

Crown Commercial Service

CONSTRUCTION PROFESSIONAL SERVICES FRAMEWORK SCHEDULE 5

**TEMPLATE CALL OFF AGREEMENT (INCORPORATING THE NEC4 PROFESSIONAL SERVICES SHORT
CONTRACT JUNE 2017 (INCLUDING AMENDMENTS ISSUED JANUARY 2019 AND OCTOBER 2020)
AND CONTRACT DATA**

Date 26/01/2024

FORM OF AGREEMENT

**Incorporating the NEC4 Professional Services Short Contract June 2017 incorporating amendments
January 2019 and October 2020**

Between

Environment Agency

And

WSP UK Limited

For the provision of

Groundwater Modelling - Broads SAC Sustainable Abstraction Work

THIS AGREEMENT is made the 26th of January 2024

PARTIES:

1. **ENVIRONMENT AGENCY** acting as part of the Crown (the "**Client**"); and
2. **WSP UK LIMITED** which is a company incorporated in and in accordance with the laws of England and Wales, Company No. **01383511** whose registered office address is at **WSP House, 70, Chancery Lane, London, WC2A 1AF** (the "**Consultant**").

BACKGROUND

- (A) The Minister for the Cabinet Office (the "**Cabinet Office**") as represented by Crown Commercial Service, a trading fund of the Cabinet Office, without separate legal personality (the "**Authority**"), established a framework for construction professional services for the benefit of public sector bodies.
- (B) The *Consultant* was appointed to the framework and executed the framework agreement (with reference number RM6165) which is dated 12/08/2023 (the "**Framework Agreement**"). In the Framework Agreement, the Consultant is identified as the "Supplier".
- (C) The *Consultant* has agreed to Provide the Services in accordance with this agreement and the Framework Agreement.

IT IS AGREED AS FOLLOWS:

1. The *Client* will pay the *Consultant* the amount due and carry out his duties in accordance with the *conditions of contract* identified in the Contract Data and the Contract Schedules.
2. The *Consultant* will Provide the Service in accordance with the *conditions of contract* identified in the Contract Data and the Contract Schedules.

This contract incorporates the conditions of contract in the form of the NEC4 Professional Services Short Contract June 2017 Edition incorporating amendments January 2019 and October 2020 and incorporating the additional conditions specified in the Client's Contract Data, which form this contract together with the documents referred to in it. References in the NEC4 Professional Services Short Contract June 2017 Edition incorporating amendments January 2019 and October 2020 to "the contract" are references to this contract.

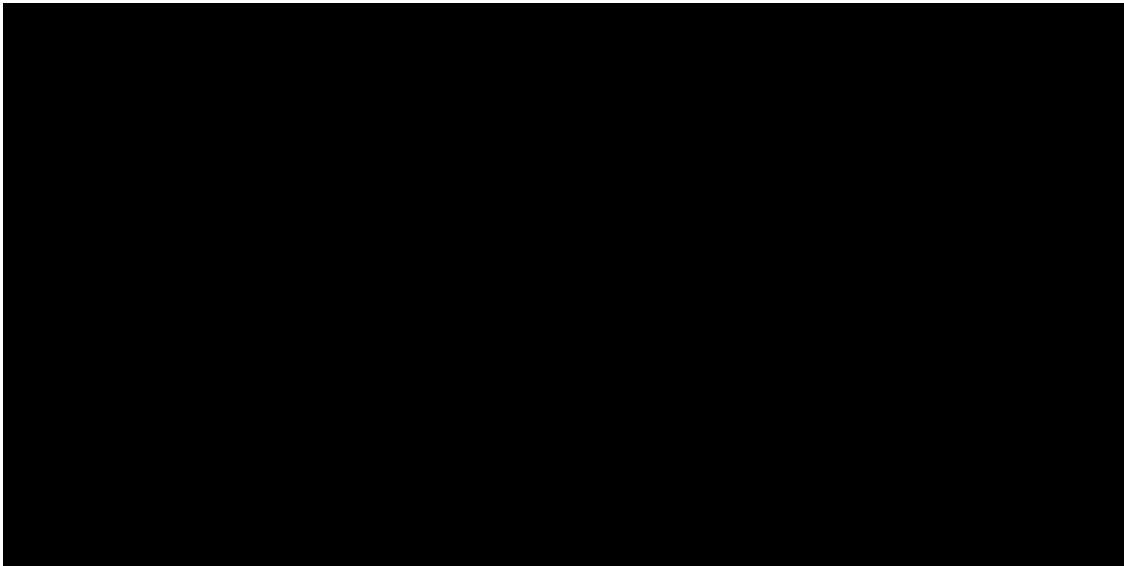
3. This contract and the Framework Agreement is the entire agreement between the parties in relation to the *service* and supersedes and extinguishes all prior arrangements, understandings, agreements, statements, representations or warranties (whether written or oral) relating thereto.
4. Neither party has been given, nor entered into this contract in reliance on any arrangements, understandings, agreements, statements, representations or warranties other than those expressly set out in this agreement.
5. Nothing in clauses 4 or 5 shall exclude liability in respect of misrepresentations made fraudulently.

