

Contract for the Provision of Research and Development for Improving sustainability in food processing using Moderate Electric Fields (MEF) for process intensification and Smart Processing (MEFPROC)

**January 2019** 

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## **SECTION 1**

## **FORM OF CONTRACT**

#### **PARTIES:**

(1) THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS of Seacole Building, 2 Marsham Street, London, SW1P 4DF (the "Authority");

#### **AND**

(2) Sheffield Hallam University, a Higher Education Corporation whose administrative address is at Howard Street, Sheffield, S1 1WB, South Yorkshire, United Kingdom (the "Contractor")

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

#### **WHEREAS**

- a) The Authority wishes to appoint the Contractor to provide the certain services and the Contractor agrees to provide those services in accordance with these terms and conditions.
- b) The Contractor will participate in the European Project entitled Improving sustainability in food processing using Moderate Electric Fields (MEF) for process intensification and Smart Processing (MEFPROC) and the Authority will enter into the Contract on the basis that the Contractor participates in the MEFPROC project with funding from the Authority. 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.
- c) The ERA-NET Cofund instrument under Horizon 2020 is designed to support public-public partnerships between Member States for the implementation and coordination of networking activities in different fields of research. Where projects are transnational, projects selected as part of Horizon 2020 will be funded from their national funding institution.
- d) The Authority is the national funder for the UK for SUSFOOD2.

#### NOW IT IS HEREBY AGREED as follows:

#### 1. TERMS OF CONTRACT

1.1 The "Contract" comprises the following:

Section 1: Form of Contract
Section 2: Terms and Conditions

Schedule 1: Specification Schedule 2: Prices

Schedule 3: Change Control

Schedule 4: Commercially Sensitive Information

1.2 Execution of the Contract is carried out in accordance with EU Directive 99/93 (Community framework for electronic signatures) and the Electronic Communications Act 2000. The Contract is

- formed on the date on which both Parties communicate acceptance of its terms on the Authority's electronic contract management system ('Bravo').
- 1.3 The Contract starts on 1st February 2019 (the "Commencement Date") and ends on 31st August 2022 (the "End Date") unless it is terminated early or extended in accordance with the Contract.
- 1.4 The Authority may extend the term of the Contract until 1st February 2023 ("**Extension**"). The terms of the Contract will apply throughout the period of any Extension.

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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.

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

"Bravo" has the meaning given in paragraph 1.2 of the Form of Contract.

"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 comprising the information of a commercially sensitive nature relating to:

- (a) the Price;
- (b) details of the Contractor's Intellectual Property Rights; and
- (c) the Contractor's business and investment plans

which the Contractor has indicated to the Authority that, if disclosed by the Authority, would cause the Contractor significant commercial disadvantage or material financial loss.

"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.

**"Consortium Members"** shall mean University College Dublin, the Contractor, Universita Degli Studi Di Salermo, Technical University of Valencia, Lund University, Tu Berlin and University of Amsterdam.

"Contract" has the meaning given in paragraph 1.1 of the Form of Contract.

"Contract Period" means the period from the Commencement Date to:

- (a) the End Date; or
- (b) following an Extension the end date of the Extension

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 Regulations.

- "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.
- "Copyright" means as it is defined in s.1 of Part 1 Chapter 1 of the Copyright, Designs and Patents Act 1988.
- **"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.
- "Database Rights" means as rights in databases are defined in s.3A of Part 1 Chapter 1 of the Copyright, Designs and Patents Act 1988.
- "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 NICs 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 2018 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 set out in paragraph 1.3 of 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.
- "Extension" has the meaning given in paragraph 1.4 of the Form of Contract.
- **"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.

#### "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 NICs;

"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.

"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.

"Jointly owned Results" means results that are generated as part of the Project that are jointly owned by the Contractor and a third party participant in the Project. For the purpose of this Contract, the third party participants in the Project are limited to the Consortium Members.

"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, B11, 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"** is the Susfood 2 Horizon 2020 ERA-Net project known as MEFROC as detailed in the proposal submitted by University College Dublin to the European Union.
- "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.
- **"Proposal"** the proposal in respect of the Project submitted by the Consortium Members to the European Commission.
- "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.
- "Regulations" means the Public Contract Regulations 2015 (SI 2015/102).
- "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.
- "Request for Information" means a request for information under the FOIA or the EIR.

#### "Restricted Country" means:

- a) any country outside the European Economic Area; and
- b) any country not deemed adequate by the European Commission pursuant to Article 25(6) of Directive 95/46/EC.
- "Results" means any guidance, specifications, reports, studies, instructions, toolkits, plans, data, drawings, databases, patents, patterns, models, designs or other material which is:
- a) generated by the Contractor for use in relation to the performance of its obligations under the Contract; or

- b) the result of any work generated 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-Contract" means a contract between 2 or more suppliers, at any stage of remoteness from the Authority in a sub-contracting chain, made wholly or substantially for the purpose of performing (or contributing to the performance of) the whole or any part of the Contract and "Sub-Contractor" 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.
- "TFEU" means the Treaty on the Functioning of the European Union.
- "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.
- "Treaties" means the Treaty on European Union and the TFEU.
- "TUPE" means the Transfer of Undertakings (Protection of Employment) Regulations 2006.
- "TUPE Information" means the information set out in clause B12.1.
- "Valid Invoice" means an invoice containing the information set out in clause C2.5.
- "Variation" means a variation to the Specification, the Price or any of the terms or conditions of 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 reenacted 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:

#### 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 save that the Authority expressly recognises that the Services constitute research and as such the Results and outcome are uncertain and no particular outcome can be guaranteed.

#### 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.
- B1.2 The Contractor shall not make any significant change to the Services without the Authority's prior written consent.
- B1.3 Where the Contractor intends to apply to a third party for other funding for the Project, it will notify the Authority in advance of its intention to do so.
- B1.4 The Authority recognises that the Services being delivered by the Contractor are inter-dependent with services being provided by other members of the MEFPROC Project Consortium as detailed in the Proposal which can be found on the contract record in Bravo.

