subsist in the IP Materials prepared in accordance with clause E8.1(b) and (c). This assignment shall take effect on the date of the Contract or (in the case of rights arising after the date of the Contract) as a present assignment of future rights that will take effect immediately on the coming into existence of the Intellectual Property Rights produced by the Contractor. The Contractor shall execute all documentation and do all acts as are necessary to execute this assignment.
- E8.3 The Contractor agrees, and shall procure the agreement of the author of any copyright material arising as a result of the Contract or the performance of its obligations under the Contract, that the Authority may publish the IP Materials, in whole or in part, in whatever form the Authority chooses from time to time.
- E8.4 The Contractor shall ensure that the third party owner of any Intellectual Property Rights that are or which may be used to perform the Services grants to the Authority a non-exclusive licence or, if

itself a licensee of those rights, shall grant to the Authority an authorised sub-licence, to use, reproduce, modify, develop and maintain the Intellectual Property Rights in the same. Such licence or sub-licence shall be non-exclusive, perpetual, royalty-free, worldwide and irrevocable and shall include the right for the Authority to sub-license, transfer, novate or assign to other Contracting Authorities, the Replacement Contractor or to any other third party supplying goods and/or services to the Authority.

- E8.5 The Contractor shall not infringe any Intellectual Property Rights of any third party in supplying the Services and the Contractor shall, during and after the Contract Period, indemnify and keep indemnified the Authority and the Crown from and against all actions, suits, claims, demands, losses, charges, damages, costs and expenses and other liabilities which the Authority or the Crown may suffer or incur as a result of or in connection with any breach of this clause E8.5, except to the extent that any such claim results directly from:
- (a) items or materials based upon designs supplied by the Authority; or
 - (b) the use of data supplied by the Authority which is not required to be verified by the Contractor under any provision of the Contract.
- E8.6 The Authority shall notify the Contractor in writing of any claim or demand brought against the Authority for infringement or alleged infringement of any Intellectual Property Right in materials supplied and/or licensed by the Contractor to the Authority.
- E8.7 The Contractor shall at its own expense conduct all negotiations and any litigation arising in connection with any claim, demand or action by any third party for infringement or alleged infringement of any third party Intellectual Property Rights (whether by the Authority or the Contractor) arising from the performance of the Contractor's obligations under the Contract ("Third Party IP Claim"), provided that the Contractor shall at all times:
- (a) consult the Authority on all material issues which arise during the conduct of such litigation and negotiations;
 - (b) take due and proper account of the interests of the Authority; and
 - (c) not settle or compromise any claim without Approval (not to be unreasonably withheld or delayed).
- E8.8 The Authority shall at the request of the Contractor afford to the Contractor all reasonable assistance for the purpose of contesting any Third Party IP Claim and the Contractor shall indemnify the Authority for all costs and expenses (including, but not limited to, legal costs and disbursements) incurred in doing so. The Contractor shall not be required to indemnify the Authority under this clause E8.8 in relation to any costs and expenses to the extent that such arise directly from the matters referred to in clauses E8.5(a) or (b).
- E8.9 The Authority shall not, without the Contractor's consent, make any admissions which may be prejudicial to the defence or settlement of any Third Party IP Claim.
- E8.10 If any Third Party IP Claim is made or in the reasonable opinion of the Contractor is likely to be made, the Contractor shall notify the Authority and, at its own expense and subject to Approval (not to be unreasonably withheld or delayed), shall (without prejudice to the rights of the Authority under clauses E8.4 and G2.1(g) (Warranties and Representations)) use its best endeavours to:
- (a) modify any or all of the Services without reducing the performance or functionality of the same, or substitute alternative services of equivalent performance and functionality, so as to avoid the infringement or the alleged infringement; or
 - (b) procure a licence to use the Intellectual Property Rights and supply the Services which are the subject of the alleged infringement, on terms which are acceptable to the Authority

and if the Contractor is unable to comply with clauses E8.10(a) or (b) within 20 Working Days of receipt by the Authority of the Contractor's notification the Authority may terminate the Contract immediately by notice to the Contractor.

- E8.11 The Contractor grants to the Authority a royalty-free, irrevocable, worldwide, non-exclusive licence (with a right to sub-license) to use any Intellectual Property Rights that the Contractor owned or developed prior to the Commencement Date and which the Authority reasonably requires in order to exercise its rights under, and receive the benefit of, the Contract (including, without limitation, the Services).

E9 Commercial Exploitation

- E9.1 The Contractor shall:

- (a) ensure that its staff, students and sub-contractors are and will be engaged in relation to the Contract and the Services on terms which do not entitle any of them to any rights in the Results; and
- (b) ensure that it is and remains entitled to transfer free from any encumbrances any title and/or rights necessary to effect the vesting of Intellectual Property Rights required by the Contract.

- E9.2 Subject to clauses E9.3 and E9.4 the Contractor will use reasonable endeavours to exploit the Results commercially for its benefit and the benefit of the Authority and the Co-funders.

- E9.3 The Contractor shall identify and inform the Authority of any Results which it considers suitable for commercial exploitation. If the Contractor has identified an opportunity for the commercial exploitation of the Results then it shall either apply to the Authority for a licence (with a right to sub-license as required) as may be necessary, or provide such assistance as is required by the Authority to facilitate a licence being granted by the Authority to a third party.

- E9.4 The Contractor shall identify and inform the Authority of any Results which may be suitable for registration as a patent, copyright, registered design, trade mark or other legal protection and shall use its reasonable endeavours to apply for such protection throughout or in any part of the world in the name of the Authority, and shall maintain such protection in such part of the world as it considers suitable at its own expense.

- E9.5 Subject to clause E9.6 the Income from the commercial exploitation of the Results shall, after deduction of allowable costs as described below, be apportioned between the Parties as follows:

- (a) the Authority and Co-Funders: 10%, to be divided in the proportion of the actual payments made to the Contractor under the Contract by the Authority and Co-Funders respectively; and
- (b) the Contractor: 90%.

- E9.6 The Income referred to in clause E9.5 shall be payable for the longer of:

- (a) the term of any patent arising from or incorporating any of the Results; and
- (b) the period in which any Know-How arising from the Results and used in any products or services exploited by the Contractor remains secret and substantial.

- E9.7 The allowable costs for the purposes of clause E9.5 shall be limited to:

- (a) the registration fees for the registering of any rights in relation to such Results;

- (b) any legal costs reasonably incurred in relation to legal proceedings in relation to such Results in any appropriate forum and before any appropriate tribunal in any country and any costs ordered by any such tribunal to be paid by the Parties or any of them;
 - (c) any other reasonable cost or expenditure which may be agreed from time to time by the Authority and the Contractor; and
 - (d) subject to Approval, any reasonable marketing, packaging and/or distribution costs, and any relevant experimental development costs including costs of field trials and/or demonstration projects incurred at the Contractor's expense.
- E9.8 The Contractor shall have sole responsibility for making any payments due to Staff under any rewards or incentive schemes, whether contractual, ex gratia, or statutory, in relation to the Results, and any such payments shall not be a cost or expenditure liable to be subtracted from any Income pursuant to clause E9.5. Any payments in respect of a share of Income to be made to the Authority and/or the Co-funders by the Contractor shall be made promptly, in such format as the Authority may direct and accompanied by sufficient information to enable the Authority to identify: i) the contract to which such payments relate; and ii) the means (including a full breakdown of allowable costs) by which such payments have been calculated.
- E9.9 If the Contractor does not intend to protect or exploit any Results then the Authority shall be entitled to obtain protection at its own cost and (if clause E8.1 (Intellectual Property Rights) has been amended or varied so that ownership of the Results vests in the Contractor) to have assigned to it at no charge all rights in the relevant Results. The Contractor will not be entitled to any share of the Income generated as the result of the protection or exploitation of the relevant Results obtained by the Authority.
- E9.10 For the avoidance of doubt, clauses E9.5 to E9.9 do not apply to and do not affect any Intellectual Property Rights in existence before the commencement of the Services.

E10 Audit

- E10.1 The Contractor shall keep and maintain until 6 years after the end of the Contract Period, or as long a period as may be agreed between the Parties, full and accurate records of the Contract including the Services supplied under it, all expenditure reimbursed by the Authority, and all payments made by the Authority. The Contractor shall on request afford the Authority or the Authority's representatives such access to those records and processes as may be requested by the Authority in connection with the Contract.
- E10.2 The Contractor agrees to make available to the Authority, free of charge, whenever requested, copies of audit reports obtained by the Contractor in relation to the Services.
- E10.3 The Contractor shall permit duly authorised representatives of the Authority and/or the National Audit Office to examine the Contractor's records and documents relating to the Contract and to provide such copies and oral or written explanations as may reasonably be required.
- E10.4 The Contractor (and its agents) shall permit the Comptroller and Auditor General (and his appointed representatives) access free of charge during normal business hours on reasonable notice to all such documents (including computerised documents and data) and other information as the Comptroller and Auditor General may reasonably require for the purposes of his financial audit of the Authority and for carrying out examinations into the economy, efficiency and effectiveness with which the Authority has used its resources. The Contractor shall provide such explanations as are reasonably required for these purposes.

E11 Tax Compliance

- E11.1 If, during the Contract Period, an Occasion of Tax Non-Compliance occurs, the Contractor shall:
- (a) notify the Authority in writing of such fact within 5 Working Days of its occurrence; and

- (b) promptly give the Authority:
 - i) details of the steps it is taking to address the Occasion of Tax Non-Compliance and to prevent the same from recurring, together with any mitigating factors it considers relevant; and
 - ii) such other information in relation to the Occasion of Tax Non-Compliance as the Authority may reasonably require.

E11.2 If the Contractor or any Staff are liable to be taxed in the UK or to pay NICs in respect of consideration received under the Contract, the Contractor shall:

- (a) at all times comply with ITEPA and all other statutes and regulations relating to income tax, and SSCBA and all other statutes and regulations relating to national insurance contributions, in respect of that consideration; and
- (b) indemnify the Authority against any income tax, national insurance and social security contributions and any other liability, deduction, contribution, assessment or claim arising from or made in connection with the provision of the Services by the Contractor or any Staff.

F. CONTROL OF THE CONTRACT

F1 Failure to meet Requirements

- F1.1 If the Authority informs the Contractor in writing that the Authority reasonably believes that any part of the Services do not meet the requirements of the Contract or differs in any way from those requirements, and this is not as a result of a default by the Authority, the Contractor shall at its own expense re-schedule and carry out the Services in accordance with the requirements of the Contract within such reasonable time as may be specified by the Authority.
- F1.2 The Authority may by notice to the Contractor reject any of the Goods which fail to conform to the approved sample or fail to meet the Specification. Such notice shall be given within a reasonable time after delivery to the Authority of such Goods. If the Authority rejects any of the Goods pursuant to this clause the Authority may (without prejudice to its other rights and remedies) either:
 - (a) have such Goods promptly, free of charge and in any event within 5 Working Days, either repaired by the Contractor or replaced by the Contractor with Goods which conform in all respects with the approved sample or with the Specification and due delivery shall not be deemed to have taken place until such repair or replacement has occurred; or
 - (b) treat the Contract as discharged by the Contractor's breach and obtain a refund (if payment for the Goods has already been made) from the Contractor in respect of the Goods concerned together with payment of any additional expenditure reasonably incurred by the Authority in obtaining other goods in replacement.
- F1.3 The Authority will be deemed to have accepted the Goods if it expressly states the same in writing or fails to reject the Goods in accordance with clause F1.2.
- F1.4 The issue by the Authority of a receipt note for delivery of the Goods shall not constitute any acknowledgement of the condition, quantity or nature of those Goods, or the Authority's acceptance of them.
- F1.5 The Contractor hereby guarantees the Goods against faulty materials or workmanship for such period as may be specified in the Specification or, if no period is specified, for a period of 18 months from the date of delivery. If the Authority shall within such period or within 25 Working Days thereafter give notice to the Contractor of any defect in any of the Goods as may have arisen

during such period under proper and normal use, the Contractor shall (without prejudice to any other rights and remedies which the Authority may have) promptly remedy such defects (whether by repair or replacement as the Authority shall elect) free of charge.

- F1.6 Any Goods rejected or returned by the Authority as described in clause F1.2 shall be returned to the Contractor at the Contractor's risk and expense.

F2 Monitoring of Contract Performance

- F2.1 The Contractor shall immediately inform the Authority if any of the Services are not being or are unable to be performed, the reasons for non-performance, any corrective action and the date by which that action will be completed.
- F2.2 At or around 6 Months from the Commencement Date and each anniversary of the Commencement Date thereafter (each being a "Review Date"), the Authority shall carry out a review of the performance of the Contractor ("Checkpoint Review"). Without prejudice to the generality of the foregoing, the Authority may in respect of the period under review consider such items as (but not limited to): the Contractor's delivery of the Services; the Contractor's contribution to innovation in the Authority; whether the Services provide the Authority with best value for money; consideration of any changes which may need to be made to the Services; a review of future requirements in relation to the Services and progress against key milestones.
- F2.3 The Contractor shall provide at its own cost any assistance reasonably required by the Authority to perform such Checkpoint Review including the provision of data and information.
- F2.4 The Authority may produce a report (a "Checkpoint Review Report") of the results of each Checkpoint Review stating any areas of exceptional performance and areas for improvement in the provision of the Services and where there is any shortfall in any aspect of performance reviewed as against the Authority's expectations and the Contractor's obligations under this Contract.
- F2.5 The Authority shall give the Contractor a copy of the Checkpoint Review Report (if applicable). The Authority shall consider any Contractor comments and may produce a revised Checkpoint Review Report.
- F2.6 The Contractor shall, within 10 Working Days of receipt of the Checkpoint Review Report (revised as appropriate) provide the Authority with a plan to address resolution of any shortcomings and implementation of improvements identified by the Checkpoint Review Report.
- F2.7 Actions required to resolve shortcomings and implement improvements (either as a consequence of the Contractor's failure to meet its obligations under this Contract identified by the Checkpoint Review Report, or those which result from the Contractor's failure to meet the Authority's expectations notified to the Contractor or of which the Contractor ought reasonably to have been aware) shall be implemented at no extra charge to the Authority.

F3 Reporting

- F3.1 Unless otherwise authorised in writing by the Authority, the Contractor shall submit an annual report (the "Annual Report") for each Project Year to the Authority in accordance with this clause F3.
- F3.2 The Contractor shall provide one hard copy of the Annual Report and one copy on either computer readable disk or e-mail in the format specified by or agreed with the Authority, no later than 4 weeks after the end of each Project Year, or, for work lasting one year or less, no later than 4 weeks after completion of the Services.
- F3.3 The Annual Report shall:
- (a) list the scientific objectives set out in the Specification, indicating where amendments have been agreed;

- (b) indicate in non-scientific terms the scientific progress achieved since the Commencement Date or since the last Annual Report; how this relates to the policy objectives as set out in the relevant current statement of policy rationale and programme objectives relating to research and development issued by the Authority in accordance with the Specification, plus any findings of particular interest;
 - (c) indicate whether the scientific objectives in the Specification are appropriate for the remainder of the Contract Period, giving reasons for any changes, together with financial, Staff and time implications;
 - (d) list the milestones for the relevant Project Year as set out in the Specification, indicating which milestones have been met and whether the remaining milestones appear realistic (subject to clause F4);
 - (e) list any outputs, for example, published papers or presentations and identify any opportunities for exploiting any Intellectual Property Rights or technology transfer arising out of the Services and any action taken to protect and exploit such Intellectual Property Rights; and
 - (f) comment briefly on any new scientific opportunities which may arise from the Services.
- F3.4 Unless Approved, the Contractor shall submit by the completion date of the Services a final report (the "Final Report") consisting of 2 hard copies and one electronic copy on either computer readable disk or by e-mail in a format specified by the Authority. The Final Report shall include the following:
- (a) the Services' code and title as set out in the Specification; the name of the Contractor; the total costs; and the Commencement Date and date of completion of the Services;
 - (b) an executive summary of not more than 2 sides of A4 written in a style understandable to the intelligent non-scientist. This should include the main objectives of the Services; the methods and findings of the research; and any other significant events and options for new work; and
 - (c) a scientific report.
- F3.5 The scientific report referred to in clause F3.4(c) above shall contain:
- (a) the scientific objectives as set out in the Specification;
 - (b) the extent to which the objectives set out in the Specification have been met;
 - (c) details of methods used and the Results obtained, including statistical analysis where appropriate;
 - (d) a discussion of the Results and their reliability;
 - (e) the main implications of the findings;
 - (f) possible future work; and
 - (g) any action resulting from the research, for example, protection of Intellectual Property Rights and knowledge transfer.
- F3.6 Notwithstanding clause E6 (Publicity, Media and Official Enquiries), the Authority may publish the Final Report on a website. When submitting the Final Report to the Authority the Contractor shall indicate any information contained in the Final Report which it considers to be commercially sensitive or which might otherwise merit non-publication and the Authority shall not disclose such

information without first having consulted the Contractor (without prejudice to the Authority's discretion as to whether to publish following such consultation).

- F3.7 The Authority reserves the right to reject any Annual Report or Final Report submitted by the Contractor which is not, in the reasonable opinion of the Authority, satisfactory, either in form or content, having regard to the provisions of this Schedule. If an Annual Report or Final Report is rejected by the Authority, the Contractor shall remedy any deficiencies identified by the Authority and submit a revised version at no additional cost to the Authority or the Co-funders.
- F3.8 The Contractor shall supply any additional reports, including financial reports, in respect of the Services, at such time or times, and in such form, as the Authority may reasonably require. Without prejudice to the generality of the foregoing, the Contractor shall provide to the Authority such information as the Authority may reasonably require regarding commercial exploitation of the Results, including details of any licences granted to third parties in respect of any Intellectual Property Rights in the same. The Contractor shall further keep at its normal place of business detailed accurate and up to date records and accounts showing details of its commercial exploitation of the Results including the sale of products or services which incorporate the Results, Income received, allowable costs deducted and the amount of licensing revenues received by it in respect of the Results in a format sufficient to ascertain that revenue sharing pursuant to the Contract has been properly accounted for and apportioned in accordance with the Contract.
- F3.9 The Contractor shall, subject to reasonable notice, attend all meetings specified in the Contract or otherwise arranged by the Authority for the purpose of discussion of the Services.