Executed under hand

Signed for on behalf of the Authority, the Client:



Signed for on behalf of the Consultant – WSP:



Short Contract

A contract between

Environment Agency

and

WSP UK Limited

for

the provision of Groundwater Modelling - Broads SAC Sustainable
Abstraction Work

Contract Forms

Contract Data

The *Consultant's* Offer

Price List

Scope

**Notes about the contract are printed in boxes
like this one. They are not part of the contract**

Contract Data

The *Client's* Contract Data

The *Client* is

Name	Environment Agency
Address for communications	Environment Agency Horizon House Deanery Road Bristol BS1 5AH
Address for electronic communications	
The service is	Groundwater Modelling - Broads SAC Sustainable Abstraction Work
The starting date is	12 th August 2023
The completion date is	31 st March 2025
The delay damages are	n/a per day

The *law of the contract* is England and Wales

The *period for reply* is 2 weeks
The *defects date* is n/a weeks after Completion
The *assessment date* is the 1st of each month

The United Kingdom Housing Grants, Construction and Regeneration Act (1996) **does not** apply

The *Adjudicator* is:

Name	'to be confirmed'
Address for communications	'to be confirmed'
Address for electronic communications	'to be confirmed'

Contract Data

The *Client's* Contract Data

The interest rate on late payments is % per complete week of delay

Insert a rate only if a rate less than 0.5% per week of delay has been agreed.

The *Client* provides this
insurance

Only enter details here if the *Client* is to provide insurance.

The *Consultant* provides the following insurance cover

Contract Data

The *Client's* Contract Data

The *conditions of contract* are the NEC4 Professional Service Short Contract June 2017 incorporating amendments January 2019 and October 2020 and the following additional conditions

Only enter details here if additional conditions are required

Option Z2 Identified and defined terms

[applies]

11.3 (1) Auditor is:

- the *Client's* internal and external auditors;
- the *Client's* statutory or regulatory auditors;
- the Comptroller and Auditor General, their staff and/or any appointed representatives of the National Audit Office;
- HM Treasury or the Cabinet Office;
- any party formally appointed by the *Client* to carry out audit or similar review functions; and
- successors or assigns of any of the above;

11.3 (2) Change of Control is a change of control within the meaning of Section 450 of the Corporation Tax Act 2010;

11.3 (3) Client Confidential Information is all Personal Data and any information, however it is conveyed, that relates to the business, affairs, developments, trade secrets, know-how, personnel, and contractors of the *Client*, including all IPRs, together with all information derived from any of the above, and any other information clearly designated as being confidential (whether or not it is marked "confidential") or which ought reasonably be considered to be confidential.

11.3 (4) Client Data is 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 supplied to the *Consultant* by or on behalf of the *Client*,
- which the *Consultant* is required to generate, process, store or transmit pursuant to this contract or

- which are any Personal Data for which the *Client* is the Data Controller to the extent that such Personal Data is held or processed by the Consultant.

11 (5) Client's Premises are premises owned, occupied or leased by the Client and the site of any works to which the *service* relates.

11.3 (6) Commercially Sensitive Information is the information agreed between the Parties (if any) comprising the information of a commercially sensitive nature relating to the *Consultant*, the charges for the *service*, its IPR or its business or which the *Consultant* has indicated to the *Client* that, if disclosed by the *Client*, would cause the *Consultant* significant commercial disadvantage or material financial loss.

11.3 (7) Confidential Information is the Client's Confidential Information and/or the Consultant's Confidential Information.

11.3 (8) Contracting Body is any Contracting Body as defined in Regulation 5(2) of the Public Contracts (Works, Service and Supply) (Amendment) Regulations 2000 other than the Client.

11.3 (9) Consultant's Confidential Information is any information, however it is conveyed, that relates to the business, affairs, developments, trade secrets, know-how, personnel and consultants of the *Consultant*, including IPRs, together with all information derived from the above, and any other information clearly designated as being confidential (whether or not it is marked as "confidential") or which ought reasonably to be considered to be confidential, including the Commercially Sensitive Information.

11.3 (10) Crown Body is any department, office or agency of the Crown.

11.3 (11) DASVOIT is the Disclosure of Tax Avoidance Schemes: VAT and other indirect taxes contained in the Finance (No.2) Act 2017.