#### B2 Samples

B2.1 The Contractor acknowledges that the Authority relies on the skill and judgment of the Contractor in the performance of the Contractor's obligations under the Contract.

#### B3 Provision and Removal of Equipment

- B3.1 The Contractor shall provide all the Equipment and resource necessary for the supply of the Services.
- B3.2 If the cost of any Equipment is reimbursed to the Contractor such Equipment is 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.
- B3.3 The Contractor shall maintain all Equipment in a safe, serviceable and clean condition.
- B3.4 The Contractor shall, at the Authority's written request, at its own expense and as soon as reasonably practicable:
  - 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.
- B3.8 Within 20 Working Days of the end of the Contract Period, 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.

#### **B4** Service Delivery

- B4.1 The Contractor shall at all times comply with the UK Quality Code for Higher Education and, where applicable, shall maintain accreditation with The Quality Assurance Agency for Higher Education. 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.
- B4.2 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.

#### **B5** Key Personnel

- B5.1 The Contractor acknowledges that the Key Personnel are essential to the proper provision of the Services.
- B5.2 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.
- B5.3 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.

- B5.4 The Authority shall not unreasonably withhold its agreement under clauses B5.2 or B5.3. 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.
- B5.5 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.

#### **B6** Contractor's Staff

- B6.1 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.

- B6.2 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.
- B6.3 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 B6.2 shall be final.
- B6.4 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.

#### B11 Offers of Employment

B11.1 Except in respect of any transfer of Staff under TUPE, for the Contract Period and for 12 Months thereafter the Contractor shall procure that its National Centre of Excellence for Food Engineering shall not solicit to any of the Authority's staff who have been associated with the Services and/or the Contract without Approval.

#### **B12** Employment Provisions

- B12.1 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 B12.1(a);
  - (c) the terms and conditions of employment/engagement of the Staff referred to in clause B12.1(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.

- B12.2 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.
- B12.3 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.
- B12.4 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.
- B12.5 If TUPE applies to the transfer of the Services on termination of the Contract, the Contractor shall indemnify and keep indemnified the Authority, the Crown 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.
- B12.6 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.
- B12.7 This clause B12 applies during the Contract Period and indefinitely thereafter.
- B12.8 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 against the milestones as outlined within Schedule 1: Specification.

#### 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
- 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 Not Used
- 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:
  - Accounts-payable.defrasscl.gsi.gov.uk (the Authority's preferred option); or SSCL AP, Defra, PO Box 790, Newport Gwent, NP10 8FZ.
- 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 The Contractor shall ensure that a provision is included in all Sub-Contracts which requires payment to be made of all sums due to Sub-Contractors 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 undisputed sums 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

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 The provisions of clause B12.5 and E8.3 confer benefits on persons named in such provisions (together "Third Party Provisions") other than the Parties (each person a "Third Party Beneficiary") and are intended to be enforceable by Third Party Beneficiaries by virtue of the Contracts (Rights of Third Parties) Act 1999 ("CRTPA").

- D3.2 Subject to clause D3.1, a person who is not a Party has no right under the CRTPA to enforce any provisions of the Contract but this does not affect any right or remedy of any person which exists or is available otherwise than pursuant to the CRTPA and does not apply to the Crown.
- D3.3 No Third Party Beneficiary may enforce or take steps to enforce any Third Party Provision without Approval.
- D3.4 Any amendments to the Contract may be made by the Parties without the consent of any Third Party Beneficiary.

#### D4 Health and Safety

- D4.1 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.
- D4.2 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.

#### D5 Environmental Requirements

- D5.1 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 to:
  - (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).
- D5.2 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 trichoroethane, 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.

- D5.3 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.
- D5.4 If required by the Authority the Contractor shall provide the Authority with information about its compliance with its obligations under clause D5.3.
- D5.5 The Contractor shall ensure that its Staff are aware of the Authority's Environmental Policies.
- D5.6 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.

#### D5.7 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.

## 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 On request from the Authority, the Contractor will provide the Authority with all such relevant documents and information relating to the Contractor's data protection policies and procedures as the Authority may reasonably require.
- E2.3 The Parties acknowledge and agree that this Contract does not require either party to act as a Processor of the other. In the event that there is any change which requires either party to act as Processor the parties agree, at their own cost, to enter into standard data protection clauses as set out in the Crown Commercial Services Procurement Policy Note 02/18 (as amended or replaced from time to time).
- E2.4 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.
- E2.5 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 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.

- E4.4 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.
- E4.5 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.
- E4.6 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.

- E4.7 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.
- E4.8 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.
- E4.9 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.
- E4.10 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.
- E4.11 The Contractor will notify the Authority as soon as reasonably practicable 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 Regulations, 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 (save for Copyright and Database Rights which shall vest in Her Majesty the Queen).

The Authority grants to the Contractor an irrevocable royalty-free non-exclusive licence to use the IP Materials (including the right for the Contractor to sub-licence such IP Materials to the Consortium Members) for the performance by and implementation of the Project by the Consortium Members. The Authority acknowledges and agrees that the third party owner of the Jointly owned Results may use such results for internal research purposes without the Approval of the Authority.

- E8.2 The Contractor hereby assigns:
  - (a) to the Authority, with full title guarantee, all Intellectual Property Rights (save for Copyright and Database Rights) which may subsist in the IP Materials. 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;
  - (b) to Her Majesty the Queen, with full title guarantee, all Copyright and Database Rights which may subsist in the IP Materials prepared in accordance with clauses E8.1 (a) and (b)
    - and shall execute all documents and do all acts as are necessary to execute these assignments.