F4 Remedies for inadequate performance

- F4.1 If the Authority reasonably believes the Contractor has committed a Material Breach it may, without prejudice to its rights under clause H2 (Termination on Default), do any of the following:
- (a) without terminating the Contract, itself supply or procure the supply of all or part of the Services until such time as the Contractor has demonstrated to the Authority's reasonable satisfaction that the Contractor will be able to supply the Services in accordance with the Specification;
 - (b) without terminating the whole of the Contract, terminate the Contract in respect of part of the Services only (whereupon a corresponding reduction in the Price shall be made) and thereafter itself supply or procure a third party to supply such part of the Services;
 - (c) withhold or reduce payments to the Contractor in such amount as the Authority reasonably deems appropriate in each particular case; and/or
 - (d) terminate the Contract in accordance with clause H2.
- F4.2 Without prejudice to its right under clause C3 (Recovery of Sums Due), the Authority may charge the Contractor for any costs reasonably incurred and any reasonable administration costs in respect of the supply of any part of the Services by the Authority or a third party to the extent that such costs exceed the payment which would otherwise have been payable to the Contractor for such part of the Services.
- F4.3 If the Authority reasonably believes the Contractor has failed to supply all or any part of the Services in accordance with the Contract, professional or industry practice which could reasonably be expected of a competent and suitably qualified person, or any legislative or regulatory requirement, the Authority may give the Contractor notice specifying the way in which its performance falls short of the requirements of the Contract or is otherwise unsatisfactory.
- F4.4 If the Contractor has been notified of a failure in accordance with clause F4.3 the Authority may:
- (a) direct the Contractor to identify and remedy the failure within such time as may be specified by the Authority and to apply all such additional resources as are necessary to

remedy that failure at no additional charge to the Authority within the specified timescale; and/or

- (b) withhold or reduce payments to the Contractor in such amount as the Authority deems appropriate in each particular case until such failure has been remedied to the satisfaction of the Authority.

F4.5 If the Contractor has been notified of a failure in accordance with clause F4.3, it shall:

- (a) use all reasonable endeavours to immediately minimise the impact of such failure to the Authority and to prevent such failure from recurring; and
- (b) immediately give the Authority such information as the Authority may request regarding what measures are being taken to comply with the obligations in this clause F4.5 and the progress of those measures until resolved to the satisfaction of the Authority.

F4.6 If, having been notified of any failure, the Contractor fails to remedy it in accordance with clause F4.5 within the time specified by the Authority, the Authority may treat the continuing failure as a Material Breach and may terminate the Contract immediately on notice to the Contractor.

F5 Transfer and Sub-Contracting

F5.1 Except where clauses F5.5 and F5.6 both apply, the Contractor shall not transfer, charge, assign, sub-contract or in any other way dispose of the Contract or any part of it without Approval. All such documents shall be evidenced in writing and shown to the Authority on request. Sub-contracting any part of the Contract shall not relieve the Contractor of any of its obligations or duties under the Contract.

F5.2 The Contractor shall be responsible for the acts and/or omissions of its Sub-Contractors as though they are its own. If it is appropriate, the Contractor shall provide each Sub-Contractor with a copy of the Contract and obtain written confirmation from them that they will provide the Services fully in accordance with the Contract.

F5.3 The Contractor shall ensure that its Sub-Contractors and suppliers retain all records relating to the Services for at least 6 years from the date of their creation and make them available to the Authority on request in accordance with the provisions of clause E10 (Audit). If any Sub-Contractor or supplier does not allow the Authority access to the records then the Authority shall have no obligation to pay any claim or invoice made by the Contractor on the basis of such documents or work carried out by the Sub-Contractor or supplier.

F5.4 If the Authority has consented to the placing of Sub-Contracts, copies of each Sub-Contract shall, at the request of the Authority, be sent by the Contractor to the Authority immediately.

F5.5 Notwithstanding clause F5.1, the Contractor may assign to a third party (the "Assignee") the right to receive payment of the Price or any part thereof due to the Contractor (including any interest which the Authority incurs under clause C2 (Payment and VAT)). Any assignment under this clause F5.5 shall be subject to:

- (a) reduction of any sums in respect of which the Authority exercises its right of recovery under clause C3 (Recovery of Sums Due);
- (b) all related rights of the Authority under the Contract in relation to the recovery of sums due but unpaid; and
- (c) the Authority receiving notification under both clauses F5.6 and F5.7.

F5.6 If the Contractor assigns the right to receive the Price under clause F5.5, the Contractor or the Assignee shall notify the Authority in writing of the assignment and the date upon which the assignment becomes effective.

- F5.7 The Contractor shall ensure that the Assignee notifies the Authority of the Assignee's contact information and bank account details to which the Authority shall make payment.
- F5.8 The provisions of clause C2 shall continue to apply in all other respects after the assignment and shall not be amended without Approval.
- F5.9 Subject to clause F5.10, the Authority may assign, novate or otherwise dispose of its rights and obligations under the Contract or any part thereof to:
- (a) any Contracting Authority;
 - (b) any other body established by the Crown or under statute in order substantially to perform any of the functions that had previously been performed by the Authority; or
 - (c) any private sector body which substantially performs the functions of the Authority
- provided that any such assignment, novation or other disposal shall not increase the burden of the Contractor's obligations under the Contract.
- F5.10 Any change in the legal status of the Authority such that it ceases to be a Contracting Authority shall not, subject to clause F5.11, affect the validity of the Contract and the Contract shall bind and inure to the benefit of any successor body to the Authority.
- F5.11 If the rights and obligations under the Contract are assigned, novated or otherwise disposed of pursuant to clause F5.9 to a body which is not a Contracting Authority or if there is a change in the legal status of the Authority such that it ceases to be a Contracting Authority (in the remainder of this clause F5 both such bodies being referred to as the "Transferee"):
- (a) the rights of termination of the Authority in clauses H1 and H2 shall be available to the Contractor in respect of the Transferee; and
 - (b) the Transferee shall only be able to assign, novate or otherwise dispose of its rights and obligations under the Contract or any part thereof with the prior consent in writing of the Contractor.
- F5.12 The Authority may disclose to any Transferee any Confidential Information of the Contractor which relates to the performance of the Contractor's obligations under the Contract. In such circumstances the Authority shall authorise the Transferee to use such Confidential Information only for purposes relating to the performance of the Contractor's obligations under the Contract and for no other purpose and shall take all reasonable steps to ensure that the Transferee gives a confidentiality undertaking in relation to such Confidential Information.
- F5.13 Each Party shall at its own cost and expense carry out, or use all reasonable endeavours to ensure the carrying out of, whatever further actions (including the execution of further documents) the other Party reasonably requires from time to time for the purpose of giving that other Party the full benefit of the provisions of the Contract.

F6 Waiver

- F6.1 The failure of either Party to insist upon strict performance of any provision of the Contract, or the failure of either Party to exercise, or any delay in exercising, any right or remedy shall not constitute a waiver of that right or remedy and shall not cause a diminution of the obligations established by the Contract.
- F6.2 No waiver shall be effective unless it is expressly stated to be a waiver and communicated to the other Party in writing in accordance with clause A4.2 (Notices).
- F6.3 A waiver of any right or remedy arising from a breach of the Contract shall not constitute a waiver of any right or remedy arising from any other or subsequent breach of the Contract.

F7 Variation

- F7.1 Subject to the provisions of this clause F7, the Authority may request a Variation provided that such Variation does not amount to a material change.
- F7.2 The Authority may request a Variation by notifying the Contractor in writing of the Variation and giving the Contractor sufficient information to assess the extent of the Variation and consider whether any change to the Price is required in order to implement the Variation within a reasonable time limit specified by the Authority. If the Contractor accepts the Variation it shall confirm it in writing.
- F7.3 If the Contractor is unable to accept the Variation or where the Parties are unable to agree a change to the Price, the Authority may:
- (a) allow the Contractor to fulfil its obligations under the Contract without the Variation to the Specification; or
 - (b) terminate the Contract immediately except where the Contractor has already delivered all or part of the Services or where the Contractor can show evidence of substantial work being carried out to fulfil the requirements of the Specification; and in such case the Parties shall attempt to agree upon a resolution to the matter. If a resolution cannot be reached, the matter shall be dealt with under the Dispute Resolution procedure detailed in clause I2 (Dispute Resolution).
- F7.4 Any Variation will not take effect unless recorded in a CCN and approved in writing by the Authority.
- F7.5 The provisions of clause F7.4 may be varied in an emergency if it is not practicable to obtain the Authorised Representative's approval within the time necessary to make the Variation in order to address the emergency. In an emergency, Variations may be approved by a different representative of the Authority. However, the Authorised Representative shall have the right to review such a Variation and require a CCN to be entered into on a retrospective basis which may itself vary the emergency Variation.

F8 Severability

- F8.1 If any provision of the Contract which is not of a fundamental nature is held invalid, illegal or unenforceable for any reason by any court of competent jurisdiction, such provision shall be severed and the remainder of the provisions of the Contract shall continue in full force and effect as if the Contract had been executed with the invalid, illegal or unenforceable provision eliminated.

F9 Remedies Cumulative

- F9.1 Except as expressly provided in the Contract all remedies available to either Party for breach of the Contract are cumulative and may be exercised concurrently or separately, and the exercise of any one remedy shall not be deemed an election of such remedy to the exclusion of other remedies.

F10 Entire Agreement

- F10.1 The Contract constitutes the entire agreement between the Parties in respect of the matters dealt with therein. The Contract supersedes all prior negotiations between the Parties and all representations and undertakings made by one Party to the other, whether written or oral, except that this clause shall not exclude liability in respect of any fraudulent misrepresentation.

F11 Counterparts

- F11.1 The Contract may be executed in counterparts, each of which when executed and delivered shall constitute an original but all counterparts together shall constitute one and the same instrument.

G LIABILITIES

G1 Liability, Indemnity and Insurance

- G1.1 Neither Party limits its liability for:
- (a) death or personal injury caused by its negligence;
 - (b) fraud or fraudulent misrepresentation;
 - (c) any breach of any obligations implied by section 12 of the Sale of Goods Act 1979 or section 2 of the Supply of Goods and Services Act 1982;
 - (d) any breach of clause D1; or
 - (e) any liability to the extent it cannot be limited or excluded by Law.
- G1.2 Subject to clauses G1.3 and G1.4, the Contractor shall indemnify the Authority and keep the Authority indemnified fully against all claims, proceedings, demands, charges, actions, damages, costs, breach of statutory duty, expenses and any other liabilities which may arise out of the supply, or the late or purported supply, of the Services or the performance or non-performance by the Contractor of its obligations under the Contract or the presence of the Contractor or any Staff on the Premises, including in respect of any death or personal injury, loss of or damage to property, financial loss arising from any advice given or omitted to be given by the Contractor, or any other loss which is caused directly by any act or omission of the Contractor.
- G1.3 Subject to clause G1.1 the Contractor's aggregate liability in respect of the Contract shall not exceed £1,000,000.
- G1.4 The Contractor shall not be responsible for any injury, loss, damage, cost or expense if and to the extent that it is caused by the negligence or wilful misconduct of the Authority or by breach by the Authority of its obligations under the Contract.
- G1.5 The Authority may recover from the Contractor the following losses incurred by the Authority to the extent they arise as a result of a Default by the Contractor:
- (a) any additional operational and/or administrative costs and expenses incurred by the Authority, including costs relating to time spent by or on behalf of the Authority in dealing with the consequences of the Default;
 - (b) any wasted expenditure or charges;
 - (c) the additional costs of procuring a Replacement Contractor for the remainder of the Contract Period and or replacement deliverables which shall include any incremental costs associated with the Replacement Contractor and/or replacement deliverables above those which would have been payable under the Contract;
 - (d) any compensation or interest paid to a third party by the Authority; and
 - (e) any fine or penalty incurred by the Authority pursuant to Law and any costs incurred by the Authority in defending any proceedings which result in such fine or penalty.
- G1.6 Subject to clauses G1.1 and G1.5, neither Party shall be liable to the other for any:

- (a) loss of profits, turnover, business opportunities or damage to goodwill (in each case whether direct or indirect); or
 - (b) indirect, special or consequential loss.
- G1.7 Unless otherwise specified by the Authority, the Contractor shall, with effect from the Commencement Date for such period as necessary to enable the Contractor to comply with its obligations herein, take out and maintain with a reputable insurance company a policy or policies of insurance providing an adequate level of cover in respect of all risks which may be incurred by the Contractor, arising out of the Contractor's performance of its obligations under the Contract, including death or personal injury, loss of or damage to property or any other loss. Such policies shall include cover in respect of any financial loss arising from any advice given or omitted to be given by the Contractor. Such insurance shall be maintained for the duration of the Contract Period and for a minimum of 6 years following the end of the Contract.
- G1.8 The Contractor shall hold employer's liability insurance in respect of Staff and such insurance shall be in accordance with any legal requirement from time to time in force.
- G1.9 The Contractor shall give the Authority, on request, copies of all insurance policies referred to in this clause or a broker's verification of insurance to demonstrate that the appropriate cover is in place, together with receipts or other evidence of payment of the latest premiums due under those policies.
- G1.10 If the Contractor does not give effect to and maintain the insurances required by the provisions of the Contract, the Authority may make alternative arrangements to protect its interests and may recover the costs of such arrangements from the Contractor.
- G1.11 The provisions of any insurance or the amount of cover shall not relieve the Contractor of any liabilities under the Contract.
- G1.12 The Contractor shall not take any action or fail to take any reasonable action, or (to the extent that it is reasonably within its power) permit anything to occur in relation to the Contractor, which would entitle any insurer to refuse to pay any claim under any insurance policy in which the Contractor is an insured, a co-insured or additional insured person.

G2 Warranties and Representations

- G2.1 The Contractor warrants and represents on the Commencement Date and for the Contract Period that:
 - (a) it has full capacity and authority and all necessary consents to enter into and perform the Contract and that the Contract is executed by a duly authorised representative of the Contractor;
 - (b) in entering the Contract it has not committed any fraud;
 - (c) as at the Commencement Date, all information contained in the Tender or other offer made by the Contractor to the Authority remains true, accurate and not misleading, save as may have been specifically disclosed in writing to the Authority prior to execution of the Contract and in addition, that it will advise the Authority of any fact, matter or circumstance of which it may become aware which would render such information to be false or misleading;
 - (d) no claim is being asserted and no litigation, arbitration or administrative proceeding is presently in progress or, to the best of its knowledge and belief, pending or threatened against it or any of its assets which will or might have an adverse effect on its ability to perform its obligations under the Contract;

- (e) it is not subject to any contractual obligation, compliance with which is likely to have a material adverse effect on its ability to perform its obligations under the Contract;
- (f) no proceedings or other steps have been taken and not discharged (nor, to the best of its knowledge, are threatened) for the winding up of the Contractor or for its dissolution or for the appointment of a receiver, administrative receiver, liquidator, manager, administrator or similar officer in relation to any of the Contractor's assets or revenue;
- (g) it owns, or has obtained or is able to obtain valid licences for, all Intellectual Property Rights that are necessary for the performance of its obligations under the Contract;
- (h) any person engaged by the Contractor shall be engaged on terms which do not entitle them to any Intellectual Property Right in any IP Materials;
- (i) in the 3 years (or period of existence where the Contractor has not been in existence for 3 years) prior to the date of the Contract:
 - (i) it has conducted all financial accounting and reporting activities in compliance in all material respects with the generally accepted accounting principles that apply to it in any country where it files accounts;
 - (ii) it has been in full compliance with all applicable securities and tax laws and regulations in the jurisdiction in which it is established; and
 - (iii) it has not done or omitted to do anything which could have a material adverse effect on its assets, financial condition or position as an ongoing business concern or its ability to fulfil its obligations under the Contract;
- (j) it has and will continue to hold all necessary (if any) regulatory approvals from the Regulatory Bodies necessary to perform its obligations under the Contract; and
- (k) it has notified the Authority in writing of any Occasions of Tax Non-Compliance and any litigation in which it is involved that is in connection with any Occasion of Tax Non-Compliance.

G3 Force Majeure

- G3.1 Subject to the remaining provisions of this clause G3, a Party may claim relief under this clause G3 from liability for failure to meet its obligations under the Contract for as long as and only to the extent that the performance of those obligations is directly affected by a Force Majeure Event. Any failure or delay by the Contractor in performing its obligations under the Contract which results from a failure or delay by an agent, Sub-Contractor or supplier shall be regarded as due to a Force Majeure Event only if that agent, Sub-Contractor or supplier is itself impeded by a Force Majeure Event from complying with an obligation to the Contractor.
- G3.2 The Affected Party shall as soon as reasonably practicable issue a Force Majeure Notice, which shall include details of the Force Majeure Event, its effect on the obligations of the Affected Party and any action the Affected Party proposes to take to mitigate its effect.
- G3.3 If the Contractor is the Affected Party, it shall not be entitled to claim relief under this clause G3 to the extent that consequences of the relevant Force Majeure Event:
 - (a) are capable of being mitigated by any of the Services, but the Contractor has failed to do so; and/or
 - (b) should have been foreseen and prevented or avoided by a prudent provider of services similar to the Services, operating to the standards required by the Contract.