11.3 (12) Data Controller has the meaning given to it in the Data Protection Legislation.

11.3 (13) Data Protection Legislation is (i) the GDPR, (ii) the Data Protection Act 2018 to the extent that it relates to processing of personal data and privacy; (iii) all applicable Law about the processing of personal data and privacy, which, pending a decision from the competent authorities of the EU on the adequacy of the UK data protection regime will include the requirements set out or referenced in Part Three, Title VII, Article 71(1) of the Withdrawal Agreement signed by the UK and the EU in December 2019;

11.3 (14) DOTAS is the Disclosure of Tax avoidance Schemes rules which require a promoter of tax schemes to tell HM Revenue & Customs of any specified notable arrangements or proposals and to provide prescribed information on those arrangements or proposals within set time limits as contained in Part 7 of the Finance Act 2004 and in secondary legislation made under vires contained in Part 7 of the Finance Act 2004 and as extended to National Insurance Contributions by the National Insurance Contributions (Application of Part 7 of the Finance Act 2004) Regulations 2012, SI 2012/1868 made under s.132A Social Security Administration Act 1992.

11.3 (15) Environmental Information Regulations is the Environmental Information Regulations 2004 and any guidance and/or codes of practice issued by the Information Commissioner in relation to such regulations.

11.3 (16) FOIA is the Freedom of Information Act 2000 and any subordinate legislation made under this Act from time to time together with any guidance and/or codes of practice issued by the Information Commissioner in relation to such legislation.

11.3 (17) General Anti-Abuse Rule is

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

11.3 (18) Halifax Abuse Principle is the principle explained in the CJEU Case C-255/02 Halifax and others.

11.3 (19) Intellectual Property Rights or "IPRs" is

- copyright, rights related to or affording protection similar to copyright, rights in databases, patents and rights in inventions, semi-conductor topography rights, trade marks, rights in internet domain names and website addresses and other rights in trade names, designs, Know-How, trade secrets and other rights in Confidential Information,
- applications for registration, and the right to apply for registration, for any of the rights listed in the first bullet point that are capable of being registered in any country or jurisdiction,
- all other rights having equivalent or similar effect in any country or jurisdiction and
- all or any goodwill relating or attached thereto.

11.3 (20) Law is any 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 *Consultant* is bound to comply under the *law of the contract*.

11.3 (21) An Occasion of Tax Non-Compliance is

- where any tax return of the *Consultant* submitted to a Relevant Tax Authority on or after 1 October 2012 is found on or after 1 April 2013 to be incorrect as a result of
- a Relevant Tax Authority successfully challenging the *Consultant* 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 or
- the failure of an avoidance scheme which the *Consultant* was involved in, and which was, or should have been, notified to a Relevant Tax Authority under DAVOIT, DOTAS or VADR or any equivalent or similar regime and

where any tax return of the *Consultant* 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 Contract Date or to a civil penalty for fraud or evasion.

11.3 (22) Personal Data has the meaning given to it in the Data Protection Legislation.

11.3 (23) Prohibited Act is

- to directly or indirectly offer, promise or give any person working for or engaged by the *Client* or other Contracting Body or any other public body a financial or other advantage to
 - induce that person to perform improperly a relevant function or activity or
 - reward that person for improper performance of a relevant function or activity,
- 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 this contract,
- committing any offence
 - under the Bribery Act 2010 (or any legislation repealed or revoked by such Act),
 - under legislation or common law concerning fraudulent acts or

- defrauding, attempting to defraud or conspiring to defraud the *Client* or
- any activity, practice or conduct which would constitute one of the offences listed above if such activity, practice or conduct had been carried out in the UK.

11.3 (24) Request for Information is a request for information or an apparent request under the Code of Practice on Access to government Information, FOIA or the Environmental Information Regulations.

11.3 (25) Relevant Requirements are all applicable Laws 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.

11.3 (26) Relevant Tax Authority is HM Revenue & Customs, or, if applicable, a tax authority in the jurisdiction in which the *Consultant* is established.

11.3 (27) Security Policy means the *Client's* security policy attached as Appendix 1 to Contract Schedule J (Security Provisions) as may be updated from time to time.

11.3 (28) VADR is the VAT disclosure regime under Schedule 11A of the Value Added Tax Act 1994 (VATA 1994) (as amended by Schedule 1 of the Finance (No. 2) Act 2005).

Option Z4 Admittance to Client's Premises

[does not apply]

Option Z5 Prevention of fraud and bribery

[applies]

17.4.1 The *Consultant* represents and warrants that neither it, nor to the best of its knowledge any of its people, have at any time prior to the Contract Date

- committed a Prohibited Act or been formally notified that it is subject to an investigation or prosecution which relates to an alleged Prohibited Act or
- 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.