#### E8.3 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, on the request of the Authority and to the extent that such Intellectual Property Rights are needed by the Authority to use the Results, 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 Crown or to any other third party supplying goods and/or services to the Authority ("Indemnified Persons"); and
- (b) not knowingly infringe any Intellectual Property Rights of any third party in supplying the Services.
- (c) during and after the Contract Period, indemnify and keep indemnified the Authority and the Indemnified Persons from and against all actions, suits, claims, demands, losses, charges, damages, costs and expenses and other liabilities which the Authority or the Indemnified Persons may suffer or incur as a result of or in connection with any breach of this clause E8.3, except to the extent that any such claim results directly from:
  - i) items or materials based upon designs supplied by the Authority; or
  - ii) the use of data supplied by the Authority which is not required to be verified by the Contractor under any provision of the Contract.
- E8.4 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.
- E8.5 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, the Contractor or an Indemnified Person) 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).
- E8.6 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 E8.6 in relation to any costs and expenses to the extent that such arise directly from the matters referred to in clauses E8.3 (c) i) and ii).
- E8.7 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.
- E8.8 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 E8.3 and G2.1(g) 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 E8.8(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.

E8.9 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 for the Authority 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:

- (a) shall identify and inform the Authority of any Results which it or a Consortium Member considers suitable for commercial exploitation. If the Contractor or a Consortium Member has identified an opportunity for the commercial exploitation of the Results then the Contractor 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.
- (b) may request a licence to the Results with the right to sub-license to a third party:
  - i. on a fair and reasonable basis to any such third party involved in the Project to the extent that the licence is needed by that third party to commercialise its own results from the Project provided that the Authority shall not unreasonably withhold its consent to the grant of such licence.
- (c) ii. on a royalty free basis to any such third party involved in the MEFPROC project to the extent that the licence is needed by that third party to use its own results from the MEFPROC project. shall inform the Authority and the Authority acknowledges and agrees that the third party owner of the Jointly owned Results may use such results for commercial exploitation without the Approval of the Authority but shall provide fair and reasonable compensation to the Contractor for such use, subject to clause E9.5.
- 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 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 NICs, in respect of that consideration; and
  - (b) indemnify the Authority against any income tax, NICs 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.

#### 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) withhold or reduce payments to the Contractor in such amount as the Authority reasonably deems appropriate in each particular case; and/or
- (b) terminate the Contract in accordance with clause H2.
- F4.2 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, taking into consideration that the Services comprise research and therefore no particular outcome or result can be guaranteed, 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.
- F4.3 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.
- F4.4 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.
- F4.5 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 is 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 award of a Sub-Contract the Contractor shall ensure that:
  - (a) the Sub-Contract contains a right for the Contractor to terminate the Sub-Contract if the relevant Sub-Contractor does not comply in the performance of its contract with legal obligations in environmental, social or labour law;
  - (b) the Sub-Contractor includes a provision having the same effect as set out in clause F5.4 (a) in any Sub-Contract which it awards; and
  - (c) copies of each Sub-Contract shall, at the request of the Authority, be sent by the Contractor to the Authority immediately.
- F5.5 If the Authority believes there are:
  - (a) compulsory grounds for excluding a Sub-Contractor pursuant to regulation 57 of the Regulations, the Contractor shall replace or not appoint the Sub-Contractor; or
  - (b) non-compulsory grounds for excluding a Sub-Contractor pursuant to regulation 57 of the Regulations, the Authority may require the Contractor to replace or not appoint the Sub-Contractor and the Contractor shall comply with such requirement.
- F5.6 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 F5.6 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 F5.7 and F5.8.
- F5.7 If the Contractor assigns the right to receive the Price under clause F5.6, the Contractor or the Assignee shall notify the Authority in writing of the assignment and the date upon which the assignment becomes effective.
- F5.8 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.
- F5.9 The provisions of clause C2 shall continue to apply in all other respects after the assignment and shall not be amended without Approval.
- F5.10 Subject to clause F5.11, 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 or authorised 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.

- F5.11 Any change in the legal status of the Authority such that it ceases to be a Contracting Authority shall not, subject to clause F5.12, affect the validity of the Contract and the Contract shall bind and inure to the benefit of any successor body to the Authority.
- F5.12 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.
- F5.13 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.
- F5.14 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 If, after the Commencement Date, the Authority's requirements change, the Authority may request a Variation subject to the terms of this clause 7.
- 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 No Variation will take effect unless and until recorded in a validly executed CCN. Execution of a CCN shall be made via electronic signature as described in clause 1.2 of Section 1 of the Contract.
- F7.5 A CCN takes effect on the date both Parties communicate acceptance of the CCN via Bravo and, on the date it communicates its acceptance of the CCN in this way, the Contractor is deemed to warrant and represent that the CCN has been executed by a duly authorised representative of the Contractor in addition to the warranties and representations set out in clause G2.
- F7.6 The provisions of clauses F7.4 and F7.5 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 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 G1.1 the Contractor's aggregate liability in respect of any breach of clauses D1, E1, E2 and E4 shall not exceed the amount that would be recoverable from the Contractor's insurers in respect of such breach.
- G1.4
- G1.5 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.
- G1.6 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:
  - 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) any compensation or interest paid to a third party by the Authority; and
  - (d) 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.
- G1.7 Subject to clauses G1.1 and G1.6, 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.
- G1.8 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.
- G1.9 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.

- G1.10 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.
- G1.11 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.
- G1.12 The provisions of any insurance or the amount of cover shall not relieve the Contractor of any liabilities under the Contract.
- G1.13 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:
  - 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:

- 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 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.
- H1.7 The Contractor may terminate the Contract in the event of termination of the Consortium Agreement or termination by the Consortium Members or Co-Funders of the Contractor's participation in the Project provided always that the Contractor and the Authority shall negotiate in good faith the extent to which the Contract may continue with variations in accordance with clause F7.