- G3.4 Subject to clause G3.5, as soon as practicable after the Affected Party issues the Force Majeure Notice, and at regular intervals thereafter, the Parties shall consult in good faith and use reasonable endeavours to agree any steps to be taken and an appropriate timetable in which those steps should be taken, to enable continued provision of the Services affected by the Force Majeure Event.
- G3.5 The Parties shall at all times following the occurrence of a Force Majeure Event and during its subsistence use their respective reasonable endeavours to prevent and mitigate the effects of the Force Majeure Event. Where the Contractor is the Affected Party, it shall take all steps in accordance with Good Industry Practice to overcome or minimise the consequences of the Force Majeure Event.
- G3.6 Where, as a result of a Force Majeure Event:
- (a) an Affected Party fails to perform its obligations in accordance with the Contract, then during the continuance of the Force Majeure Event:
 - i) the other Party shall not be entitled to exercise its rights to terminate the Contract in whole or in part as a result of such failure pursuant to clause H2.1 or H2.3; and
 - ii) neither Party shall be liable for any Default arising as a result of such failure;
 - (b) the Contractor fails to perform its obligations in accordance with the Contract it shall be entitled to receive payment of the Price (or a proportional payment of it) only to the extent that the Services (or part of the Services) continue to be performed in accordance with the terms of the Contract during the occurrence of the Force Majeure Event.
- G3.7 The Affected Party shall notify the other Party as soon as practicable after the Force Majeure Event ceases or no longer causes the Affected Party to be unable to comply with its obligations under the Contract.
- G3.8 Relief from liability for the Affected Party under this clause G3 shall end as soon as the Force Majeure Event no longer causes the Affected Party to be unable to comply with its obligations under the Contract and shall not be dependent on the serving of notice under clause G3.7.

H DEFAULT, DISRUPTION AND TERMINATION

H1 Termination on Insolvency and Change of Control

- H1.1 The Authority may terminate the Contract with immediate effect by notice and without compensation to the Contractor where the Contractor is a company and in respect of the Contractor:
- (a) a proposal is made for a voluntary arrangement within Part I of the Insolvency Act 1986 or of any other composition scheme or arrangement with, or assignment for the benefit of, its creditors;
 - (b) a shareholders' meeting is convened for the purpose of considering a resolution that it be wound up or a resolution for its winding-up is passed (other than as part of, and exclusively for the purpose of, a bona fide reconstruction or amalgamation);
 - (c) a petition is presented for its winding up (which is not dismissed within 14 days of its service) or an application is made for the appointment of a provisional liquidator or a creditors' meeting is convened pursuant to section 98 of the Insolvency Act 1986;

- (d) a receiver, administrative receiver or similar officer is appointed over the whole or any part of its business or assets;
- (e) an application order is made either for the appointment of an administrator or for an administration order, an administrator is appointed, or notice of intention to appoint an administrator is given;
- (f) it is or becomes insolvent within the meaning of section 123 of the Insolvency Act 1986;
- (g) being a "small company" within the meaning of section 247(3) of the Companies Act 1985, a moratorium comes into force pursuant to Schedule A1 of the Insolvency Act 1986; or
- (h) any event similar to those listed in H1.1(a)-(g) occurs under the law of any other jurisdiction.

H1.2 The Authority may terminate the Contract with immediate effect by notice and without compensation to the Contractor where the Contractor is an individual and:

- (a) an application for an interim order is made pursuant to sections 252-253 of the Insolvency Act 1986 or a proposal is made for any composition scheme or arrangement with, or assignment for the benefit of, the Contractor's creditors;
- (b) a petition is presented and not dismissed within 14 days or order made for the Contractor's bankruptcy;
- (c) a receiver, or similar officer is appointed over the whole or any part of the Contractor's assets or a person becomes entitled to appoint a receiver, or similar officer over the whole or any part of his assets;
- (d) the Contractor is unable to pay his debts or has no reasonable prospect of doing so, in either case within the meaning of section 268 of the Insolvency Act 1986;
- (e) a creditor or encumbrancer attaches or takes possession of, or a distress, execution, sequestration or other such process is levied or enforced on or sued against, the whole or any part of the Contractor's assets and such attachment or process is not discharged within 14 days;
- (f) he dies or is adjudged incapable of managing his affairs within the meaning of Part VII of the Mental Capacity Act 2005;
- (g) he suspends or ceases, or threatens to suspend or cease, to carry on all or a substantial part of his business; or
- (h) any event similar to those listed in clauses H1.2(a) to (g) occurs under the law of any other jurisdiction.

H1.3 The Contractor shall notify the Authority immediately in writing of any proposal or negotiations which will or may result in a merger, take-over, change of control, change of name or status including where the Contractor undergoes a change of control within the meaning of section 1124 of the Corporation Taxes Act 2010 ("Change of Control"). The Authority may terminate the Contract with immediate effect by notice and without compensation to the Contractor within 6 Months of:

- (a) being notified that a Change of Control has occurred; or
- (b) where no notification has been made, the date that the Authority becomes aware of the Change of Control,

but shall not be permitted to terminate where Approval was granted prior to the Change of Control.

H1.4 The Authority may terminate the Contract with immediate effect by notice and without compensation to the Contractor where the Contractor is a partnership and:

- (a) a proposal is made for a voluntary arrangement within Article 4 of the Insolvent Partnerships Order 1994 or a proposal is made for any other composition, scheme or arrangement with, or assignment for the benefit of, its creditors; or
- (b) it is for any reason dissolved; or
- (c) a petition is presented for its winding up or for the making of any administration order, or an application is made for the appointment of a provisional liquidator; or
- (d) a receiver, or similar officer is appointed over the whole or any part of its assets; or
- (e) the partnership is deemed unable to pay its debts within the meaning of section 222 or 223 of the Insolvency Act 1986 as applied and modified by the Insolvent Partnerships Order 1994; or
- (f) any of the following occurs in relation to any of its partners:
 - (i) an application for an interim order is made pursuant to sections 252-253 of the Insolvency Act 1986 or a proposal is made for any composition scheme or arrangement with, or assignment for the benefit of, his creditors;
 - (ii) a petition is presented for his bankruptcy; or
 - (iii) a receiver, or similar officer is appointed over the whole or any part of his assets;
- (g) any event similar to those listed in clauses H1.4(a) to (f) occurs under the law of any other jurisdiction .

H1.5 The Authority may terminate the Contract with immediate effect by notice and without compensation to the Contractor where the Contractor is a limited liability partnership and:

- (a) a proposal is made for a voluntary arrangement within Part I of the Insolvency Act 1986 or a proposal is made for any other composition, scheme or arrangement with, or assignment for the benefit of, its creditors;
- (b) it is for any reason dissolved;
- (c) an application is made either for the appointment of an administrator or for an administration order, an administrator is appointed, or notice of intention to appoint an administrator is given within Part II of the Insolvency Act 1986;
- (d) any step is taken with a view to it being determined that it be wound up (other than as part of, and exclusively for the purpose of, a bona fide reconstruction or amalgamation) within Part IV of the Insolvency Act 1986;
- (e) a petition is presented for its winding up (which is not dismissed within 14 days of its service) or an application is made for the appointment of a provisional liquidator within Part IV of the Insolvency Act 1986;
- (f) a receiver, or similar officer is appointed over the whole or any part of its assets; or
- (g) it is or becomes unable to pay its debts within the meaning of section 123 of the Insolvency Act 1986;

- (h) a moratorium comes into force pursuant to Schedule A1 of the Insolvency Act 1986; or
- (i) any event similar to those listed in clauses H1.5 (a) to (h) occurs under the law of any other jurisdiction.

H1.6 References to the Insolvency Act 1986 in clause H1.5(a) shall be construed as being references to that Act as applied under the Limited Liability Partnerships Act 2000 subordinate legislation.

H2 Termination on Default

H2.1 The Authority may terminate the Contract with immediate effect by notice if the Contractor commits a Default and:

- (a) the Contractor has not remedied the Default to the satisfaction of the Authority within 25 Working Days or such other period as may be specified by the Authority, after issue of a notice specifying the Default and requesting it to be remedied;
- (b) the Default is not, in the opinion of the Authority, capable of remedy; or
- (c) the Default is a Material Breach.

H2.2 If, through any Default of the Contractor, data transmitted or processed in connection with the Contract is either lost or sufficiently degraded as to be unusable, the Contractor shall be liable for the cost of reconstitution of that data and shall reimburse the Authority in respect of any charge levied for its transmission and any other costs charged in connection with such Default.

H2.3 If the Authority fails to pay the Contractor undisputed sums of money when due, the Contractor shall give notice to the Authority of its failure to pay. If the Authority fails to pay such undisputed sums within 90 Working Days of the date of such notice, the Contractor may terminate the Contract in writing with immediate effect, save that such right of termination shall not apply where the failure to pay is due to the Authority exercising its rights under clause C3.1 (Recovery of Sums Due) or to a Force Majeure Event.

H3 Termination on Notice

H3.1 The Authority may terminate the Contract at any time by giving 30 days' notice to the Contractor.

H4 Consequences of Expiry or Termination

H4.1 If the Authority terminates the Contract under clause H2 and makes other arrangements for the supply of the Services the Authority may recover from the Contractor the cost reasonably incurred of making those other arrangements and any additional expenditure incurred by the Authority throughout the remainder of the Contract Period.

H4.2 If Contract is terminated under clause H2 the Authority shall make no further payments to the Contractor (for Services supplied by the Contractor prior to termination and in accordance with the Contract but where the payment has yet to be made by the Authority), until the Authority has established the final cost of making the other arrangements envisaged under this clause.

H4.2 If the Authority terminates the Contract under clause H3 the Authority shall make no further payments to the Contractor except for Services supplied by the Contractor prior to termination and in accordance with the Contract but where the payment has yet to be made by the Authority.

H4.3 Save as otherwise expressly provided in the Contract:

- (a) termination or expiry of the Contract shall be without prejudice to any rights, remedies or obligations accrued under the Contract prior to termination or expiration and nothing in the Contract shall prejudice the right of either Party to recover any amount outstanding at such termination or expiry; and

- (b) termination of the Contract shall not affect the continuing rights, remedies or obligations of the Authority or the Contractor under clauses C2 (Payment and VAT), C3 (Recovery of Sums Due), D1 (Prevention of Fraud and Bribery), E2 (Data Protection Act Compliance), E3 (Official Secrets Acts 1911 to 1989, Section 182 of the Finance Act 1989), E4 (Confidential Information), E5 (Freedom of Information), E8 (Intellectual Property Rights), E10 (Audit), F10 (Remedies Cumulative), G1 (Liability, Indemnity and Insurance), H4 (Consequences of Expiry or Termination), H6 (Recovery upon Termination) and I1 (Governing Law and Jurisdiction).

H5 Disruption

- H5.1 The Contractor shall take reasonable care to ensure that in the performance of its obligations under the Contract it does not disrupt the operations of the Authority, its employees or any other contractor employed by the Authority.
- H5.2 The Contractor shall immediately inform the Authority of any actual or potential industrial action, whether such action be by its own employees or others, which affects or might affect its ability at any time to perform its obligations under the Contract.
- H5.3 If there is industrial action by the Staff, the Contractor shall seek Approval to its proposals to continue to perform its obligations under the Contract.
- H5.4 If the Contractor's proposals referred to in clause H5.3 are considered insufficient or unacceptable by the Authority acting reasonably, then the Contract may be terminated with immediate effect by the Authority by notice.
- H5.5 If the Contractor is unable to deliver the Services owing to disruption of the Authority's normal business, the Contractor may request a reasonable allowance of time, and, in addition, the Authority will reimburse any additional expense reasonably incurred by the Contractor as a direct result of such disruption.

H6 Recovery upon Termination

- H6.1 On termination of the Contract for any reason, the Contractor shall at its cost:
- (a) immediately return to the Authority all Confidential Information, Personal Data and IP Materials in its possession or in the possession or under the control of any permitted suppliers or Sub-Contractors, which was obtained or produced in the course of providing the Goods and Services;
 - (b) immediately deliver to the Authority all Property (including materials, documents, information and access keys) provided to the Contractor in good working order;
 - (c) immediately vacate any Authority Premises occupied by the Contractor;
 - (d) assist and co-operate with the Authority to ensure an orderly transition of the provision of the Services to the Replacement Contractor and/or the completion of any work in progress; and
 - (e) promptly provide all information concerning the provision of the Services which may reasonably be requested by the Authority for the purposes of adequately understanding the manner in which the Services have been provided and/or for the purpose of allowing the Authority and/or the Replacement Contractor to conduct due diligence.
- H6.2 If the Contractor does not comply with clauses H6.1(a) and (b), the Authority may recover possession thereof and the Contractor grants a licence to the Authority or its appointed agents to enter (for the purposes of such recovery) any premises of the Contractor or its permitted suppliers or Sub-Contractors where any such items may be held.

H7 Retendering and Handover

- H7.1 Within 21 days of being requested by the Authority, the Contractor shall provide, and thereafter keep updated, in a fully indexed and catalogued format, all the information necessary to enable the Authority to issue tender documents for the future provision of the Services.
- H7.2 The Authority shall take all necessary precautions to ensure that the information referred to in clause H7.1 is given only to potential providers who have qualified to tender for the future provision of the Services.
- H7.3 The Authority shall require that all potential providers treat the information in confidence; that they do not communicate it except to such persons within their organisation and to such extent as may be necessary for the purpose of preparing a response to an invitation to tender issued by the Authority; and that they shall not use it for any other purpose.
- H7.4 The Contractor shall indemnify the Authority against any claim made against the Authority at any time by any person in respect of any liability incurred by the Authority arising from any deficiency or inaccuracy in information which the Contractor is required to provide under clause H7.1.
- H7.5 The Contractor shall allow access to the Premises in the presence of the Authorised Representative, to any person representing any potential provider whom the Authority has selected to tender for the future provision of the Services.
- H7.6 If access is required to the Contractor's Premises for the purposes of clause H7.5, the Authority shall give the Contractor 7 days' notice of a proposed visit together with a list showing the names of all persons who will be visiting. Their attendance shall be subject to compliance with the Contractor's security procedures, subject to such compliance not being in conflict with the objectives of the visit.
- H7.7 The Contractor shall co-operate fully with the Authority during any handover at the end of the Contract. This co-operation shall include allowing full access to, and providing copies of, all documents, reports, summaries and any other information necessary in order to achieve an effective transition without disruption to routine operational requirements.
- H7.8 Within 10 Working Days of being requested by the Authority, the Contractor shall transfer to the Authority, or any person designated by the Authority, free of charge, all computerised filing, recording, documentation, planning and drawing held on software and utilised in the provision of the Services. The transfer shall be made in a fully indexed and catalogued disk format, to operate on a proprietary software package identical to that used by the Authority.

H8 Exit Management

- H8.1 Upon termination the Contractor shall render reasonable assistance to the Authority to the extent necessary to effect an orderly assumption by a Replacement Contractor in accordance with the following procedure set out in clause H9.

H9 Exit Procedures

- H9.1 Where the Authority requires a continuation of all or any of the Services on expiry or termination of this Contract, either by performing them itself or by engaging a third party to perform them, the Contractor shall co-operate fully with the Authority and any such third party and shall take all reasonable steps to ensure the timely and effective transfer of the Services without disruption to routine operational requirements.
- H9.2 The following commercial approach shall apply to the transfer of the Services if the Contractor:
- (a) does not have to use resources in addition to those normally used to deliver the Services prior to termination or expiry, there shall be no change to the Price; or

- (b) reasonably incurs additional costs, the Parties shall agree a Variation to the Price based on the Contractor's rates either set out in Schedule 2 or forming the basis for the Price.
- H9.3 When requested to do so by the Authority, the Contractor shall deliver to the Authority details of all licences for software used in the provision of the Services including the software licence agreements.
- H9.4 Within one Month of receiving the software licence information described above, the Authority shall notify the Contractor of the licences it wishes to be transferred, and the Contractor shall provide for the approval of the Authority a plan for licence transfer.
- H10 Knowledge Retention**
- H10.1 The Contractor shall co-operate fully with the Authority in order to enable an efficient and detailed knowledge transfer from the Contractor to the Authority on the completion or earlier termination of the Contract and in addition, to minimise any disruption to routine operational requirements. To facilitate this transfer, the Contractor shall provide the Authority free of charge with full access to its Staff, and in addition, copies of all documents, reports, summaries and any other information requested by the Authority. The Contractor shall comply with the Authority's request for information no later than 15 Working Days from the date that that request was made.

I DISPUTES AND LAW

I1 Governing Law and Jurisdiction

- I1.1 Subject to the provisions of clause I2 the Contract shall be governed by and interpreted in accordance with English Law and shall be subject to the jurisdiction of the Courts of England and Wales. The submission to such jurisdiction shall not limit the right of the Authority to take proceedings against the Contractor in any other court of competent jurisdiction, and the taking of proceedings in any other court of competent jurisdiction shall not preclude the taking of proceedings in any other jurisdiction whether concurrently or not.

I2 Dispute Resolution

- I2.1 The Parties shall attempt in good faith to negotiate a settlement to any dispute between them arising out of or in connection with the Contract within 20 Working Days of either Party notifying the other of the dispute and such efforts shall involve the escalation of the dispute to the finance director of the Contractor and the commercial director of the Authority.
- I2.2 Nothing in this dispute resolution procedure shall prevent the Parties from seeking from any court of competent jurisdiction an interim order restraining the other Party from doing any act or compelling the other Party to do any act.
- I2.3 If the dispute cannot be resolved by the Parties pursuant to clause I2.1 the Parties shall refer it to mediation pursuant to the procedure set out in clause I2.5 unless: (a) the Authority considers that the dispute is not suitable for resolution by mediation; or (b) the Contractor does not agree to mediation.
- I2.4 The obligations of the Parties under the Contract shall not cease, or be suspended or delayed by the reference of a dispute to mediation (or arbitration) and the Contractor and the Staff shall comply fully with the requirements of the Contract at all times.
- I2.5 The procedure for mediation and consequential provisions relating to mediation are as follows:
 - (a) a neutral adviser or mediator (the "Mediator") shall be chosen by agreement between the Parties or, if they are unable to agree upon a Mediator within 10 Working Days after a

request by one Party to the other or if the Mediator agreed upon is unable or unwilling to act, either Party shall within 10 Working Days from the date of the proposal to appoint a Mediator or within 10 Working Days of notice to either Party that he is unable or unwilling to act, apply to the Centre for Effective Dispute Resolution to appoint a Mediator;

- (b) the Parties shall within 10 Working Days of the appointment of the Mediator meet with him in order to agree a programme for the exchange of all relevant information and the structure to be adopted for negotiations. If appropriate, the Parties may at any stage seek assistance from the Centre for Effective Dispute Resolution to provide guidance on a suitable procedure;
- (c) unless otherwise agreed, all negotiations connected with the dispute and any settlement agreement relating to it shall be conducted in confidence and without prejudice to the rights of the Parties in any future proceedings;
- (d) if the Parties reach agreement on the resolution of the dispute, the agreement shall be recorded in writing and shall be binding on the Parties once it is signed by their duly authorised representatives;
- (e) failing agreement, either of the Parties may invite the Mediator to provide a non-binding but informative written opinion. Such an opinion shall be provided on a without prejudice basis and shall not be used in evidence in any proceedings relating to the Contract without the prior written consent of both Parties; and
- (f) if the Parties fail to reach agreement in the structured negotiations within 60 Working Days of the Mediator being appointed, or such longer period as may be agreed by the Parties, then any dispute or difference between them may be referred to the Courts unless the dispute is referred to arbitration pursuant to the procedures set out in clause 12.6.