#### **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** Other Termination Grounds

- H4.1 The Authority may terminate the Contract on written notice to the Contractor if:
  - (a) the Contract has been subject to a substantial modification which requires a new procurement procedure pursuant to regulation 72(9) of the Regulations;
  - (b) the Contractor was, at the time the Contract was awarded, in one of the situations specified in regulation 57(1) of the Regulations, including as a result of the application of regulation 57 (2), and should therefore have been excluded from the procurement procedure which resulted in its award of the Contract;
  - (c) the Contract should not have been awarded to the Contractor in view of a serious infringement of the obligations under the Treaties and the Regulations that has been declared by the Court of Justice of the European Union in a procedure under Article 258 of the TFEU; or
  - (d) the Contractor has not, in performing the Services, complied with its legal obligations in respect of environmental, social or labour law.

#### H5 Consequences of Expiry or Termination

- H5.1 If the Authority terminates the Contract under clauses H2 or H4 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.
- H5.2 If Contract is terminated under clauses H2 or H4 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.

- H5.3 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.
- H5.4 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), H5 (Consequences of Expiry or Termination), H7 (Recovery upon Termination) and I1 (Governing Law and Jurisdiction).

#### H6 Disruption

- H6.1 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.
- H6.2 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.
- H6.3 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.
- H6.4 If the Contractor's proposals referred to in clause H6.3 are considered insufficient or unacceptable by the Authority acting reasonably, then the Contract may be terminated with immediate effect by the Authority by notice.
- H6.5 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.

#### H7 Recovery upon Termination

- H7.1 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) 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 to conduct due diligence.

H7.2 If the Contractor does not comply with clauses H7.1(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.

#### H8 Knowledge Retention

H8.1 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

Subject to the provisions of clause I2 the Contract, including any matters arising out of or in connection with it, 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.
- 12.2 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.
- If the dispute cannot be resolved by the Parties pursuant to clause I2.1 either Party may refer it to mediation pursuant to the procedure set out in clause I2.5.
- 12.4 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.
- 12.5 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 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 I2.6.
- I2.6 Subject to clause I2.2, the Parties shall not institute court proceedings until the procedures set out in clauses I2.1 and I2.3 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 I2.7;
  - (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 I2.7; and
  - (c) the Contractor may request by notice to the Authority that any dispute be referred and resolved by arbitration in accordance with clause I2.7, 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 I2.7(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 I2.7(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**

#### 1. Background

- a) Food manufacturers are challenged by production, cost and efficiency. They are required to respond with speed and flexibility, while achieving minimal energy consumption and waste.
- b) MEF is one of the 'greenest' ways electrical energy can be used in food processing. This arises from direct, simple energy application, volumetric heating, tremendously reduced heating times all minimising energy loss opportunities and providing an outstanding alternative to conventional heating.
- c) MEF differs significantly from the more widely researched Pulse Electric Fields (see abstract), but because no formal definition currently exists, the term is used inconsistently. Some workers reserve 'MEF' for predominantly 'non-thermal' processes using 'ohmic heating' for thermal applications, others use the terms interchangeably. This project considers 'ohmic heating' as a subset of MEF due to the difficulty of divorcing thermal from non-thermal phenomena, as noted in many 'ohmic' publications.
- d) Since 2004 there has been an exponential rise in MEF citations with approx. 315 publications currently available. A recent review describes an extensive range of applications including extraction, protein coagulation, parboiling, blanching, thawing, dough proofing, dehydration, evaporation, peeling, softening, hydro distillation, starch gelatinisation, pasteurisation and sterilisation. In addition a recent opinion paper outlines future MEF research needs, all will be addressed in the project, although allergenic potential suggestions will only be discussed.
- e) For food manufacturers, MEF offers many innovative processing solutions with associated benefits including improved sustainability, reduced environmental impact, increased competitiveness, and intensified processing, enhanced product safety/quality and also waste valorisation. However, to date MEF is largely only explored in research/academic setting, with this information not yet translating to a commercial environment.
- f) Sustainability and increasing resource efficiency is at the core of this project which focuses on the establishment of processing applications for MEF (an extremely 'green' method for superior electrical energy usage in food processing), addressing knowledge gaps currently preventing this technology from achieving its true potential in post farm gate processing of foods thereby reducing the environmental impact of food manufacture.
- g) Efficiency enhancement of the food and drink industry is proposed by providing MEF (+/-US) based solutions for waste stream valorisation (enhancing resilience in the food sector by making better use of resources and reducing losses and waste), process intensification/acceleration (increasing productivity) and/or improvement in product yield (which will stimulate economic growth).

- h) Innovative processing solutions will be developed with industry illustrating the potential of MEF (+/-US) to efficiently produce safe foods with improved quality and nutritional value in a sustainable minimally processed way.
- i) SHU will develop novel process control methods to improve the flow of information and communication in a production environment by suing novel management systems and smart technologies, reducing energy expenditure and leading to a lower carbon food and drink sector.
- j) By aiming to enhance scientific and technical knowledge currently preventing the adoption of MEF and US by the food industry, this project supports Defra's research priorities to increase productivity through stimulating innovation in the food and drink sector in that it (i) identifies new and emerging technologies which benefit the food and drink industry; (ii) removes barriers to improve the uptake of innovation and its translation in to use for commercial outcomes for food and drink manufactures; and (iii) contributes to the safeguarding of a viable food supply in the face of climate change and changing demands by improving yields.

#### 2. Objectives

#### Dissemination

- a) NCEFE at SHU will lead and coordinate the dissemination activities for this project, through both traditional communication channels such as event attendance (e.g. conferences, seminars, workshops, etc.), project publications (e.g. leaflets, newsletters, articles in peer-reviewed scientific journals and conferences etc.) and project presentations, as well as online activities based around the project website, and through the main social platforms (e.g. LinkedIn, Twitter, etc.).
- b) The dissemination activities will be designed to target the key audiences and stakeholders to improve awareness of MEF technology and maximize the impact of the project outcomes. In addition, the team at SHU will contribute to the work package 5 on the development of new control capability to produce effective and efficient food processing using Mild Electric Fields (MEF) or Ultrasound (US) assisted MEF.