12.6 Subject to clause 12.2, the Parties shall not institute court proceedings until the procedures set out in clauses 12.1 and 12.3 have been completed save that:

- (a) The Authority may at any time before court proceedings are commenced, serve a notice on the Contractor requiring the dispute to be referred to and resolved by arbitration in accordance with clause 12.7;
- (b) if the Contractor intends to commence court proceedings, it shall serve notice on the Authority of its intentions and the Authority shall have 21 days following receipt of such notice to serve a reply on the Contractor requiring the dispute to be referred to and resolved by arbitration in accordance with clause 12.7; and
- (c) the Contractor may request by notice to the Authority that any dispute be referred and resolved by arbitration in accordance with clause 12.7, to which the Authority may consent as it sees fit.

12.7 If any arbitration proceedings are commenced pursuant to clause 12.6,

- (a) the arbitration shall be governed by the provisions of the Arbitration Act 1996 and the Authority shall give a notice of arbitration to the Contractor (the "Arbitration Notice") stating:
 - (i) that the dispute is referred to arbitration; and
 - (ii) providing details of the issues to be resolved;
- (b) the London Court of International Arbitration ("LCIA") procedural rules in force at the date that the dispute was referred to arbitration in accordance with 12.7(b) shall be applied and are deemed to be incorporated by reference to the Contract and the decision of the

arbitrator shall be binding on the Parties in the absence of any material failure to comply with such rules;

- (c) the tribunal shall consist of a sole arbitrator to be agreed by the Parties;
- (d) if the Parties fail to agree the appointment of the arbitrator within 10 days of the Arbitration Notice being issued by the Authority under clause 12.7(a) or if the person appointed is unable or unwilling to act, the arbitrator shall be appointed by the LCIA;
- (e) the arbitration proceedings shall take place in London and in the English language; and
- (f) the arbitration proceedings shall be governed by, and interpreted in accordance with, English Law.

SCHEDULE 1 - SPECIFICATION

This Schedule forms the Services to be provided within this contract.

Composition of the Supply Chain

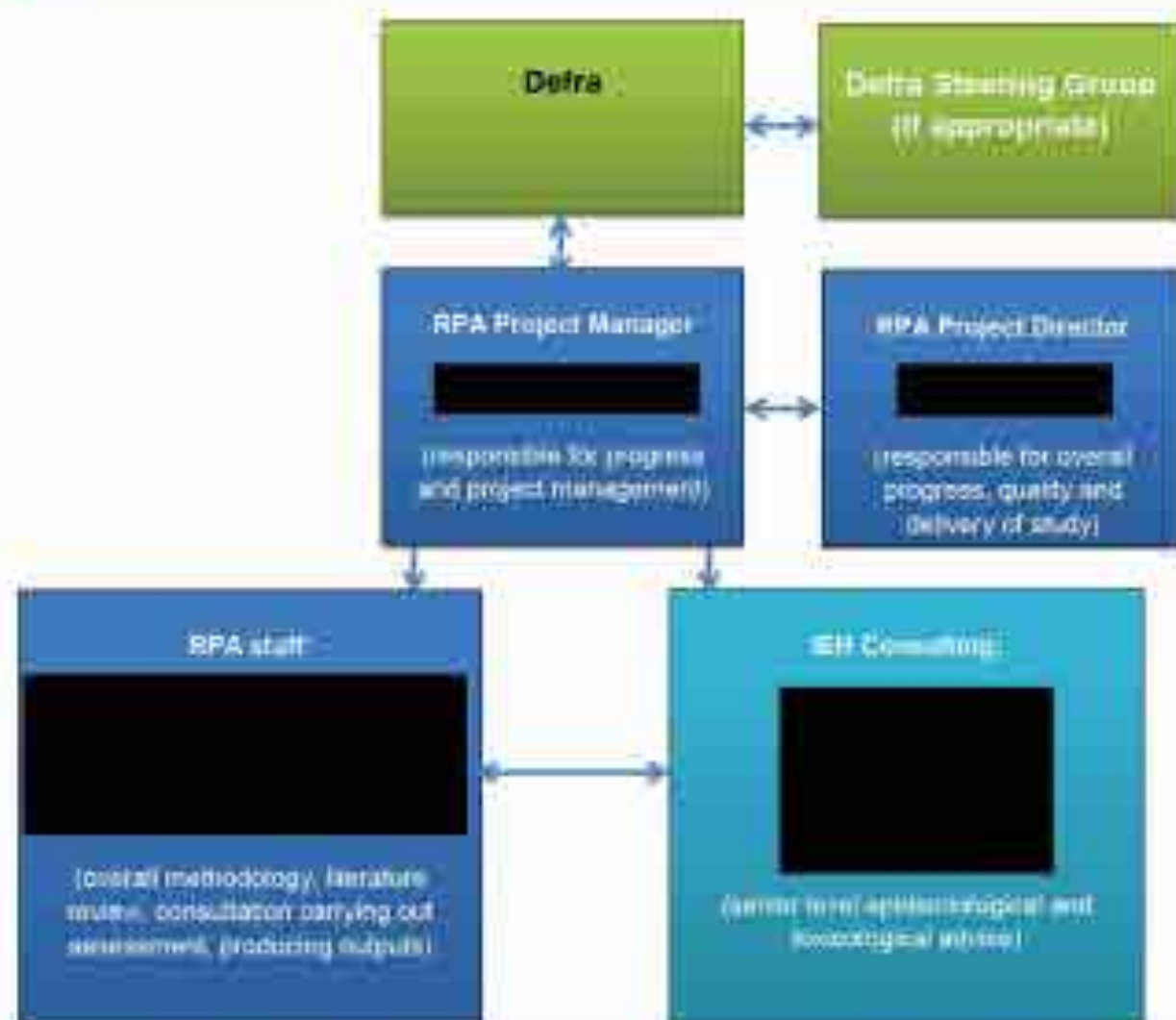


Figure 1: Composition of the study chain

The RPA project manager for this study will be [redacted]. [redacted] will be responsible for overseeing all work on the project and ensuring that the outputs are produced on time. [redacted] will also be the main point of contact for Defra.

RPA staff will contribute to all tasks including the start-up meeting (Task 0), definition of the desired monitoring outputs (Task 1), policy options and impact categories (Task 2), literature review and consultation (Tasks 3 and 4), analysis of costs and maximum theoretical benefits (Tasks 5 and 6) and evaluation of the policy options and reporting (Tasks 7 and 8).

RPA will be supported on this contract by JEH-C experts who will provide specialist input in relation to policy, toxicology and epidemiological approaches. In particular, they will contribute to Task 1 by identifying the levels of data required to draw meaningful conclusions (i.e. to be useful), thus identifying data gaps that hinder the use of the monitoring data to inform policy. They will also contribute to Tasks 2, 4, 6 and 8, ensuring that the project adheres to scientific best practice and its results stand up to scrutiny.

E01 Sustainability

Environmental sustainability and social responsibility are integral to RPA's ethics, codes of operation and business approach and we undertake projects with a focus on the entire life cycle approach. RPA is a member of the Institute of Environmental Management and Assessment (IEMA) which helps to keep RPA up-to-date with best practices and promote sustainable development. RPA's most recent sustainability report was shortlisted in the Environment & Sustainability category of the EDP (Eastern Daily Press) Business Awards. RPA's designated Sustainability Officer [REDACTED] is responsible for overall monitoring of sustainability within the company.

Operational sustainability

Financial sustainability

RPA has succeeded in maintaining revenue and profitability within the recent challenging economic climate, and has even increased its employee base. RPA currently has a revenue to cost ratio of 3:1 which it looks to maintain as quality and integrity of service are RPA's first priority. RPA's policy is to pay its team at market or above-market rates and an annual profit sharing plan has been set up to further motivate colleagues' performance and financial participation. RPA's sustainable approach to employee pay is further supported by the recognition that the company is a living wage employer.

Business sustainability

RPA has a diverse and international client base, which includes the European Commission, local authorities, UK government departments and private organisations. Many of these clients repeatedly entrust their projects to RPA and some have been clients for over a decade. Most private sector contracts won are through recommendations by other clients which is reflected in RPA's retention rate of 90%. An online survey and independent assessment was carried out to determine RPA's client satisfaction. Overall this survey demonstrated that clients are very content with the quality of RPA's work, its project pricing, employees and service levels.

Environmental management

Much of the work for this project will be undertaken at RPA's offices in Loddon where the environmental impact will be minimal. RPA has recently made improvements to its offices to improve energy efficiency, including; installing double glazing and loft insulation, reducing central heating water temperature, use of energy efficient computers, and installing time switches in areas where lights tend to get left on. These have led to a decrease in overall energy consumption of 10-15% over the last five years, during which staff numbers increased by 50%. RPA's gas and electricity is provided by Opus Energy who boast a robust environment policy and supply the majority of their energy from low carbon sources.

Travel to and from meetings will be the main cause of environmental impacts of this contract. RPA promotes the use of telephone and video conferencing wherever possible with this contributing to a 50% reduction in business travel between 2010/11 and 2011/12. RPA does not offer company cars and does not encourage private car use. Car sharing to our office in Loddon is popular and many of the staff travel to work by bus. The normal mode of transport to meetings is by train and bus. Sub-contractors will be encouraged to follow these guidelines for this project.

RPA's activities generate over 2,000 kg of waste per annum. The RPA team is actively encouraged to separate their waste into three streams: material for recycling (such as paper, glass, etc.); food waste that can be composted (on site); and other waste. We estimate that over 75% of waste is recycled or reused. Apart from use of the local authority waste collection service, non-confidential paper is sent to a local

paper recycling plant (via the local school collection skip). Confidential paper is either shredded on-site for re-use as bedding in the local dog rescue centre or is shredded off-site (for recycling) by a confidential data handling company. The printing of paperwork associated with this study (and all work undertaken by RPA) will be actively avoided and will only be undertaken where completely necessary.

Wildlife and natural features

This project is primarily desk based with stakeholder engagement, therefore damage to habitats and ecosystems will not occur.

RPA's Loddon office is located in a large green acreage on the very edge of the Broads. Gardens are tended with environmental protection and biodiversity in mind. Material for habitats is provided (such as rotting branches for insects and nesting boxes for birds) while the use of pesticides is avoided. Biodiversity is encouraged through a mixture of 'semi-wild' areas and cultivated areas, as well as a pond. There is a Tree Preservation Order on many of the trees in RPA's gardens, which range from Scot's Pine to Sycamore and Holmes' Oak to Holly trees. Rainwater is harvested and stored in underground storage tanks and is used to water the gardens in the summer. The team assist the Norfolk Biodiversity Information Service by collecting environmental data on wildlife sightings and natural incidents in the local area. Several members of staff are also taking part in a bat monitoring system within the surrounding area of RPA's offices, which is in conjunction with the Norfolk Bat Survey.

The company's total charitable contribution equated to nearly 2% of estimated profit for the year 2011-12, with a substantial financial allocation being given to the Norfolk Wildlife Trust in support of its valuable work in protecting the biodiversity of the local environment.

Transport

RPA prioritises local, ethically responsible, sustainably minded SMEs as its providers. These links are extremely important for the local economy and limit the mileage of materials where possible.

As RPA's offices are located in rural Norfolk, commuting to work by private car is the only option for some staff. However, almost half the workforce (46%) travel to work by bus (from nearby Norwich) and a third (33%) live close enough to either walk or cycle to the offices and of those which do drive to work car sharing is popular. For business travel, RPA does not offer company cars and does not encourage private car use. The normal mode of transport to meetings in the UK is by train and by Eurostar to meetings in Brussels (and, occasionally, in Paris). Within cities, use of public transport is considered to be the norm. RPA has recently witnessed a massive 50% reduction in business travel, down from 145,770 km in 2010/11 to 72,458 km in 2011/12. Car travel has also dropped by 25% (down from 6,481 km in 2010/11 to 5,032 km in 2011/12) and coach use has been halved from 888 km to 444 km. RPA have reduced their train travel by almost a third (down from 76,548 km to 51,613 km) and air travel has been reduced by an enormous 75% (from 61,853 km to 15,369 km). This can be attributed, in part, to a company-wide drive to encourage telephone and video conferencing wherever possible. Sub-contractors will also be encouraged to follow these guidelines for this project.

References

Table 101 Additions from previous works where sustainability was integrated throughout delivery	
Project title and client	How sustainability was integrated throughout delivery
Assessment of the remediation measures to deal with contaminants from disused metal and coal mines (for the Coal Authority)	Environmental management: This project involved many field visits across the UK. To reduce carbon emissions RPA staff used public transport for visits where possible and those trips which were close to each other were undertaken consecutively to limit the number of trips required.
Invasive non-native species: RINSE project outputs and IC2M (for Norfolk County Council)	Wildlife and natural features: This project contributes to the control of invasive non-native species within the coastal zone thereby protecting native species.
Local Economic and Environmental Development (LEED) toolkit (with a Local Enterprise Partnership and Local Nature Partnership for Natural England)	Environmental management: For this project we undertook meetings with stakeholders to which we travelled by train. We also undertook as many meetings as possible within each trip to avoid undertaking multiple visits.

All projects make maximum use of teleconferencing facilities where possible.

Carbon reporting

RPA records electricity and gas consumption within the office as well as transport mileage to allow us to identify areas where we could reduce our carbon emissions.

Contract specific sustainability measures

More specifically in relation to the delivery of this contract, RPA will ensure that our sustainability guidelines and policy are carefully followed. Where possible, correspondence will be carried out via electronic means where data and reports are concerned, to reduce printing. Staff will be encouraged to work electronically when conducting processing, literature review and report writing, where possible. If printed, all reports and other materials will be printed on 100% recycled paper. Transport and travel arrangements for this project will use public transport where possible (trains and buses). Internal project team meetings and information exchange, including between subcontractors, will be carried out via email correspondence and teleconference/phone conversations. Face-to-face meetings with the client will be kept to a minimum, with the preferred communication method being teleconference.

E02 Equality & Diversity Policy

Monitoring equality and diversity

RPA operates under a strict Equal Opportunities Policy. We aim to ensure that RPA is free from discriminatory practices and that all staff members and clients are treated fairly. This creates a safe and comfortable working environment. We recruit our staff from a wide variety of academic and cultural backgrounds; current employees within RPA come from 13 different countries, thus creating a unique employment environment. We have a high staff retention rate and many employees have been with the company for over 10 years. Our staff comprises 15 women and 17 men, and 50% of the company is female owned. Employees' ages range from early 20s to over 60. Employees are equally remunerated by grade and RPA has recently been awarded an accreditation as a Living Wage Employer. We offer staff flexible working hours to assist them in managing their work time around their personal commitments. At the moment there are no disabled people employed at RPA, although there have been in the past.

Training programmes for raising awareness

When staff join RPA, part of their initial training programme involves talking through the equality and diversity policy within the staff handbook. This is followed up by inviting staff members to ask any questions as and when they arise. Refresher training on all RPA policies is also provided as and when required.

Ensuring staff and sub-contractors comply appropriately with the relevant legislation

The current legislation covered in RPA training and listed in the staff handbook includes;

- Equal Pay Act 1970
- Sex Discrimination Act 1975
- Race Relations Act 1976
- Disability Discrimination Act 1995
- Employment Equality (Sexual Orientation) Regulations 2003
- Employment Equality (Religion or Belief) Regulations 2003
- Gender Recognition Act 2004
- Civil Partnership Act 2004

All RPA staff receive training regarding the relevant legislation when they first join, with regular opportunities to recap further during their career at RPA.

When undertaking work with external companies and individuals, RPA ensures that they have their own equality and diversity policies which incorporate the relevant legislation and that they are aware of RPA's policy. If a member of staff becomes aware of a breach of policy or discrimination, either by RPA or by any sub-contractor, which contravenes legislation, RPA has measures in place to enable the issue to be dealt with in an appropriate manner. Two members of RPA's Management Team have responsibility for monitoring adherence with legislation and acting in the event of any issues arising in line with the procedures set out in the RPA handbook.

Addressing cases of discrimination, other breaches and preventing recurrences

RPA's equality and diversity policy ensures that all employees are treated fairly irrespective of race, sex, sexual orientation, religion, disability, age, marital status or ethnic origin. This policy aims to remove unfair and discriminatory practices within the Company and to encourage full contribution from its diverse employee base. The Company is committed to actively opposing all forms of discrimination. RPA also aims to provide a service that does not discriminate against its suppliers, clients and customers in terms of the means by which they can access the services supplied by the company.

The training of RPA staff and the work environment help to prevent occurrences of discrimination. If a case does occur, RPA has a set of procedures in place to effectively deal with the issue. These include reporting the issue to a project manager as soon as possible. If the concern is about the project manager then the issue is to be reported to the next most senior person available. The introduction of the Public Disclosure Act 1998 protects any person who is contracted to work for the Company and who reports any discriminatory incident or working procedures such as those mentioned above.

The full text of RPA's equality and diversity policy can be obtained on request.

E03 Health & Safety

Although RPA's employees do not usually encounter hazardous or dangerous environments in their day-to-day work, RPA maintains clear health and safety guidelines. RPA has four trained first aiders in case of emergency, who attend regular refresher courses. RPA complies with all aspects of the Health & Safety at Work etc. Act 1974 and there have been no accidents or incidents in the last 12 months.

This document on RPA's health and safety arrangements has been prepared in support of its health and safety policy and forms part of the Staff Handbook which is issued to every member of staff on arrival at RPA. The Staff Handbook is regularly reviewed to ensure it is up to date and staff are encouraged to refer to it frequently. In preparing this document, account has been taken of guidance published by the Health & Safety Executive¹.

Responsibilities

RPA has a legal duty to ensure the health and safety of its employees (and others) at all times. RPA's Managing Director, [REDACTED], has overall responsibility for health and safety matters including the formal reporting of any significant incidents and injuries. Employees also have legal responsibilities to take care of the health and safety of themselves and others. As such, all employees have to:

- Co-operate with supervisors and managers (see chart below) on health and safety matters
- Not interfere with anything provided to safeguard their health and safety
- Take reasonable care of their own health and safety
- Report all health and safety concerns to an appropriate person.

The following diagram shows the lines of reporting of health and safety matters:



¹ Including for example, HSE (2011): Health and Safety Made Simple, leaflet INDG449, published July 2011

Risk assessments and work procedures

Risk assessments of our operations have been undertaken and reviewed by senior staff. The full assessments are available on request from the Directors.

Due to the nature of RPA's work, most risks are considered to be low – due, in part, to the controls in place. The risk assessment includes the safe use of equipment and chemicals (including COSHH requirements). Some of the more significant hazards are briefly summarised below.

Table 10.1: Some of RPA's more significant hazards (drawn from our risk assessment)		
Hazard	Those at risk	Controls
Trips/falls	Staff, visitors	Care required on narrow staircases
Falls, etc.	Builders, repairmen, etc.	Activities of builders, etc. monitored to ensure safe operations
Electrical shocks	Staff	Plugs and equipment periodically checked. Three first aiders on site
Personal safety	Staff	Lone working on site visits, etc. not permitted Work travel arranged to avoid late night travel alone Contact maintained with staff away from office via mobile phones, etc.
Vehicle collision	Staff	Long car journeys discouraged (company policy is to use public transport) – but probably is most significant risk faced by RPA staff
Stress	Staff	Workloads regularly discussed with staff (in accordance with HSE guidance on Management Standards for work related stress) Staff 'under the weather' sent home
Use of VDU's	Staff	Displays, seating, etc. checked for suitability and long periods at screen discouraged. Some anti-glare screen provided. Company pays for annual eye-tests

Although RPA has not suffered any significant injuries, accidents or other incidents, should such an event occur it would, of course, be investigated by some of RPA's risk specialists and remedial action taken if considered appropriate.

Training and first aid

All new staff are provided with the HSE leaflet (Health and Safety Law) and are provided with basic health and safety induction training. Although RPA does not anticipate employing young (under 18) people in the near future, RPA has provided short-term work placements for 15 year olds from the nearby Secondary School. The associated implications for health and safety have been discussed extensively with the education authorities and measures have been taken (such as close supervision) to ensure the health and safety of someone on a work placement at our offices. RPA currently has four formally qualified First Aiders () who undertake regular refresher courses. There is also an accident book and a First Aid box (located next to the office kitchen).

Emergency procedures

RPA's offices are provided with numerous fire extinguishers, signed escape routes as well as smoke/fire alarms. The status of the alarms, escape routes and fire extinguishers are subject to periodic inspections. On hearing an alarm, all staff (and visitors) must evacuate by one of the escape routes. The assembly point is in the office car park by the large garage. The fire procedures (and associated equipment) have been subject to a detailed fire risk assessment (a copy is available from the Directors). The two key findings from the fire risk assessment were that:

- more frequent testing of the fire alarm was required; and
- some office doors were being wedged open (during normal working hours) – however the associated fire risks are very low.

Working with others

On occasion, RPA staff may visit other locations and, as indicated in RPA's safety policy, this requires that particular care should be exercised when on the premises of other parties during the course of RPA work. As such, all RPA staff should be aware of any relevant health and safety guidance or instructions (for example of the host organisation when on their premises) and should ensure that they do not place themselves in risky situations (see 'Personal safety' in the Risk Assessment table above). RPA uses sub-consultants on some contracts – but it is unlikely that sub-consultants would be asked to undertake work other than desk-based research and attend meetings. In any event, all sub-consultants are asked to provide a copy of their health and safety policy (in full or in summary).

E04 Proposed Project Team

Structure of the project team: Risk & Policy Analysts Ltd (RPA) is an environmental economics and strategic policy assessment consultancy based in Norfolk. RPA will act as the lead contractor for this study, with expert input supplied under sub-contract (under Defra's terms and conditions). [REDACTED], a founding director of RPA, will act as **Project Director** and will be supported in **Project Management** by [REDACTED], a Senior Consultant at RPA. [REDACTED] will be also be supported by: [REDACTED] (Consultant), [REDACTED] (Consultant) and [REDACTED] (Researcher). Expert input will be provided by [REDACTED] from **IEH Consulting**, in relation to policy, toxicology and epidemiological approaches. The sub-contractors will be involved in project meetings to ensure they can influence and comment on the work as it proceeds. Any written inputs will be required at least one week before the deadline for each task. The structure of the project team is given in the organogram below (Figure E04-1).

Figure E04-1: Project Organogram



Roles and responsibilities of project team: We will discuss management roles and responsibilities at the start-up meeting, so that the whole team understands how this fits into project delivery and other aspects of the study. However, the general roles of the team are shown in Figure E04-2. Our external experts will provide expert guidance throughout the project, with particular attention to Tasks 0, 1, 2, 4, 6 and 8, to help ensure that the fundamental basis for our recommendations is based on sound evidence and analysis. For further details of the relevant experience of the team please see the summary of their experience in Table E04-2 and their CVs.

Relevant skills, training and expertise: Collectively, the study team present expertise in environmental, health and regulatory economics, toxicology and epidemiology, monitoring and surveillance schemes, chemical safety and policy appraisal, the contributory roles of the team are detailed in Figure E04-2, with a breakdown of days per task in Table E04-1. Both RPA and IEH Consulting have extensive experience in desk-based research, stakeholder engagement and consultation, impact assessment and project management – achieving deliverables on time and to cost. RPA staff regularly undertake training via online symposiums (e.g. ChemWatch) and training to ensure standards. The roles and responsibilities of the project team, with evidence of their relevant skills and experience, to deliver the project, are detailed in Table E04-2.

Escalation Procedure and Value for money: Table E04-1 sets out levels of input for each team member, highlighting the high level of input from senior members (around 45% of the days). The distribution of work throughout senior and junior team members optimises value-for-money. RPA's escalation procedure ensures that should Defra be dissatisfied with any aspect of the work undertaken by RPA and our sub-contractors and the matter is not resolved through normal communications, they may submit the complaint in writing to the Project Director. The Project Director will review the progress of the project and discuss the complaint with members of the project team before seeking a person-to-person meeting with Defra to discuss the complaint and agree actions to be taken to resolve matters. A further meeting will be held once these actions have been taken to determine whether matters have been satisfactorily resolved.

Figure E04-2: Core skills required and team expertise



Table E04-1 Day allocations to project tasks

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Table E04-2 Roles and responsibilities of project team and evidence as to their relevant skills and expertise to deliver this project

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1. Introduction

The aim of this project is to undertake a cost/benefit analysis (CBA) to inform the development of new arrangements to monitor and evaluate the impact of pesticides on human health, in line with the recommendation from a report of the Pesticides Adverse Health Effects Surveillance (PAHES) working group of the Advisory Committee on Pesticides (ACP), hereinafter ACP (2013). To achieve this aim, we have defined a set of specific objectives and associated tasks that correspond to the key analytical steps for the evaluation of central government policy as set out in the HM Treasury Green Book (2011).

2. Background to the study/understanding of key issues

An estimated 3 billion kg (~1 million metric tonnes) of pesticides are applied worldwide each year, which is estimated to result in more than 26 million cases of non-fatal acute pesticide poisoning (Richter, 2002)², 3 million hospitalisations, 350,000 fatalities (PAN, 2013)³ and 750,000 chronic illnesses per year (Hart and Pimentel, 2002)⁴. In the UK, an estimated 701 tonnes of active substances (herbicides 96%, fungicides 4% and insecticides <1%) were applied to almost 300,000 hectares. Reflecting the hazardous nature of these materials, the use and manufacture of pesticides is carefully regulated in Europe. The use of pesticides does, however, pose a complex challenge in terms of maintaining an appropriate balance between the socioeconomic benefits and the costs of usage, for example in terms of balancing increased food security with the impact on health and the environment. Use of pesticides can lead to increased crop and livestock yields, potentially improved food safety (e.g. by preventing insect or fungal spoilage, quality of life and socioeconomic health (Cooper & Dobson, 2007)⁵. Pimentel (1997)⁶ estimated that for each £1 invested in pesticides, £4 in protected crops is returned. Whilst, to the authors knowledge, cost benefit analyses specific to the UK are lacking and the regulatory contexts vary, in the US, the economic and environmental losses due to pesticide application were reported to be \$8.2 billion (bn) across impacts on public health (\$1.1 bn), pesticide resistance (\$1.5 bn), bird losses (\$2.2 bn) and groundwater contamination (\$2.0 bn) (Pimentel, 2005)⁷. For sake of comparison, assuming that the impacts and exposure in the US and the UK are similar as a percentage of GDP, this would account for a total of \$1.5 bn (£1 bn) based on UK GDP⁸. Thus, it can be argued that the use of pesticides has many beneficial consequences, against which the potential risks to both human health and non-target organisms must be balanced (Travisi *et al.*, 2006)⁹.

Acute pesticide poisoning has been attributed to significant morbidity and mortality worldwide (WHO, 2008)¹⁰, with annual incidence rates of 18.2 per 100,000 reported in full time workers (Calvert *et al.*, 2004) and 7.4 per million

² Richter, E. D. (2002) Acute human pesticide poisonings in D. Pimentel (Ed.), *Encyclopaedia of Pest Management*, New York, Dekker, pp3-6.

³ PAN (2013) PAN-UK Current pesticide spectrum, Global use and Major Concerns: <http://www.pan-uk.org>

⁴ Hart, K., Pimentel, D. (2002) Public health and costs of pesticides, in D. Pimentel (Ed.) *Encyclopaedia of Pest Management*, New York, Dekker, pp. 677-679.

⁵ Cooper, J., Dobson, H. (2007) The benefits of pesticides to mankind and the environment. *Crop Protection* **26**: 1337-1348.

⁶ Pimentel, D. (1997) Pest management in agriculture, in D. Pimentel (Ed.) *Techniques for Reducing Pesticide Use: Environmental and Economic Benefits*, Chichester, UK, John Wiley & Sons, pp. 51-78.

⁷ Pimentel, D. (2005) Environmental and economic costs of the application of pesticides primarily in the United States. *Environment, Development and Sustainability* **7**: 229-252.

⁸ Based on World Bank estimates: US GDP of \$13,093 bn and UK GDP \$2,412 bn in 2005: <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?page=1>

⁹ Travisi, C. M., Nijkamp, P. Vingidni, G. (2006) Pesticide risk valuation in empirical economics: a comparative approach. *Ecological Economics* **56**: 455-474.

¹⁰ WHO (2008) World Health Organisation International Bulletin: Acute pesticide poisoning: a proposed classification tool. Volume 86 [86/3/07-941814/en].

cases of acute pesticide poisoning among school children (Alarcon *et al.*, 2005) in developed countries. In 2012-2013, the UK Field Operations Directorate (FOD) investigated 45 pesticide incidents, including 15 allegations of acute ill-health. In addition, repeat pesticide exposure has also been tentatively associated with depression of reproductive parameters (decreased libido, sperm count, fertility and fecundity), birth abnormalities (cryptorchidism and decreased anogenital distance in male offspring), spontaneous abortion and increased incidence of Parkinson's disease and cancer burden (for review see Shirangi *et al.* 2010¹¹; Colborn & Carroll, 2007¹²; and Rushton *et al.*, 2012¹³; and Maele-Farby *et al.* 2012)¹⁴. An occupational epidemiology study of non-professional pesticide use in Europe (1994-2003), suggested that of 678 workers participating in the study, 378 (56%) were unaffected while 301 (44%) were believed to have been affected to some extent by pesticides; of the 301 affected the effects reported included headache (213 cases ~71%), chronic fatigue (177 cases ~59%), respiratory difficulties (146 cases ~49%), altered sense of smell (140 cases ~47%) or taste (106 cases ~35%), and periods of nausea/vomiting (90 cases ~30%). However, due to a lack of effective monitoring and surveillance, the potential for misdiagnosis by health-care providers and lack of data on non-hospitalised cases, there are no reliable estimates as to the magnitude of pesticide-related ill health (WHO, 2008).

As the UK pesticides regulator, the Health and Safety Executive's (HSE) Chemical Regulation Directorate (CRD) is responsible for ensuring that the impacts of pesticide usage are monitored and evaluated. A clear understanding of pesticide usage is required to analyse the potential human health and environmental impacts. Consequently an array of national initiatives collect information on pesticide exposure and the resulting health effects, such as the Pesticide Users Health Study (PUHS); Human Health Enquiry and Incident Survey (HHEIS); the Health and Occupational Reporting Network (THOR); UK hospital episode data; Pesticide Incidents Appraisal Panel (PIAP); and the National Poisons Information Service (NPIS). In addition, the use, manufacture and application of pesticides are governed by an array of EU regulation (see Figure E05-3). However, there is debate regarding the efficacy of the current UK monitoring and surveillance schemes in defining the extent of pesticide exposure and its health impacts (ACP, 2013). Thus, the extent to which the data collected under the auspices of the PUHS, HHEIS, THOR, PIAP and NPIS fully portrays the extent of the problem and the relationship between pesticide exposure and health, is uncertain. In review, the Advisory Committee on Pesticides (ACP, 2013) made a number of recommendations, including adoption of a yellow-card system, improvement or discontinuation of the PIAP and creation of an independent co-ordinating body, but these recommendations were not evaluated in the context of the Green Book (2011), or in terms of their logistics and practicability. Consequently, the ACP also recommended a formal cost-benefit analysis of the proposed schemes.

As noted in ACP (2013), currently collected data are not sufficient to conclusively report the ill-health effects of pesticide exposure and the lack of an overarching committee currently renders coordination and comparison between pesticide monitoring schemes, such as the PIAP and NPIS, difficult. The main purpose of PIAP is "*to provide an overview of alleged ill health attributed to pesticide exposure (as reported to and investigated by HSE) so that new issues and trends can be identified; and to inform the pesticides approval process*" by considering all reports of the HSE's Field Operations Division (FOD). In 2012-2013, there were 2 confirmed cases of pesticide poisoning, 4 likely incidents (8 affected people) and 30 alleged incidents, suggesting that the ill-health as a result of pesticide exposure may be low. However, the quality of the data collected by PIAP appears to be low (ACP, 2013). For example, information submitted for 33% of incidents was not sufficient for PIAP classification and large discrepancies are reported between schemes. Conflictingly, the NPIS received 3,785 online enquiries and 789 telephone enquiries

¹¹ Shirangi, A., Nieuwenhuijsen, M., Vienneau, D., Holman, C. D. (2010) Living near agricultural pesticide applications and the risk of adverse reproductive outcomes: a review of the literature. *Paediatric and Perinatal Epidemiology* **25**: 172-191.

¹² Colborn, T., Carroll, L. E. (2007) Pesticides, sexual development, reproduction, and fertility: Current perspective and future direction. *Human and Ecological Risk Assessment: An International Journal* **13** (5): 1078-1110.

¹³ Rushton L, Hutchings SJ, Fortunato L, Young C, Evans GS, Brown T, Bevan R, Slack R, HOLMES P, Bagga S, Cherie JW and Van Tongeren M (2012) Occupational cancer burden in Great Britain. *British Journal of Cancer*, 107, Supplement 1, S3-S7

¹⁴ Maele-Farby, G., Hoet, P., Vilain, F., Lison, D. (2012) Occupational exposure to pesticides and Parkinson's disease: a systematic review and meta-analysis of cohort studies. *Environment International* **46**: 30-43.

regarding pesticide exposure in 2013-2014, including 607 adult and 556 child patients. Health alterations were commonly associated with Permethrin (113 cases), Glyphosate (101 cases) and/or Metaldehyde (89 cases) exposure. The NPIS scheme was commended by the ACP report, whilst pitfalls of the PIAP were attributed to lack of corroborating medical information and informed consent paperwork. Thus, whilst PIAP have reported declines in pesticide associated ill-health, the NPIS scheme has identified increasing numbers of poisonings since its inception in 2004. As a result, the current understanding the pesticide associated ill-health is severely caveated. Furthermore, none of the currently available schemes enable long-term follow-up and do not provide a route to the prospective epidemiological studies required to elucidate chronic health effects.

In order for adverse effects to be robustly attributable to pesticide exposure, a plausible pathway must exist between the source (e.g. pesticide spraying) and the affected population (e.g. farm labourers or exposed bystanders). Potentially, pesticide exposure may occur via ingestion, inhalation, dermal absorption or ocular contact (WHO, 2008). The direct and indirect pesticide exposure pathways are illustrated in Figure E05-3. If using the standard toxicological assumption, that the degree of exposure is positively associated to the degree of adversity incurred, evaluating the impacts of pesticides via monitoring the health of occupationally-exposed and amenity-use individuals (i.e. direct exposure during manufacture and use in agriculture) is justified. Surveillance and monitoring schemes can be valuable in identifying the consequences of acute exposure episodes but tend to be of limited value in identifying the consequences of chronic, low-level exposures. Such consequences are better informed by structured epidemiological studies. However, due to their inherent design limitations, and the unavoidable risk of there being unrecognised (and non-adjustable) confounding factors, as well as practical constraints associating with the economic costs of such investigations, many such studies are limited in their ability to define causality. Furthermore, epidemiology studies are costly endeavours; the Avon Longitudinal Study of Parents and Children (ALSPAC) has incurred costs in excess of £42 million since its 1990 inception (Pearson, 2012)¹⁵, and an estimated £1-2 million were required to set-up the UK Biobank and EPIC-Oxford study.