#### **Other**

- c) Development of mathematical/physical models of MEF (+/- US) processes for design and simulation of advanced control systems, based on the models developed in the project;
- d) Software packages such as MATLAB/SIMULINK (including Simscape) and/or COMSOL will be to develop mathematical/physical models of the MEF (+/- US) processes.

- e) Possibility of developing empirical models based on the Multivariate Statistical Process Control (MSPC) methods will also be investigated if sufficient data can be collected from the prototype or existing industrial plants.
- f) Simulations of the MEF (+/- US) systems will be developed in this study and be used as a testbed for future developments.
- g) Development of auto-tuning or adaptive PID controllers for different stages of MEF heating; In a MEF process, objectives and hence requirements of the PID controllers often change during different stages of control. Characteristics of food such as the electrical conductivity also change from time to time. This task will investigate how to use methods such as Adaptive Interaction to develop continuous online auto-tuning or adaptive PID controllers which are simple and independent of the process models to achieve better performance.
- h) Development of Intelligent and/or Model Predictive Controller (MPC) for more effective control of the process; during different phases of MEF heating, many parameters such as electrical conductivity, thermal conductivity, particle size and viscosity may change and these changes would substantially alter parameters in the process model. This task will attempt to make use of the empirical reference trajectories and predictive models developed previously to achieve more effective control of the processes.
- i) Conducting analysis of energy efficiency of the processes and optimising the controllers to achieve better efficiency; an economic assessment of operating costs of the MEF process will be conducted and compared with other competing processing methods. It will also be investigated how control can be optimised at different stages to achieve better efficiency.
- j) Development of integrated solutions for control, optimisation and real-time condition monitoring of the processes; The integrated solution will focus on the coordination of control, optimisation, monitoring and diagnosis tasks, and their supervision for enhanced decision making and intervention.
- k) Identification and investigation of on-line implementation issues relating to the application of the developed techniques to the prototype system and real industrial processes. It is expected that this work will have a significant impact on the application of advanced process control and condition monitoring systems to industrial food manufacturing processes. It provides the opportunity for food heating processes to operate with greater efficiency, thus improving the benefits that such systems offer industrial operations in the food sector.

#### 3. Approaches and Work Plan

WP5 [M1-36]: Involves a 2 way interaction with WP3 and WP4, developing control systems for the applications under investigation in WP3-4, but also learning from WP3-4 using their data for modelling and in prototype development.

Modelling and Control: Software such as MATLAB/SIMULINK and/or COMSOL.

**Analysis:** SHU will analyse process energy efficiency and optimise controllers to achieve better efficiency.

Facilities and Computation Capabilities: Process control systems, food modelling/analysis lab, automation facility, logistics and engineering design and analysis laboratories with MATLAB/Simulink, COMSOL Multiphysics, LabView and Aspen Plus software. A prototype MEF unit with full process control capabilities will be built by SHU using their own funding.

#### **Objectives:**

In WP5, SHU will apply engineering methodologies to model and control MEF (+/-US) processes. This will include control systems for a range of raw materials/products, geometries and differing process stages; defining adaptive PID controller characteristics; and developing intelligent, model predictive controllers.

#### Task 5.1 Design and develop: MEF Equipment

Task 5.1.3 Evaluate the MEF module for volumetric heating designed in 5.1.1

Task 5.1.4 Evaluate the MEF module for extraction/impregnation purposes designed in 5.1.2

#### Task 5.5 Control: Processes Dynamics

Control methods for efficient processing using MEF (+/- US) will be developed. Adaptive/Advanced intelligent controllers required to cope with differing raw materials/products, heating geometries and process incorporation stages.

#### The sub-tasks are:

- -Task 5.5 (Part 1) Study dynamics for design/simulation of advanced control systems
- -Task 5.5 (Part 2) Develop auto-tuning, adaptive PID controllers and Intelligent, Model Predictive Controllers for MEF heating (IMPC MEF)
- -Task 5.5 (Part 3) Develop integrated solutions for process control, optimisation and real time monitoring (RTM MEF), including evaluation of in-line measurement techniques for tailored meat process control
  - Transfer functions and system dynamics described/analysed using MATLAB/SIMULINK and Simscape software.
  - Empirical MSPC method models (e.g. PCA and PLS) developed (if sufficient data from prototype/existing industrial plants)
  - Simulation of MEF systems dynamics.
  - Integration of control, optimisation and condition monitoring is close to realisation as software for real-time operations and powerful computer hardware is available.
  - Integrated solutions focusing on coordination of control, optimisation, monitoring and diagnosis tasks for enhanced decision making/intervention.

- The work will have significant impact on application of advanced process control and condition monitoring systems to MEF(+/- US) processes.
- Benefits are improved heating, reliability, flexibility and energy efficiency.

#### Task 5.6 Modelling: US+MEF Process Kinetics

Modelling is an essential tool to quantify the effect of different variables in a process.

To find synergies between MEF and US technologies, the kinetics modelling of the different processes (extraction, impregnation and heating) will allow to quantify and to determine the effectiveness of the combined application.

SHU will provide input to this work package on control options.

#### WP 6 Dissemination

The aim of WP 6 - Dissemination is to define and implement an effective dissemination strategy with consortium partners to maximise the impact of project results and achievements using both scientific and industrial channels across Europe and beyond. This aim will be achieved through the following objectives:

- -To showcase MEF (+/- US) potential as an alternative food processing technology thus improving commercial awareness and understanding among manufacturers about the project outcomes and developments that have been achieved
- -To involve key stakeholders (e.g. regulatory authorities, public good bodies, the food manufacturing industry, the MEF equipment manufacturers, academics, as well as the consumers and the general public) to foster the impact of the project activities and results
- -To provide technical results and foundation collateral to support the communication plan and facilitate MEF uptake.
- -To produce high-quality, peer-reviewed outputs

#### Description:

A core part of this project is to communicate and disseminate the outcomes and demonstrate the benefits of MEF technology, such as improved sustainability, reduced environmental impact, intensified processing, enhanced product safety/quality and waste reduction, to the food sector.