3. Approach

The following sections describe our proposed methodology in chronological order, highlighting the aims and expected outcomes of each task. Our approach has been broken down into eight tasks:

- Task 0: Project inception
- Task 1: Defining the desired monitoring outputs
- Task 2: Defining the policy options (specific monitoring arrangements) and the associated impact categories
- Task 3: Literature review and synthesis
- Task 4: Stakeholder consultation
- Task 5: Analysis of the costs
- Task 6: Analysis of the maximum theoretical benefits
- Task 7: Evaluation of the policy options (including actual benefits)
- Task 8: Final reporting

The proposed methodology incorporates key elements of the analytical framework for the evaluation of central government policy, set out in the Green Book (2011), and the tasks for this study have been designed with the view to fulfilling the key evaluation stages described in the Green Book (2011).

RPA has extensive experience with health economics and the assessment of the impacts of pesticide use and regulation, such as a 2008 study for Defra's Pesticide Safety Directorate on the benefits of pesticide regulation. IEH Consulting provide authoritative expert evaluation of epidemiological and toxicological data and the associated human health risks.

3.1 Task 0: Project inception

The aim of this task is to further elaborate and agree the proposed methodology for this project.

¹⁵ Pearson, H. (2012) Coming of Age: Researchers in Britain have tracked thousands of children since their birth in the 1990's. Now the study is 21 and turning to the next generation. *Nature* **484**: 155-158.

At the outset of the project, it is proposed that a start-up meeting is organised to bring together representatives of the study team (RPA & IEH-C), Defra, HSE and other relevant public authorities, in addition to, interested members of the Advisory Group on Pesticides (AGP), in order to discuss and agree the detailed methodological approaches to be taken. This will ensure that the project is well placed to meet the requirements of the client and to ensure it is delivered on time. It is anticipated that the meeting is organised at or in close proximity to the client's offices. However, should time constraints and possible logistical issues affect the availability of key stakeholders, RPA has conference call facilities, which could be used in the absence of a face-to-face meeting. At this meeting, the project team will present the proposed approach and methodology for discussion. Specifically, the start-up meeting will provide an opportunity to discuss:

- Defra's objectives, the scope and depth of analysis and defining the desired outputs of monitoring;
- the assumptions underpinning the baseline (do-minimum) scenario;
- the most appropriate methodology for the evaluation of the options;
- identification of data sources known to Defra (including unpublished data and information);
- a preliminary list of organisations and experts to be consulted under Task 4;
- frequency of regular updates provided by RPA/IEH-C to the client (e.g. monthly, used for interim conference call);
- the key deliverables and timing of their submission; and
- the key risks associated with the project.

Outputs: Minutes of the start-up meeting and a brief summary (max. 10 pages) of the main points agreed at the meeting with regard to the context, methodology and deliverables for the project.

3.2 Task 1: Defining the desired monitoring outputs

Task 1 aims to identify the desired (ideal and feasible) and minimum pesticide incident reporting outputs.

Building upon (and updating) the information in AGP (2013), this task will first define an idealistic data collection strategy, to be followed by the definition of a more narrow set of data that is also feasible to collect without incurring excessive costs. The resulting output will a list of the monitoring outputs that will be targeted by the policy options developed under Task 2, applying MoSCoW (Must be, Should have, Could have and Would have) identification techniques. These will be, to the extent possible, defined as standardised data categories to ensure consistency of data collection across the different schemes.

Effective monitoring schemes appropriately balance the ease of reporting with the collection of sufficient detail for analysis, in which standard datasets enable effective reporting, regardless of the source. Importantly, it is essential to recognise that the more bureaucratic the process of reporting pesticide exposures and symptoms is, the less likely individuals are to participate. Hence, increasing pesticide monitoring efficacy is not as simple as just demanding more data from the currently available schemes. Furthermore, it is assumed that many potential minor symptoms of occupational pesticide exposure (e.g. headache, dizziness or nausea) currently go unreported or are misassigned to other causes. Such indicators could provide useful exposure information in the evaluation of subchronic toxicity (i.e. the effects of long-term low dose pesticide exposure). Ideally, a monitoring scheme should report the date, time, pesticide brand (single/co-exposure), signs and symptoms, clinical diagnosis, age, sex, lifestyle factors (i.e. smoker/non-smoker) and source and route of exposure, with quantified pesticide concentrations. An ideal monitoring scheme would enable high-risk brands and formulations to be identified, informing their regulation and usage. In addition, exposed individuals should have the option to enrol in prospective epidemiology studies.

However, these idealistic outputs must be balanced against feasibility. As such, the final output of this task will be a list of desired monitoring outputs that takes feasibility and cost considerations into account. Identification of the desired (MoSCoW) and minimum monitoring outputs will be guided by input from senior members of IEH-C staff. In particular, IEH-C experts will provide expert epidemiology and toxicology advice regarding the levels of data required to draw meaningful conclusions (i.e. to be useful), thus identifying data gaps that hinder the use of the monitoring data to inform policy. We will give consideration to applying the MoSCoW prioritisation framework to differentiate between the information that the desired arrangements **Must**, **Should**, **Could**, and **Won't deliver** (i.e. MoSCoW). Although much of this work will be carried out in-house, it is anticipated that discussions with the client and stakeholder consultation (see Task 4) will be used to validate the draft inventory and provide further relevant information.

Furthermore, alternative sources of data on pesticide exposure shall be evaluated. The Environment Agency (EA) determines the concentrations of 184 pesticides in 370,000 samples of freshwater, groundwater, marine water and sewage and trade effluent at 3,287 sites, at a cost of £4 million. These evaluations of environmental contamination, are not currently linked to monitoring and surveillance efforts, however, may provide useful exposure information²⁶.

Outputs: Inventory of the desired (ideal and feasible) pesticide incident monitoring outputs.

3.3 Task 2: Defining the policy options and the most relevant impact categories

The aim of this task is to define the details of the monitoring arrangements proposed in ACP (2013). This task will comprise two subtasks: defining the policy options (Subtask 2a) and determining the most relevant impact categories (Subtask 2b).

Subtask 2a: Defining the policy options

Qualitative and semi-quantitative evaluation approaches typically require well-defined policy options. Thus, evaluation of insufficiently defined policy options is less reliable, in particular where intensive quantification is attempted. A broad outline of the policy options to be considered by the project is provided in the specification. However, in order to facilitate data collection and ensure a robust assessment of the costs and benefits, it is expected that further work on defining the details of the policy options would be beneficial. It is, therefore, proposed that, prior to starting data collection and analysis (Tasks 3-7), a detailed overview of the structures and activities that would be established or discontinued under each of the policy options is compiled. For example, where the specifications suggest that the new arrangements could involve "putting additional resources into PIAP", it would be important to define, at least to some extent, the additional activities that PIAP would be expected to undertake. For example, following up on reported incidents may require repeated telephone or written contact with members of the public and workers, carried out by a trained member of PIAP staff, entering the collected information into a database and publishing aggregated statistics on an regular basis. Similarly, it will be necessary to further define the scope and nature of the proposed Yellow Card scheme, as well as the specific actions required to implement it. In addition, should this scheme be complemented by awareness raising measures, it would be useful to specify the responsible stakeholders, e.g. specify whether pesticide manufacturers and distributors would be required to alert users. Similarly, where the specifications propose that a central, independent, co-ordinating body is set up, the precise relationship of this body to the NPS would need to be clearly defined.

This task will also involve the development of the baseline scenario (referred to as the 'do minimum option' in the Green Book, 2011), which relates to a scenario where government takes no or the minimum amount of action beyond what it undertakes currently, whilst taking into account expected developments at the EU level. However, there appears to be considerable uncertainty with regard to the future-proofness of current pesticide monitoring schemes. For example, the fact that the NPS is presently supported through research funding, complicates predictions about its future activities. In the absence of Defra's specific objectives, it is proposed that the baseline scenario assumes that the status quo is maintained and the current level of monitoring remains unchanged. The advantage of this is that it negates the need for arbitrary assumptions regarding uncertain developments. The key drawback is that the baseline scenario may ignore likely future developments and, as a result, overestimate or underestimate the benefits and costs of potential policy action. Using the example of the NPS, a baseline scenario assuming that its activities continue at the current level would likely underestimate the benefits from putting the NPS on a permanent or formal footing (as suggested in the specification) and thus securing long-term funding for its work. In addition to the baseline, the following policy options will be considered:

- Option 1: Establishing and running the co-ordinating body, putting the NPS on a permanent footing, putting additional resource into PIAP and continuing the CRD approval holder's survey; and
- Option 2: Establishing and running the co-ordinating body, putting the NPS on a formal footing and supplementing it with development of a Yellow Card type Scheme.

This task will also involve consideration of alternative options that may produce broadly equivalent outcomes and other combinations of the measures proposed in the specification. A brief update of the information given in the ACP (2013) report is advised, to reflect new information that has become available since the publication of this report.

²⁶ PAN (2011) Keeping pesticides out of water. Pesticides News No 51, p8-9

- one-off and running costs (including fixed, variable, semi-variable, and semi-fixed (or mixed) costs);
- potential losses in agricultural production, due to reduced pesticide use and/or increased administration;
- the benefits of reduced occupational exposure and human health improvements (QALYs and value of prevented injury);
- indirect benefits in terms of environmental gains; and,
- public health benefits via reduced indirect pesticide exposure.

Outputs: List of policy options to be assessed under subsequent tasks, defined in terms of specific actions that can be costed and a list of the types of costs and benefits that are expected to warrant investigation

3.4 Task 3: Literature review

The literature review aims to identify the consequences of pesticide exposure, in terms of human health, clinical diagnosis, economic and governance costs, whilst informing the methodological approach to and data required for the evaluation of implementing new monitoring and surveillance schemes

Desk-based research will draw upon various sources of information, including online publications, public authority resources, industry reports, as well as academic research journals and databases. In conjunction with consultation (Task 4), the literature will support the identification and clarification of the costs and benefits associated with the policy options assessed under Tasks 5-7. Consisting of four dimensions, literature review will focus on:

the background information and context, such as the ill-health effects attributed to pesticide exposure and the affiliated costs of NHS treatment and reduced quality of life (QALY), in addition to the costs of Irresponsible economic activity;

the costs of running pesticide monitoring and surveillance schemes, via costs of comparable schemes, both locally and internationally; and

developing initial lists of potential consultees for Task 4;

evaluation of the policy options, including the identification of the benefits of effective information collection, specifically economic modelling based on Value-of-Information and Decision Theory approaches.

A key aspect of the study that is vital to evaluation of the policy options (Task 7) is a clear understanding of the potential benefits of improved pesticide monitoring (Task 6), balanced against the costs of the implementation of the schemes (Task 5). To ensure a comprehensive approach to the identification of the relevant literature, a comprehensive search strategy will be adopted to identify published literature; using search engines such as Scopus, Google Scholar, PubMed, EMBASE, Research Papers in Economics (RePEc), STOR and Social Science Research Network (SSRN), where appropriate. Table E05-2 details the preliminary search strategies to identify relevant literature. Screening of the titles and abstracts retrieved ($n=444$) identified 110 peer-reviewed relevant journal articles, available for inclusion. Reflective of a "review of reviews" methodology, the 110 papers identified will form the basis of further literature-review strategy, identifying relevant original research, which may be used in the detailed analysis.

Whilst the majority of non-UK schemes assessed by the ACP were from English-speaking countries, the German Ämtliche Mischungen scheme was included. Fortunately, RPA has a number of bilingual staff, together capable of covering almost one-half of the EU28 languages. Thus, RPA has the capacity to review EU pesticide monitoring reports from Member States published in their entirety in their mother tongue, ensuring accurate translation of findings.

Table E05-2: Search terms for identification of relevant literature evidence		
Search term	Results	Total*
TITLE:ABS:KEY (pesticide) AND TITLE:ABS:KEY (epidemiology) OR TITLE:ABS:KEY (exposure) AND TITLE:ABS:KEY (uk)	Scopus	67
TITLE:ABS:KEY (pesticide) AND TITLE:ABS:KEY (epidemiology) OR TITLE:ABS:KEY (exposure) AND TITLE:ABS:KEY (topofrank, "v")	Scopus**	444
TITLE:ABS:KEY (value of information) OR TITLE:ABS:KEY (value of information) AND TITLE:ABS:KEY (environmental*) OR TITLE:ABS:KEY (health, economic*) AND ((monitor*) AND (pesticide))	Scopus**	48
TITLE:ABS:KEY (Bayesian decision theory) AND TITLE:ABS:KEY (environmental economics) OR TITLE:ABS:KEY (health, economic)	Scopus**	40
TITLE:ABS:KEY (pesticide) AND TITLE:ABS:KEY (health) AND TITLE:ABS:KEY (economic*) AND ((monitor*)	Scopus**	370
*Number of hits recorded on 5.02.2015. ** https://www.scopus.com		

Useful insights may also be gleaned from the US experience, which is characterised by a high degree of decentralisation, pesticide monitoring being a State-level responsibility and thus subject to significant differences across the US (Ballard & Calvert, 2001)¹⁹. The fact that some State schemes undertake follow-up activities, whilst others do not, offers a unique opportunity to explore the differences between the costs of the different arrangements.

Outputs: This task will identify the literature and datasets that will inform the analysis under Tasks 5 and 6, and help refine the methodological approach to Task 7. In addition, Task 3 will assist with the identification of stakeholders to be consulted.

3.5 Task 4: Stakeholder consultation

Stakeholder consultation aims to collect original qualitative information, regarding the practical feasibility of implementing new pesticide monitoring schemes (Tasks 5 and 6) to support the evaluation of the policy options (Task 7).

Task 4 comprises identification of and consultation with relevant stakeholders, the details of which will be gained from the start-up meeting and literature. It is expected that this task will provide the bulk of data regarding the qualitative costs of implementing the new pesticide monitoring and surveillance arrangements. It is anticipated that the National Farmers Union (NFU) will be contacted to gauge the perspective of agricultural users with regard to monitoring schemes, in addition to reviewing the perspective of the current schemes data requirements and pesticide outreach. Leading UK manufacturers, such as Syngenta, will also be approached to assess the protocols regarding occupational exposure monitoring, in addition to their perspective on the suggested changes to the UK monitoring system. Stakeholder consultation will also consider the logistics of implementing any new scheme, identifying areas where technological advances may aid the 'futureproofness' of the scheme.

Subtask 4a: Identification of stakeholders for engagement

Stakeholders identified through the literature (Task 3), in addition to groups identified via liaising with Defra, will be approached. It is anticipated that representatives of the relevant government departments (including the existing monitoring schemes), main industry associations, health care practitioners, key national level NGOs and professional associations, will be included. Stakeholders may be identified via: the CPA²¹, BCFA²², NFU²³, NAAC²⁴, BCFA²⁵, NSALG²⁶, Royal College of Physicians and PAN UK.

This task involves determining the names and contact details of the relevant people within each organisation. The time required for this could vary from a few days to a few weeks, depending on the ease of identifying the correct person (particularly in a large organisation) and the speed of response of the organisation. However, having details of an appropriate individual is likely to make the task of consultation itself far more efficient and effective.

Subtask 4b: Semi-structured stakeholder interviews and email communication

Stakeholder consultation could involve the use of questions circulated by email, telephone calls and/or face-to-face interviews. Our overall approach to consultation is intended to be flexible and multi-dimensional (involving a mixture of approaches) and iterative, with the main aim of obtaining a high number of useful responses. The means of approaching stakeholders will reflect differences between the main stakeholder groups. For example, it could be decided that while a representative sample of farmers may be contacted via the NFU, other stakeholders will need to be approached individually. Whilst key questions will be explored in all communication with stakeholders, we will also consider the possibility of elaborating case studies on issues of particular relevance, based on targeted communication with small samples of stakeholders.

¹⁹ Ballard & Calvert (2001): Surveillance of acute occupational pesticide-related illness and injury: the US experience, available at <http://www.ncbi.nlm.nih.gov/pubmed/11750274>

²¹ The Crop Protection Association (CPA): <http://www.cropprotection.org.uk>

²² British Crop Protection Council (BCPC): <http://www.bcpcc.org>

²³ National Farmers Union (NFU): <http://www.nfuonline.com>

²⁴ National Association of Agricultural Contractors (NAAC): <http://www.naac.co.uk>

²⁵ British Pest Control Association (BCPA): <http://www.bcpa.org.uk>

²⁶ The National Allotment Society (NSALG): www.nsalg.org.uk

Outputs: Task 4 is expected to provide the bulk of the data for the analysis under. A Progress Note (max. 20 pages) will be submitted to the client on conclusion of Task 4. It will set out the progress achieved so far, including any preliminary findings, highlight any challenges encountered and propose solutions to address them. It will also set out our approach to the remaining tasks, in particular should it need to be adjusted in light of any of the evidence collected so far.

3.6 Task 5: Analysis of the costs

The objective of this task is to quantify the costs of the different policy options, i.e. the costs of implementing the proposed monitoring arrangements.

The task will take into account the range of cost categories compiled under Subtask 2b (and any additional cost categories identified under subsequent tasks) and utilise the information and data collected under Tasks 3 and 4. The relevant costs will be monetised to the greatest degree possible, and expressed as Net Present Costs (NPC – the cost of each option, less the cost that would be incurred under the baseline scenario). An assessment timeframe of 15-20 years is proposed, in order to compare the costs with the potential long-term benefits, such as decreased incidence of Parkinson's disease and birth abnormalities (see Tasks 6 and 7 below for our proposed approach to the assessment of the benefits). While the direct administrative costs associated with the different monitoring schemes are expected to be relatively easy to quantify, indirect costs (such as the costs to manufacturers, farmers and the UK economy at large that may arise if measures to reduce the ill-health effects of pesticide exposure affected pesticide usage patterns) may be more difficult to measure and, as a result, may need to be assessed qualitatively.