A detailed dissemination strategy and plan will be developed and reviewed.

All the dissemination opportunities will be identified through traditional communication channels such as event attendance (e.g. conferences, seminars, workshops, etc.), project publications (e.g. leaflets, newsletters, articles in peer-reviewed scientific journals and conferences etc.) and project presentations, complemented also by online activities

based around the project website, and through the main social platforms (e.g. LinkedIn, Twitter, etc.).

The dissemination activities will be designed to target the key audiences and stakeholders to improve awareness of MEF technology and maximize the impact of the project outcomes.

#### Task 6.1 Dissemination Strategy/Plan Development

This task will develop an effective dissemination strategy and plan within the project consortium partners.

The dissemination plan shall define principles to be followed by all dissemination activities in order to avoid confusion and misconceptions and to foster the quality of project communication.

To maximise the visibility and impact of the project outcomes, the dissemination plan will be reviewed and updated annually.

This task will also be devoted to the coordination of the dissemination activities.

#### Task 6.2 Identity - Web & Social Media Presence

This task will be devoted to development of the project identity through a project logo which will be used on the web site and in publications, in order that audience can easily identify and recognise the project.

A series of promotional materials including leaflets and newsletters will be produced to give the stakeholders a general overview and can be used in public events by all partners.

A website designated for the project will be developed as an online focal point for informing about the project's objectives and methods and for publishing results. Social media will be used to reach a wider audience and to facilitate the dialogue with

relevant stakeholders, especially the consumers and the general public.

In recent years, social networks (on the global scale particularly LinkedIn, Facebook, Twitter and Google+) have had a major impact on how people interact online and have attracted users in the millions.

A project account for the selected social media chancels will be set up and updated on a regular basis to engage non-academic audiences to raise the awareness of the MEF technology.

All partners will also support dissemination through established institutional dissemination channels and European COST networking groups.

#### Task 6.3 Workshops & Seminars

The innovation hub concept is core to internal project communication and dissemination. These hubs (Task 2.2 to Task 2.8) are of such significance that they have a dedicated coordination committee (Task 1.2) with associated milestones (Milestone 1.2 and Milestones 2.4).

In addition to the innovation hub activities, two seminars will also be delivered with input from each RPO partner to disseminate interim (M20) and final (M43) findings respectively.

These Seminars will be open to the public including manufacturers who are from outside the project consortium.

#### Task 6.4 Presentations and Publications

This task is devoted to publications in high impact academic journals, Trade Journals and Industry focused literature. Each partner will publish in their area of expertise.

Presentation at professional conferences to disseminate the project objectives and results will also be an important part of the dissemination activities. A list of conferences within the project scope will be identified and circulated to all project partners. It is expected by attending and presenting at carefully selected conferences the visibility of the project will be greatly increased among the target audience.

The following Peer Reviewed Scientific Journals, have been identified and the list will be reviewed and updated by all partners during the project.

**BioSystems** 

Biotechnology & Bioengineering

Canadian Biosystems Engineering

European Food Research and Technology

Food Chemistry

Food Research International

Innovative Food Science and Emerging Technologies

International Journal of Modelling, Identification and Control

Journal Food Engineering

Journal Food Process Engineering

Journal of Agricultural & Food Chemistry

Journal of Applied Microbiology

Journal of Food Processing and Technology

Journal of Food Protection

Journal of Food Science

Journal of Food Science and Technology

Journal of Microbiology and Biotechnology

Journal of Process Control
Journal of the Science of Food and Agriculture
LWT - Food Science and Technology
Meat Science

#### Task 6.5 Dissemination Strategies: Evaluation

All the dissemination efforts will be selected against measurable criteria in order to effectively evaluate each dissemination activity. Once the dissemination strategy and associated plan have been developed and agreed, a monitoring and evaluation plan will also be developed.

#### This may include:

- -Web statistics newsletter subscribers, visits to website, views of YouTube videos etc.
- -Attendances of seminars
- -Publications and citations
- -Feedback immediately after seminars
- -Feedback from conference presentations

Through the continuous evaluation of the dissemination plan, it will enhance, support and encourage project participants during the project, and provide data for reviewers of the project to get clear information about the project and results of dissemination.

#### 4) Project Outputs and Deliverables

Deliverable 1.2 (month 36): Shared Endnote Reference Database

Reference management database containing comprehensive literature review on areas relevant to the project.

Deliverable 1.3 (month 9): Staff Training

Staff trained in the use of lab and pilot scale processing systems.

Deliverable 5.7 (month 15): Control: Sensitivity Analysis Report

A report on sensitivity analysis will be prepared for internal usage. Interim report on progress for submission to Defra.

Deliverable 5.8 (month 9): Control: Process Dynamics Report

Once completed, the study on the system(s) dynamics for design/simulation of advanced control systems will be edited in a report.

Deliverable 5.9 (month 24): Control: IMPC MEF Report

A report on the development of the IMPC MEF (Intelligent, Model Predictive Controllers for MEF heating) and of auto-tuning, adaptive PID controllers will constitute the deliverable of Task 5.3 (Part 2). Interim report on progress for submission to Defra.

**Deliverable 6.6** (month 36): Papers & Presentations: Output List (completed in 2 stages) Stage 1 [M36] - Peer Reviewed Papers: A list of peer-reviewed papers which are published/accepted/submitted by each of the partners will be collated as evidence of achievements from this project. <u>Stage 2</u> [M36] - Presentations: A list of presentations at both academic and industrial conferences and event by each of the partners will be collated as evidence of dissemination of this project.

#### **Deliverable 8.1** (month 36): MEF (+/-US) Implementation in Heating

A final report will be prepared containing the main conclusions about MEF (or MEF/US combinations as appropriate) in heat transport processes and the feasibility of their implantation at industrial level. This will include not only technical and quality aspects but also consumer perception. The report will also include an estimation of the capital and operating costs for heating. This report will also contain a compilation the main results obtained by the different RPO teams.

#### 5) Risks to delivery and contingency plans

#### Key risk 1: MEF Applications chosen for evaluation prove ineffective - WP 5

Proposed mitigation measure: As this is such a potentially significant factor, a dedicated 'Stop, Go' system has been put in place to deal with this specific risk. If a particular application (e.g. impregnation) is not proving promising by M20, activity on this front will be terminated and replaced by another MEF application, relevant to the affected Food Manufacturer, for the remainder of the project. This alternative application will be taken from the reserve list as identified in conjunction with the food manufacturer in T2.1 (Initial Consultation). The 3 management committees (i.e. project management (T1.1), industry workshop (T1.2) and external advisory (T1.3)) will all have input into this 'Stop, Go' decision.

#### Key risk 2: An RPO is not able to complete his task(s) on time - WP 5

Proposed mitigation measure: Project Coordinator will be in regular contact will all RPO's and will also visit most RPO sites in his capacity as Innovation Hub facilitator. If it becomes apparent that an RPO is unable to complete his task on time, remedial action will be taken. This could include enlisting the assistance of another partner who will undertake or assist in the completion of the work. In an extreme situation, the work may be taken from a partner and a new partner recruited to take over.

#### Key risk 3: Risks relating to loss of personnel prior to project completion - WP 5

#### Proposed mitigation measures:

Loss of expertise in relation to equipment operation or analytical techniques: T1.5 requires training of all personnel to use processing equipment/analytical techniques. Training will be structured which will be helpful in the event of one member of research team becoming unavailable permanently or for a long period of time. Workers will fully document new analytical procedures as they are developed to minimise potential disruption of this kind. Training material will be available on hard copy and each staff member could provide necessary information to train a new member.

Loss of expertise in relation to completed experiments: Workers maintain lab-books and will write up experiments as they are completed. This strategy minimises this risk and has worked successfully in previous projects.

# Key risk 4: An RPO, Food and Equipment Manufacturer are unable to work effectively to develop a specific application - WP 5

Proposed mitigation measure: Interaction between RPO's, Food and Equipment Manufacturers via Innovation Hubs is essential for the project to progress. Manufacturers were selected on the basis of previous track record with the RPO's and suitability to take on the new technology. If the partners are unable to work together effectively, the project coordinator will need to understand where the problems lies. If it is apparent that some individual partners are not suited to the task, remedial action of the type mentioned in Key Risk 2 will be undertaken.

# Key risk 5: Risks relating to the inability to complete proposed tasks with allocated full time personnel on the project - WP 5

#### Proposed mitigation measure:

Inability to complete project due to staff overload: The proposers have carefully weighed up each task and feel that while the project workload is relatively intensive, it can be delivered in full by the allocated staff. However, in the event of unanticipated delays the proposers have access to some additional personnel not employed on the project which could assist in this regard (e.g. undergraduate students who are required to complete short research projects or visiting students who also require short term projects). A number of the task elements have semi-stand-alone modules which could be assigned to these students (under the supervision of staff employed on the project) for short term projects in the event of full time staff getting held up from unanticipated delays. This strategy has been used successfully in the past by the project coordinator.

Key risk	Likelihood	Significance
1	1	3
2	1	3
3	1	3
4	1	2
5	1	2

### 6) Milestones Table

	Target date	Description of milestone including the deliverable (maximum 120 characters)	Suggested payment (£)
1			
2			
3			
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25			

## 7) Quality Assurance

The project deliverables will be ensured by the project management arrangements associated with the project.

- The Project Management Committee will include membership from all participating RPO's.
- The committee will be chaired by the Project Coordinator (
   ).
- The committee will ensure that all administrative aspects of the project and work package descriptions are adhered to and KPIs are delivered on time.
- Monitoring the effectiveness of the projects communication and dissemination plan will also fall under this committees remit.
- In terms of risk management, the committee will also have a say in the "Stop, go" aspect of industrial applications in month 20.
- The management of intellectual property will also fall under the remit of this committee
  and this may also involve the inclusion of equipment/food manufacturing project
  partners for specific components of the management meetings (at the month 1
  meeting).
- Formal Meetings will be held in months 1, 10, 20, 30 and 36 though informal communications will be an ongoing feature throughout the project lifetime.
- As outlined in the Communication and Dissemination Plan, a Communications Manager will be appointed at the kick off meeting.

As outline in the Management of Risks section of the DOW to ensure the harmonious running of the project, a risk identification, probable impacts on the project, and probability of occurrence will be periodically checked at the management meetings. A contingency plan will be in place to minimize loss of time, budget and results (see Risk Analysis).

#### 8) Ethical considerations and health and safety

As a member of a pan-European consortium SHU is aware of and fully committed to abiding by all principles expressed in relevant international texts or codes of practice on ethics. A thorough ethics self-assessment has been performed in accordance with the European Commission's H2020 ethics guidance document. A completed ethical issues table is available on request but the coordinator can confirm that this research project does not involve any sensitive ethical issues as outlined in Section 1-10 of the guidelines for getting our proposal 'ethics-ready'.

Furthermore the consortium feels that the proposed research is in compliance with "Guidance Note – Ethics and Food-Related Research" which outlines core issues of ethical concern in food-related research.

Appropriate safety provisions will be taken at all times during the research work. In all cases, actions undertaken during the course of the project will fulfil all the legal or ethical requirements of the Member States in which they are carried out.

#### 9) Project Management and Team

Within Sheffield Hallam University, research projects are subject to a monitoring process made up of meetings at the beginning and close of a project, as well as at annual intervals. These projects review progress and deliverables, health and safety, finances and claims, REF implications, publications, ethics and risk assessments and Intellectual Property. In addition, ad hoc research centre meetings take place to address specific operational challenges.