RPA has extensive experience of assessing the cost burden associated with different information provision requirements and, if needed, would be able to use previous findings of comparable activities to derive cost estimates for this study, such as the time required to complete a one-page questionnaire requesting readily available information, etc. As such, should Tasks 3 and 4 not provide sufficient data for direct cost categories, RPA can draw upon its historical regulatory economics database of generic unit costs, of different administrative actions devised through the Standard Cost Model (SCM) and similar approaches. Caution will be exercised to ensure that this takes into account the key differences between the conditions under which these unit costs were derived and the conditions under which proposed pesticide monitoring schemes would be implemented. Examples of such differences include cost-relevant features of different civil service organisations, and where estimates from other countries are applied, differences in agricultural practices, structural characteristics of the agricultural sector (average farm, company sizes, etc), horticultural customs and practices, etc.

The NPC values will be risk-adjusted to internalise uncertainty about key factors such as the cost of inputs or changes to key assumptions underpinning estimates. Should uncertainty be so large that it cannot be internalised, we will provide a central estimate, together with a maximum and minimum plausible valuation. We will clearly specify what proportion of these costs would be borne by the different stakeholder groups, including the government, pesticide manufacturers, professional applicators, non-professional users, and public and private healthcare providers. Where there may be other policy options which could deliver the required benefits at a similar cost, but may have some specific distributional effects which increase/decrease the costs for certain stakeholders (e.g. SMEs), these will be identified and assessed.

Outputs: Net Present Cost (NPC) values for the different policy options and assessment of distributional effects, sensitivity analysis to assess key uncertainties.

3.7 Task 6: Analysis of the maximum theoretical benefits

Task 6 will assist with the identification of the potential benefits of increased pesticide monitoring and surveillance via evaluation of the maximum theoretical benefits that could be accrued as a result of actions to reduce pesticide exposure. The specific value of the benefits that can be expected to accrue from each of the policy options will be worked out under Task 7.

The assessment of the benefits of effective pesticide monitoring present significant challenges to cost-benefit analyses (CBA), as it demands quantitative evaluation of the value of information. With regard to the implementation of new pesticide monitoring and surveillance schemes, with the exception of increased awareness and compliance, the benefits are dependent on subsequent policy action to reduce pesticide exposure, which may be implemented, upon the collection of monitoring data with lower margins of uncertainty (i.e. more conclusive). This task will therefore involve estimating the maximum theoretical benefits that could be accrued if subsequent policy action (risk

reduction measures) were successful in eliminating all pesticide-induced ill health. Under task 7, this information will be used to estimate the specific benefits of risk reduction measures that could be triggered by the monitoring arrangements (policy options) considered in this study.

In order to analyse the maximum theoretical benefits, the literature will be reviewed to identify the health problems associated with pesticide exposure. The list of health effects will be weighted according to their biological plausibility (i.e. the weight of evidence WoE). The costs associated with these health effects will be elucidated, defining the baseline and calculating pesticide attributable fractions. The cumulative cost shall provide a crude estimation of the potential monetary savings, which might be possible, upon reducing exposure to pesticides. As detailed under Task 1, a range of health outcomes have been proposed as being attributed to acute or chronic pesticide exposure. However, the non-specific nature of at least some of the symptoms of acute exposure, in addition to the limitations of epidemiology studies in defining causality even to chronic outcomes, complicates defining the severity of pesticide associated ill health.

As an example of a means to monetise potential health costs/benefits, the 2012-2013 NHS trust and foundation trust reference costs will be consulted. For example, Poison Management Drugs (Band 1 service code X0522) averaged £872 per unit prescription, with a lower quartile unit of £124 and upper quartile unit cost of £709. Comparable figures are available for all ill health monitored in the UK. Health effects, of both acute and long-term repeat-dose pesticide exposure identified in the literature (Task 3) will be tabulated and weighted on the basis of the strength of the association. An attributable fraction of the incidents of these diseases will then be attributed to pesticide exposure, enabling a crude estimation of the potential health care cost, calculated under variable unit cost parameters. Where available, Quality Adjusted Life Years (QALY) will be utilised and monetised in the analysis. Elucidating the potential impacts of pesticides on health provides information on the baseline of ill health currently attributed pesticide exposure, enabling an estimation of the potential cost of uncertainty.

Outputs: Estimated monetary value (or a range) of the theoretical benefits from preventing pesticide-induced ill health.

1.8 Task 7: Evaluation of the policy options

The tender specifications recommend evaluation by means of a Cost/Benefit Analysis (CBA), thus indicating that both the costs and benefits of the policy options should be monetised and compared. However, monitoring outputs have no intrinsic value and produce tangible benefits only when better information triggers the implementation of specific risk reduction measures (additional to those currently in place). Thus, the quantification of the benefits of better information is extremely difficult without knowing what risk reduction measures would be triggered by new information. Consequently, it is suggested that, in collaboration with the client, the study team reviews alternative analytical approaches permitted by the Green Book (2011), such as Cost-Effectiveness Analysis, to determine whether they may be more appropriate. The choice of most appropriate tool will be made jointly by the client and the consultants at the start-up meeting (Task 0). It is expected that this decision will primarily reflect the desired robustness of the conclusions of this project and the needs of the subsequent policy development process.

For the purposes of this proposal, it is assumed that a CBA based method will be elaborated. Our proposed CBA methodology incorporates elements of the Value of Information (VoI) approach, which has been widely applied in decision making across a range of sectors, including to inform decisions about the allocation of funding for healthcare and environmental research (e.g. Koerkamp, 2006²⁷; Jeffrey & Powell, 2013²⁸; Thompson & Evans, 1997²⁹; Maxwell, 2015³⁰; Ramos et al., 2013³¹; Struhl, 2014³²; Kainer, 2001³³). VoI is directly relevant to assessing policy options

²⁷ B. Groot Koerkamp et al. (2006) Identifying key parameters in cost-effectiveness analysis using value of information: a comparison of methods. *Health Economics* 15: 383-392.

²⁸ S. Jeffrey and D. Powell (2013) Economic of Prioritising Environmental Research: An Expected Value of Partial Perfect Information (EVPPPI) Framework. Working Paper 1303, School of Agricultural and Resource Economics, University of Western Australia, Crawley, Australia.

²⁹ K. Thompson and J. Evans (1997) The value of improved Malaria Exposure Information for Panchoselhyene (Peru): A Case Study for Dry Cleaners. *Risk Analysis* 17: 253-271.

³⁰ S. Maxwell et al. (2015) How much is new information worth? Evaluating the financial benefit of reducing management uncertainty. *Journal of Applied Ecology* 52: 15-20.

³¹ J. Ramos et al. (2013) The Role of Value of Information Analysis in a Health Care Research Priority Setting: A Theoretical Case Study. *Medical Decision Making*, May 2013: 423-489.

involving whether or not to increase monitoring activities. It also incorporates Monte Carlo simulation to explore the range of outcomes given the range of uncertainties that are inherent.

The primary goal of a CBA is to derive a Net Present Value (i.e. monetised benefits, net of any costs) for each policy option, thereby showing whether an action is justified on cost-benefit grounds, and determining which policy option can be expected to deliver the greatest benefit. However, the type and scale of the risk reduction measures that could be triggered by improved pesticide monitoring is unknown and, consequently, the assessment of the benefits of the proposed monitoring arrangements is likely to be uncertain. The range of possible risk reduction measures is potentially very large and includes, for example, the publication of pesticide poisoning data, awareness raising campaigns, withdrawal of specific pesticide formulations from the market, banning unsafe application practices, requiring/recommending the use of PPE, etc. Each of these measures is expected to have a different cost and benefit profile, and the relevant costs may include wide-ranging but diffuse impacts that are difficult to quantify, such as reduced agricultural output. It is also possible that better information may result in no additional risk reduction measures, or even lead to the relevant authorities relaxing existing requirements. The range of potential risk mitigation measures available to policy makers is illustrated below, drawing on the UK National Action Plan (NAP), and highlighting the additional risk reduction measures that could be introduced should improvements to monitoring schemes lead to an increased number of pesticide poisoning incidents being identified.

Table 4: UK Pesticide Action Plan (NAP) for Pesticides Policy, 2017-2020		
Measure Area	Current Schemes	Additional Measures
Training of users, distribution and advice (Statutory training, non-statutory initiatives)	<ul style="list-style-type: none"> 20,000 professional users participating in on-going training programmes (accounting for 80% of application) SAIS Professional Register Red Tractor Assurance Scheme City and Guilds (and other) based technical operator training National Register of Sprayer Operators (NRSO) National Amenity Spray Operator Records (NASOR) Train Operators to Promote Best Practice and Sustainability (TOPPS), which was initiated by the European Crop Protection Association (ECPA) 	<ul style="list-style-type: none"> Personal monitoring equipment Registered occupational exposure logs (i.e. from spraying and spraying) Increased PPE requirements Applicator assessment schemes (i.e. increased CoSHH training)
Label of Pesticides (Professional and non-professional)	<ul style="list-style-type: none"> EU REACH Regulations EU Biocides Regulations EU Plant Protection Products (PPP) Sustainable Use (SUS) Regulations 	<ul style="list-style-type: none"> Pesticide tax
Information and awareness raising (Professional applicators and non-professional use)	<ul style="list-style-type: none"> The Crop Protection Association 'NOSSE' campaign The Catchment Sensitive Farming Programme The Amenity Forum The Campaign for the Natural Environment Get Pollenative 	<ul style="list-style-type: none"> Increase CLP requirements Provide pesticide information sheets on purchase Local affected area alerts and awareness programmes
Inspection of applicator equipment (Professional applicators)	<ul style="list-style-type: none"> 14,000 inspections carried out each year National Sprayer Testing Scheme (NTS) The Carriage of dangerous Goods and Use of Transportable Pressure Equipment Regulations 	<ul style="list-style-type: none"> Increase NTS requirements and frequency, under PPP Sustainable Use Regulations
Measures to protect the aquatic environment and drinking water (Reduce exposure)	<ul style="list-style-type: none"> Water Framework Directive (WFD) The Single Farm Payment and Environmental Stewardship Scheme The Environmental Protection Act 1990 The Hazardous Waste Regulations 2005 	<ul style="list-style-type: none"> Introduce storage limits and specifications requirements (WFD)
Poisoning (Monitoring and non-monitored incidents)	<ul style="list-style-type: none"> The EU Regulation on Pesticide Statistics (Regulation 1181/2007) Pesticide User Health Survey (PUHS, 2015) Human Health Inquiry and Incident Survey (HHIIS) via pesticide registered holders The Health and Occupancy Reporting Network (THORN) UK Hospital Episode Data via HES Pesticide Incident Reporting Panel (PIRP) National Poisons Information Service Environment Agency Bio-monitoring 	<ul style="list-style-type: none"> Increase data requirements of policy indicators, such as the monitoring outputs

²⁹ G. Strub (2014) Value of information analysis with structural reliability methods. *Structural Safety* 40: 75–85

³⁰ J. Karnon (2001) Planning the efficient allocation of research funds: an adapted application of a non-parametric Bayesian value of information analysis. *Health Policy* 51: 329–347

The above table suggests that changes to data collection systems can trigger any of a plethora of policy responses, each of which is associated with a different cost/benefit payoff. The starting point for this analysis will take the form of asking simple 'what if' questions and creating decision trees that set out a range of possible outcomes that may be triggered by changes to pesticide incident reporting schemes. When postulating these scenarios, we will take into account the following factors:

- **number and severity of incidents in reported data** (a large number of incidents makes the adoption of mitigation measures more likely);
- **credibility of monitoring** (increased credibility makes the adoption of mitigation measures more likely); and
- **other factors determining the specifics of the policy response** (for example, cost of implementing additional risk reduction measures, public support or resistance to specific mitigation measures, political considerations).

The work will also involve predicting the benefits that these risk reduction measures could deliver, drawing on the analysis carried out under Task 6 (estimation of the maximum theoretical benefits) and expert opinion collected under Task 4 (consultation), and assigning probabilities to each of the key factors that are expected to have a bearing on decisions regarding additional risk reduction measures (e.g. number and severity of pesticide poisoning cases, credibility of the data, ease of action, etc.). Building on this analysis, the Vol approach will be applied. Vol typically seeks to quantify the Expected Value of Perfect Information (EVPI), or Expected Value of Partial Perfect Information (EVPPI), and compare it with the expected cost of obtaining that additional information. The EVPI is defined as follows:

$$EVPI = \text{Expected payoff under conditions of certainty} - \text{Expected payoff under conditions of uncertainty}$$

The Vol is linked to its ability to reduce uncertainty and through this trigger the implementation of additional risk reduction/mitigation measures (Baker, 1981)³⁴. Newly acquired information thus allows the probabilities of the expected policy outcomes under the Base Case to be updated, possibly altering the most likely course of policy action as well as reducing variation in Base Case probability distributions (Karnon, 2001). This information is then compared with the costs of the additional data collection; where the costs exceed the EVPI, the additional data collection/monitoring is not justified (Koerkamp, 2006) and vice versa where the EVPI exceeds the costs. Variations in outcome (in terms of both cost and benefit) caused by different probabilities can be explored using Monte Carlo simulation.

Subtask 7.2: Proposed approach to carrying out a Cost/Benefit Analysis

It is proposed that the CBA relies on several methods to account for uncertainty over the risk reduction/mitigation measures that may be adopted. These include a) deriving a central NPV estimate that internalises known risks and uncertainties, b) building a number of scenarios representing different combinations of risk reduction approaches, and c) calculating switching points to show how effective risk reduction would have to be to achieve a positive NPV. The key advantage of using multiple analytical approaches is that they address uncertainty in different ways, thus enhancing the overall reliability of the analysis.

A: Risk-adjusted central estimate: This will involve calculating NPVs for the Base Case and the policy options, drawing on cost and benefit calculations carried out under Tasks 5 and 6. A central estimate of the potential benefits will be derived by predicting the most likely scenario using Monte Carlo simulation of possible outcomes to arrive at a central estimate. This will be informed by the study team's expertise, a number of assumptions (where necessary), discussions with the client and consultation with experts (Task 4). Whenever assumptions are made, these (and any evidence underpinning them) will be clearly explained. Known risks and uncertainties will be internalised into the central estimate. As well as providing a central estimate, the Monte Carlo simulation can be used to provide a sensitivity analysis to show how changes to key assumptions impact on the final headline figure..

B: Scenario analysis: Scenarios are a powerful tool for evaluating how the different options may be affected by uncertainty. In cases where there is a large number of highly uncertain variables, the advantages of scenario analysis is that it allows these variables to be modelled in a single framework, e.g. through the use of discrete probabilities and/or Monte Carlo analysis. In addition, the results are easily auditable and can be adjusted by varying key assumptions and probabilities.

³⁴

Baker A J (1981) *Business Decision Making*. Croom Helm, London

It is proposed that, in line with the Val approach, decision trees are constructed for the Base Case and the two policy options, setting out the possible policy actions (risk mitigation measures), their payoffs, and the probabilities associated with the key factors that are expected to inform decisions on specific risk mitigation measures. The payoffs and probabilities in each decision tree will be derived through expert elicitation (Task 4) or will be subject to Monte Carlo analysis based on distributions suggested by experts. This will include consideration of which agencies would benefit from additional data and would lead on possible follow-up policy action. This will enable us to calculate and compare the total payoffs from the Base Case and each policy option. These estimates will then be compared with the costs to derive NPVs for the different options. The Value of Information (VoI) will be calculated by comparing the net benefits that would be accrued under Options 1 and 2 with the Base Case scenario, where this is the value from reducing uncertainty on the payoffs from having better information for risk management purposes. An example decision tree is provided in Figure E05-1 (using hypothetical risk mitigation measures and probabilities). The overall payoff will be calculated by means of multiplying the payoffs from each mitigation measure (the first right hand column in Figure E05-1) by the probabilities of them occurring and summing up all of the probability-adjusted payoffs to derive the overall payoff for the Base Case and each policy option. Different outcomes can also be explored using Monte Carlo simulation.

The key differences between the Base Case and the policy options will be the “revised” probabilities of the specific risk mitigation measures being implemented under the policy options and hence of the associated cost and benefit payoffs. The Base Case assumptions will relate to what are termed the “prior” probabilities in Bayesian terms, with those for the policy options reflecting “posterior” probabilities. Revisions to the probability distributions will reflect both the increased likelihood that additional risk reduction measures may be implemented, should the number of reported incidents increase, and the reduced uncertainty surrounding the reported data (and RPA staff have applied this type of approach in the past). The relevant probabilities will be derived by means of expert elicitation (Task 4). This will require us to derive discrete values where expert opinion defines a wide range of possible values for a parameter; in such cases, a probability distribution can be defined to indicate the likelihood of a given value being correct. Therefore, discrete values will be used even where different experts provide us with a range of opinions. Using a Monte Carlo based approach, sensitivity analysis will be carried out by systematically varying the probabilities attached to a series of discrete values for an uncertain variable and determining the effect this has on the predicted outcome.

C. Switching points: The third proposed approach involves calculating switching points (i.e. threshold values) that indicate how effective risk mitigation measures (i.e. actions to reduce ill-health effects of pesticide exposure) would have to be for the NPV of each policy option to be positive. This will provide the client with an indication of the level of health-related benefits that would be required to offset the costs incurred as a result of each of the policy options. This will be expressed as a percentage of the maximum theoretical benefits, i.e. a percentage of the total burden associated with pesticide exposure calculated under Task E. Although calculating a switching point does not, in itself, provide a conclusion on whether the relevant option should be implemented, it provides a useful indication of how much subsequent risk reduction would be required in order to justify the costs of increased information collection. A switching point of, for example, 5% indicates that it would be significantly easier to adopt measures that offset information collection costs than a switching point of, for example, 50%. A further advantage of this approach is that it allows a clear comparison (and ranking) of the different policy options.

Outputs: Evaluation and comparison of the policy options, enabling the client to reach an evidence-based conclusion

3.9 Task 3: Final reporting

The Draft Final Report (accompanied by a Draft Executive Summary) will be submitted to the client for comments before finalising. The DFR will be submitted at the latest one month before the conclusion of the contract to give the client sufficient time to comment on the draft findings, and for the consultants to incorporate any comments and suggestions that the client may have. Although not required in the specifications, we would be happy to present and discuss the DFR at a meeting. The Final Report will be structured in a way that it provides a clear evidence base to inform subsequent action. On agreement with the client, RPA will publish this report on its website and provide links to it through our Twitter and LinkedIn accounts.