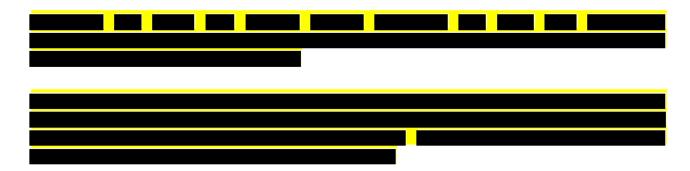
Internal auditors work on behalf of the University's management team and Audit and Risk Committee. Its function is to evaluate the internal controls, risk management and governance processes and provide advice for improvement to help ensure that the University achieve its objectives efficiently and effectively. Internal audit is a separate team and has a different role from the external auditors. The University's internal audit service is provided by KPMG LLP, a professional services firm working extensively in the Higher Education and wider public sector. Its activities within the University are managed by the Chief Operating officer, working closely with the University Secretary, and supported by Governance Services. There is an agreed a protocol for working with KPMG which sets out how the internal audit process is managed (including timescales for responses).

External auditors have a statutory duty to examine and give an opinion on the University's annual financial statements, review the financial aspects of corporate governance and assess the overall use of public resources. The University's external auditors are Grant Thornton LLP, a large professional services firm.

The external auditors are also required to give their professional and independent view on other work performed by the University such as the audit of grant claims and other contracts which require an audit as part of the contract terms and conditions. All such work must be performed by the appointed external auditors.

#### 10) Team skills and expertise

The centre has extensive industry knowledge and pioneering technical expertise, utilising world class facilities to develop leading edge solutions to the food engineering and food processing challenges of the food and drink sector. The centre supports the sector by developing unique partnerships between manufacturers, government and industry stakeholders, to generate innovative and ground breaking solutions.
The centre's work supports organisations from multinationals through to small, local food
processors.



11) Summary of staff time involved per financial year (in days) and total days per staff

	Staff time per financial year in days (whole days only				
Name of staff member. (If not yet appointed enter the task to be performed e.g. Res. Asst.)		19/20	20/21	21/22	Total Days

# **SCHEDULE 2 – PRICING**

1) Project Costs: Cost Breakdown

1) Project Costs: Cost Breakdown					
Financial years (April – March) (e.g. 13/14)					
	Year 18 / 19	Year 19 / 20	Year 20 / 21	Year 21 / 22	Total
Cost	£	£	£	£	£
Pay costs	_		_	_	_
Consumables					0
Equipment					
Travel expenses	_	_	_	_	
Overheads	_				
Sub contracts <sup>1</sup>					Ō
Other**	_	_	_	_	
Total costs* (FINANCIAL year)					
*Excl VAT					
VAT (FINANCIAL year)	0	0	0	0	0

#### 2) Cost Details

Personnel: SHU will recruit 1 contract researcher to work on this project for the full duration of 36 months. The researcher will have knowledge of both food processing and advanced control engineering techniques and will be supervised by experienced permanent research staff. She/he will carry out the experiments and the evaluation of process and control parameters to develop the fundamental understanding and implementation of the new system. Costs have been calculated on standard SHU research pay and cost allocations in line with Research Council UK guidelines. The appointment of young researchers to this project will support their specific development and career and the development of the UK research base.

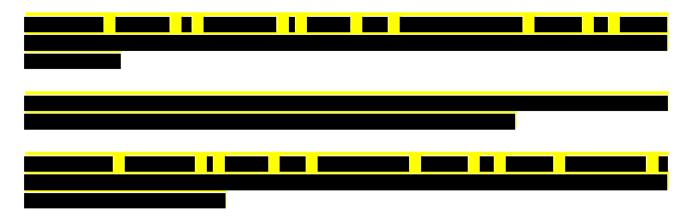
Travel: This budget includes the travelling expenses to attend and participate in consortia coordination meetings and project research meetings to review and analyse the work package results. This travel will also support short visits to partner research facilities to support the cooperation and the exchange of knowledge. The plans include attendance at least three international conferences during the project life.

Consumables/Equipment: This budget includes the purchase of small items of laboratory and analysis equipment to complement the MEF facilities at SHU. Planned equipment purchases include instrumentation for power and temperature control, MEF components, digital controllers and computer components for data capture during experimentation. Additional purchases of small electrical & electronic components, cables, contactors and consumables are included. The sum includes the use of other laboratory consumables needed to carry out detailed materials analysis pre and post materials processing.

#### 3) Address to which payment should be made

Finance Directorate
Sheffield Hallam University
City Campus
Oneleven Level
1-11 Arundel Gate
Sheffield S1 2PN

# 4) Insurance



#### SCHEDULE 3 - CHANGE CONTROL

## **Contract Change Note ("CCN")**

CCN 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 amended all other terms of the Original Contract shall remain effective.
- 3. This CCN takes effect from the date on which both Parties communicate acceptance of its terms via Bravo.

# SCHEDULE 4 - COMMERCIALLY SENSITIVE INFORMATION

[insert commercially sensitive information as appropriate and if known the dates that the information will remain commercially sensitive]

- 1.1 Without prejudice to the Authority's general obligation of confidentiality, the Parties acknowledge that the Authority may have to disclose Information in or relating to the Contract following a Request for Information pursuant to clause E5 (Freedom of Information).
- 1.2 In this Schedule the Parties have sought to identify the Contractor's Confidential Information that is genuinely commercially sensitive and the disclosure of which would be contrary to the public interest.
- 1.3 Where possible the Parties have sought to identify when any relevant Information will cease to fall into the category of Information to which this Schedule applies.
- 1.4 Without prejudice to the Authority's obligation to disclose Information in accordance with the FOIA and the EIR, the Authority will, acting reasonably but in its sole discretion, seek to apply the commercial interests exemption set out in s.43 of the FOIA to the Information listed below.

CONTRACTOR'S COMMERCIALLY SENSITIVE INFORMATION	DATE	DURATION CONFIDENTIALITY	OF