Figure E99-1: Decision Tree of Pesticide Monitoring Cost-Benefit Analysis

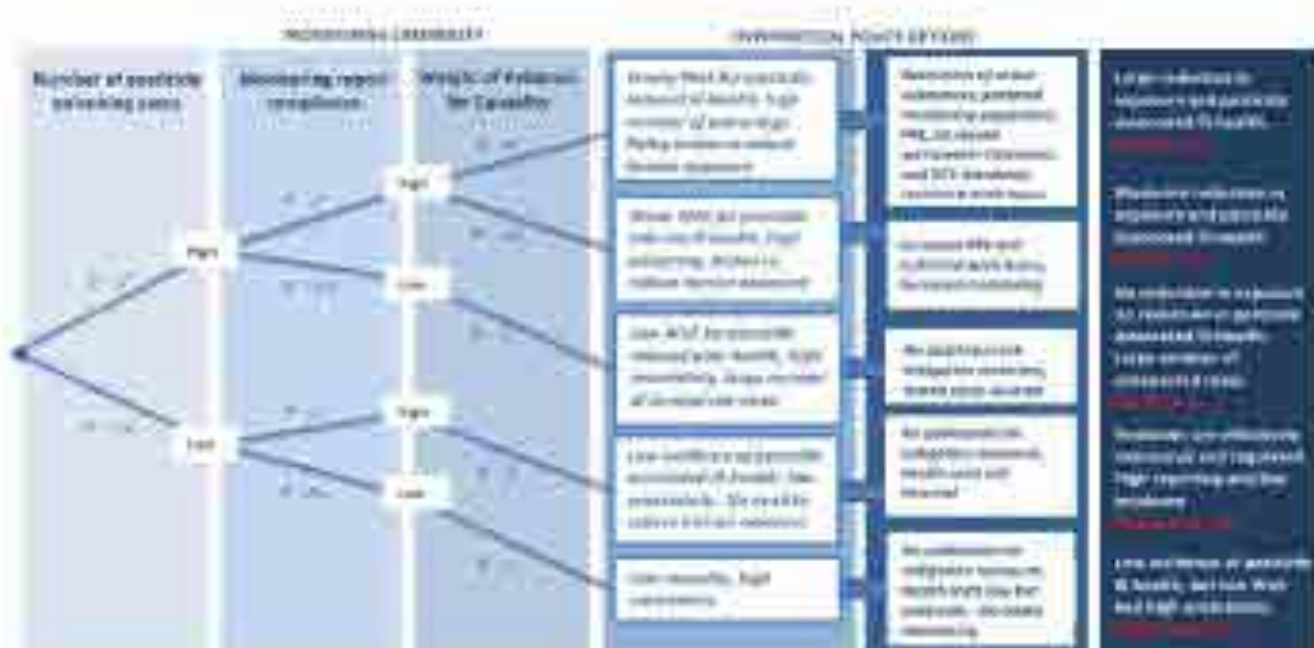


Figure S55.2 Overview of approach via the tests, outputs and key stuff



The degree and severity of pesticide exposure is linked to the proximity and risk management of the source (i.e. manufacture or agricultural and non-professional application)



E06 Delivery Plan

The delivery plan has been designed to ensure that the project is delivered on time and to budget. An overview of the key tasks and milestones is provided below.

Project timetable

A summary of the milestones is given below. For illustrative purposes, a contract start date of 1 April 2015 has been assumed with a kick-off meeting date of 7th April 2015. Clearly, the timetable could move forwards or backwards depending on the actual contract start date.

Table E06-2: Summary of key milestones		
Milestone	Target Date (weeks/months from contract start)	Illustrative Timetable (in 15 Sept. 2015)
Contract signature	0	1 April 2015
Start-up meeting	within 1 week	7 April 2015
Minutes of the meeting and summary of points agreed	within 2 weeks	14 April 2015
Inventory of desired monitoring outputs (Task 1)	within 1.5 months	15 May 2015
List of policy options (Task 2)	within 2 months	29 May 2015
Progress note (max. 20 pages)	within 4 months	31 July 2015
Interim meeting/conference call	within 4.5 months	14 August 2015
Draft Final Report and Meeting	within 6 months	30 September 2015
Final Report	within 7 months	30 October 2015

The Gantt chart in Figure E06-1 at the end of this document shows the timing of the key tasks and sub-tasks for this project. The work programme has been designed to ensure that sufficient time is allowed for the execution of the tasks, and particularly those that involve time-consuming information collection activities. Figure E06-2 illustrates the development of the project approach, team members assigned to individual tasks and task outputs.

Contingency plan

BPA and our partners maintain a good reputation for high quality work across a wide range of clients. To assist the project team in ensuring quality across all the inputs and outputs from the project, we are going to follow a set of written procedures, prepared in accordance with BS EN ISO 9001, which all have an impact on our quality of work and efficiency of operation and have been successfully used in practice. This involves a formalised (but flexible) approach to project management, including contingency planning for the event of unforeseen circumstances that may impact on the work programme.

Although the team for this project consists of only seven members of staff, we believe that it is important to establish clear lines of responsibility and communication amongst all team members and between the project team and the client, a clear programme against which deliverables can be managed, and a consistent approach to validation and verification of the project inputs and outputs. See Figure E06-3 for an illustration of established lines of responsibility and communication.

Adherence to this plan will be monitored on an ongoing basis and the client will be provided with monthly email (or telephone) updates, clearly identifying any delays and other issues, as well as the proposed steps to address them. In this manner, we will ensure that we keep abreast of any emerging issues and remain flexible, whilst delivering the key outputs on time and to the client's satisfaction. Additionally, regular communications within the team (including regular meetings between the Project Director, Project Manager and key team members) will provide early warnings of potential delays and will enable mitigation actions to be taken.

BPA and EHC have robust procedures in place for managing any potential issues relating to staff availability. The proposed project team has sufficient overlap of areas of expertise to overcome any unforeseeable staff absences (e.g. due to ill-health). In addition, BPA has 28 members of staff based in its offices in Eddon (Norfolk) and London and EHC consists of two key experts and 14 associates.

As such, should any of the team members have to cease working for an unexpected reason (e.g. due to long-term health problems), RPA and IEH-C would be able to replace them with an expert offering similar expertise. Any replacements would have to be approved by the client.

Resource allocation plan

The resources allocated to each of the tasks are sufficient to ensure a timely and robust execution of the proposed approach. Staff resource allocation is shown in Table E06-2. RPA also has all of the technical tools required to undertake the types of data collection and analysis that may be required. Our London and Loddon offices have meeting room facilities and we also have access to teleconferencing and video conferencing facilities. We regularly undertake consultation via teleconference as part of stakeholder engagement and consultation activities.

Figure 388-1: Gantt Chart

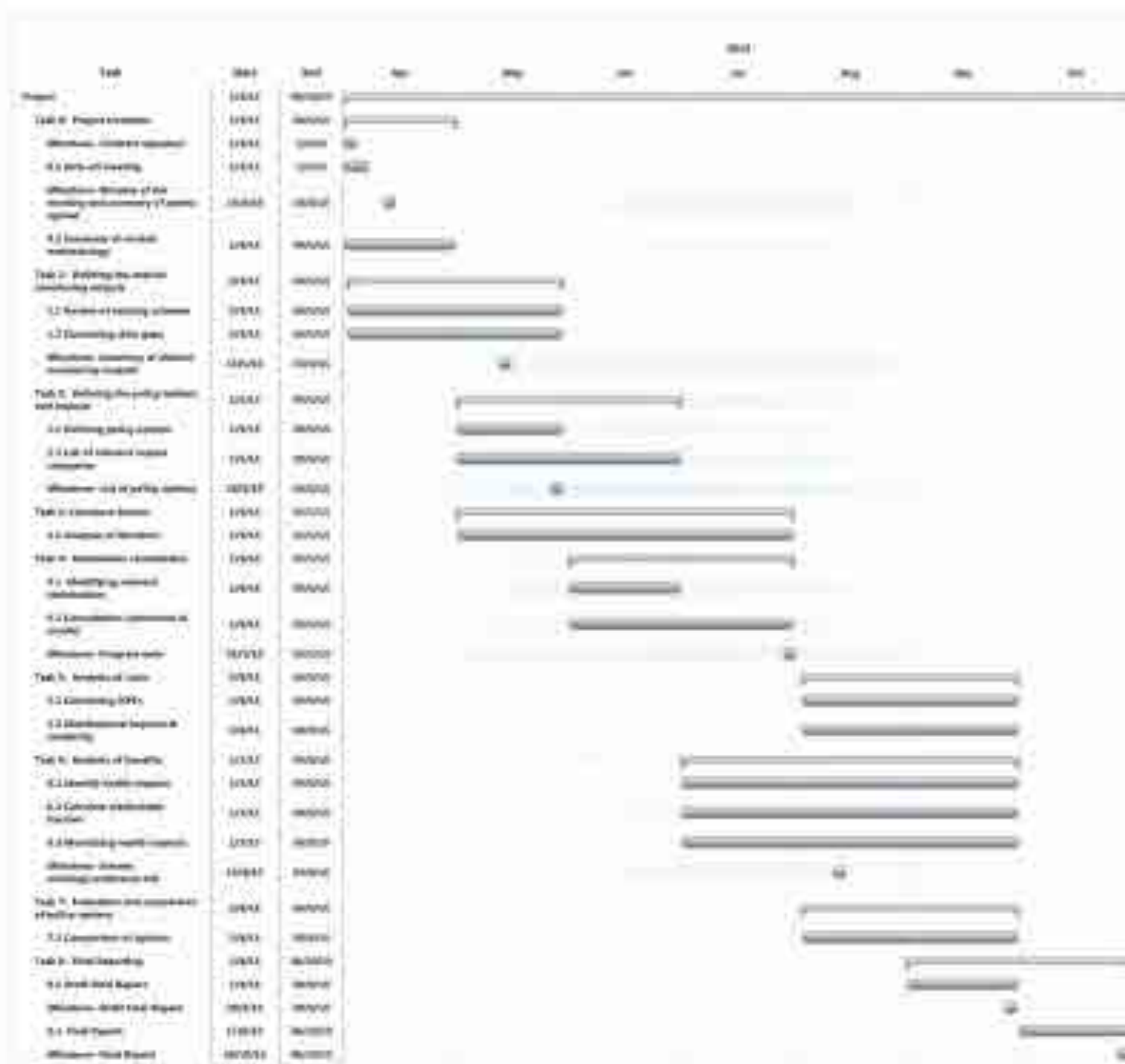


Figure E06-2: Overview of approach via the tasks, outputs and key staff



Figure E06-3: Indicative lines of reporting responsibility (solid lines) and lines of communication (dashed lines)



E07 Risk Management and Mitigation

Capacity

Risk & Policy Analysts Ltd (RPA) is an economics and policy assessment consultancy with extensive expertise in undertaking research projects, with the aim of developing implementable policy, programme and project advice. We have long-standing experience in the production of desk-top appraisal methodologies, with this including for Defra on the benefits of pesticides regulation (2008) and amenity pesticide use (2007). As a result, we have a team of economists and impact assessment/evaluation specialists who are familiar with researching the economics literature as well as gathering the scientific and demographic data needed for evaluations. We have therefore built up the depth of human resources needed to provide back-up and support should this be required. Furthermore, we have drawn together a team of external experts from IEH-C who all have significant experience in the practical application of toxicological and epidemiological advice in the evaluation of complex policies and policy proposals. We have long-standing relationships with most of these individuals and, if needed, can draw further upon IEH-C to address capacity concerns during the project.

Any changes to staff allocated to the project during its execution will be discussed and agreed with Defra's project manager. The Project Director (██████████) will ensure that staff with the appropriate skills are allocated to the project, taking into account their specialisms and availability to meet the timescales. Within RPA, our working practices and computer filing system also ensure that all files and emails can be made accessible to additional staff members, should work need to be cascaded in the event of illness or other absence. Minutes from meetings and regular progress reports provide a clear record of work undertaken and progress made, thus ensuring that any new staff members are able to get up to speed on a study quickly.

Risks and issues for successful delivery

The main sources of risk for this study are technical, personnel, stakeholder, timetable and commercial. These risks are linked and their likelihood and consequences could multiply up during the project if they are not adequately mitigated. Table E07-1 summarises the key risks associated with each stage of the study and how we will mitigate them through our approach and workplan.

Managing risks as part of project management

A Gantt chart for the proposed work was provided in **Section E06**, with this setting out the links between the different research activities. All staff working on the study will be provided with a copy of the Gantt chart and the **Project Plan**, which will include:

1. Overall objectives: these will enable progress to be measured and monitored against deliverables.
2. Quality assurance plan: this will ensure that the quality of both the process and outputs is monitored as the project proceeds. It will include: research objectives; a schedule; and a risk register.
3. Statement of work: each team member's role will be clearly identified along with their specific responsibilities and the outputs they are expected to produce.

It is proposed to begin the study with a start-up meeting to clarify the scope, timescale and deadlines (see E05 and E06). Communication will be maintained throughout the project with Defra by the provision of progress emails, as well as telephone calls, should particular issues arise. Monthly progress reports will be provided either by email or through a teleconference with Defra. These will be in addition to the other project meetings – see E06 and will provide a means of ensuring that mitigation actions are taken early to address any risks that may impact on the timely delivery of the outputs and their desired quality.

Quality and continuity of work and project deliverables will be assured through our approaches to QA, and will involve careful planning and ongoing development of the project plan and quality assurance plan. QA includes all written communications (letters, faxes, reports, etc.) being prepared in standard formats and approved by a Director prior to dispatch. Notes of telephone conversations, meetings, e-mails, etc. are recorded to allow future reference and record checks. Quantitative data also undergo checks for outliers and abnormalities as well as checks for human errors. We will contact Defra's Project Manager immediately should particular issues arise during the study to ensure that implications for the timescale and budget are minimised as far as possible.

Although the Project Director and Project Manager will be responsible for managing the project, they will also be actively involved in undertaking the work.

Key risks involved in project delivery and Mitigation Plan

The table below summarises the main project risks, along with safeguards and mitigation measures. The table uses 'L' for low, 'M' for medium and 'H' for high for the level of risk. The primary risk owner is RPA Ltd, together with external experts from IEH-C. Any risks that emerge throughout the study will be discussed with Defra and resolved based on a mutually agreed strategy.

Mitigation Plan		
Risk	Uncertainty Level of risk	Mitigation and mitigation measures
Data: not of sufficient quantity, quality or coverage; inconsistent; qualitative not quantitative	H	L
Analysis: too many data gaps; too many assumptions needed; no opportunities for validation; lack of consensus on assumptions	H	L
Delays in receiving comments; delays in obtaining data; delays in finding right contacts for engagement	M	L
Changes have to be made to the project team due to illness or other events	L	L

Mitigation Plan		
Issue	Interruption Level of risk	Mitigation level of risk
Subsequent risk mitigation measures		
Given the potential scope of the work (e.g. health endpoints), the project team has trouble completing the work within the budget	M	L
Project runs over on time	L	L
<p>Experts knowledgeable in the literature covering the health impacts of pesticide exposure, health economics and administrative burden appraisal, will help ensure that relevant studies and data can be identified and evaluated quickly. RPA's ongoing work in the development and use of desk-top methodologies also means that we have experience in undertaking this type of work and in delivering usable (and useful) outputs. The start-up meeting and the Progress Note will allow discussions with Defra on the overall work to be carried out and its progress and this should ensure that what is being proposed is feasible.</p> <p>We do not foresee this as a significant risk, given that the work is not heavily engagement based. RPA has a long-standing reputation for delivering to budget and on time.</p>		

SCHEDULE 2 - PRICING

1. The Authority, will pay to the Contractor no more than the fixed sum identified in Table 1: **£54,478** (Ex VAT).

Table 1: Breakdown of Contract Price (Ex VAT) - per financial year and total



2. Subject to any Variation agreed in accordance with the terms of this Contract as set out in Clause F7, the amounts in **Table 1** shall remain firm throughout the duration of the Contract.

3. In the event that the Contract is varied, the amount in **Table 1** may be adjusted as agreed in writing, between the Authority and the Contractor.

4. The payment arrangements shall be as follows:

- (a) Upon completion of the Services described in the Specification for each of the milestones set out in **Table 2** below, the Contractor shall submit an invoice to the Authority for the amounts set out below in respect of each such milestone;
- (b) Any and all such invoices shall comply with the requirements in section C of the Contract and the Contractor shall provide all further reasonable information and/or evidence of completion as the Authority shall reasonably require to demonstrate the satisfactory completion of the agreed milestones;
- (c) The Authority shall pay all valid invoices in accordance with the payment terms in section C of the Contract to the bank account nominated by the Contractor in the invoice.



(d) The Contractor shall be responsible for all payments to be made to the sub-contractors (Amounts payable to sub-contractors detailed within **Table 3**).

Table 3: Breakdown of Sub-Contract Costs (to be paid and managed by the Contractor)

SCHEDULE 3 - CHANGE CONTROL SCHEDULE (TO BE COMPLETED IN THE EVENT OF A CONTRACT VARIATION)

Contract Change Note

Contract Change Note Number	
Contract Reference Number & Title	
Variation Title	
Number of Pages	

WHEREAS the Contractor and the Authority entered into a Contract for the supply of [project name] dated [dd/mm/yyyy] (the "Original Contract") and now wish to amend the Original Contract

IT IS AGREED as follows

1. The Original Contract shall be amended as set out in this Change Control Notice:

Change Requestor / Originator		
Summary of Change		
Reason for Change		
Revised Contract Price	Original Contract Value	£
	Previous Contract Changes	£
	Contract Change Note [x]	£
	New Contract Value	£
Revised Payment Schedule		
Revised Specification (See Annexe [x] for Details)		
Revised Contract Period		
Change in Contract Manager(s)		
Other Changes		

2. Save as herein amended all other terms of the Original Contract shall remain effective.
3. This Change Control Notice shall take effect from the date on which both the Authority and the Contractor have communicated acceptance of its terms via Bravo.