17.4.2 During the carrying out of the *service* the *Consultant* does not

- commit a Prohibited Act and
- do or suffer anything to be done which would cause the *Client* or any of the *Client's* 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.

17.4.3 In Providing the Service the *Consultant*

- establishes, maintains and enforces, and requires that its Subcontractors 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,
- keeps appropriate records of its compliance with this contract and make such records available to the *Client* on request and
- provides and maintains and where appropriate enforces an anti-bribery policy (which shall be disclosed to the *Client* on request) to prevent it and any *Consultant's* people or any person acting on the *Consultant's* behalf from committing a Prohibited Act.

17.4.4 The *Consultant* immediately notifies the *Client* in writing if it becomes aware of any breach of clause 17.4.1, or has reason to believe that it has or any of its people or Subcontractors have

- been subject to an investigation or prosecution which relates to an alleged Prohibited Act,
- 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 or
- received a request or demand for any undue financial or other advantage of any kind in connection with the performance of this contract or otherwise suspects that any person or party directly or indirectly connected with this contract has committed or attempted to commit a Prohibited Act.

17.4.5 If the *Consultant* makes a notification to the *Client* pursuant to clause 17.4.4, the *Consultant* responds promptly to the *Client's* enquiries, co-operates with any investigation, and allows the *Client* to audit any books, records and/or any other relevant documentation in accordance with this contract.

17.4.6 If the *Consultant* breaches Clause 17.4.3, the *Client* may by notice require the *Consultant* to remove from carrying out the *service* any person whose acts or omissions have caused the *Consultant's* breach.

Option Z6 Equality and Diversity

[applies]

27.1 The *Consultant* performs its obligations under this contract in accordance with

- all applicable equality Law (whether in relation to race, sex, gender reassignment, religion or belief, disability, sexual orientation, pregnancy, maternity, age or otherwise); and
- any other requirements and instructions which the *Client* reasonably imposes in connection with any equality obligations imposed on the *Client* at any time under applicable equality Law;

27.2 The *Consultant* takes all necessary steps, and informs the *Client* 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).

Option Z7 Legislation and Official Secrets

[does not apply]

Option Z8 Conflict of Interest

[applies]

28.1. The *Consultant* takes appropriate steps to ensure that neither the *Consultant* nor any of its personnel are placed in a position where (in the reasonable opinion of the *Client*) there is or may be an actual conflict, or a potential conflict, between the pecuniary or personal interests of the *Consultant* or its personnel and the duties owed to the *Client* under this contract.

28.2. The *Consultant* promptly notifies and provides full particulars to the *Client* if such conflict referred to in clause 28.1 arises or may reasonably be foreseen as arising.

28.3. The *Client* may terminate the *Consultant's* obligation to Provide the Service immediately under reason R11 and/or to take such other steps the *Client* deems necessary where, in the reasonable opinion of the *Client*, there is or may be an actual conflict, or a potential conflict, between the pecuniary or personal interests of the *Consultant* and the duties owed to the *Client* under this contract.

Option Z9 Publicity and Branding

[applies]

29.1 The *Consultant* does not

- make any press announcements or publicise this contract in any way
- use the *Client's* name or brand in any promotion or marketing or announcement of the contract

without approval of the *Client*.

29.2. The *Client* is entitled to publicise the contract in accordance with any legal obligation upon the *Client*, including any examination of the contract by the National Audit Office pursuant to the National Audit Act 1983 or otherwise.

Option Z10 Freedom of information

[applies]

26.2 The *Consultant* acknowledges that unless the *Service Manager* has notified the *Consultant* that the *Client* is exempt from the provisions of the FOIA, the *Client* is subject to the requirements of the Code of Practice on Government Information, the FOIA and the Environmental Information Regulations. The *Consultant* cooperates with and assists the *Client* so as to enable the *Client* to comply with its information disclosure obligations.

26.3 The *Consultant*

- transfers to the *Service Manager* all Requests for Information that it receives as soon as practicable and in any event within two working days of receiving a Request for Information,
- provides the *Service Manager* with a copy of all information in its possession, or power in the form that the *Service Manager* requires within five working days (or such other period as the *Service Manager* may specify) of the *Service Manager's* request,
- provides all necessary assistance as reasonably requested by the *Service Manager* to enable the *Client* to respond to the Request for Information within the time for compliance set out in section 10 of the FOIA or regulation 5 of the Environmental Information Regulations and
- procures that its Subcontractors do likewise.

26.4 The *Client* is responsible for determining in its absolute discretion whether any information is exempt from disclosure in accordance with the provisions of the Code of Practice on Government Information, FOIA or the Environmental Information Regulations.

26.5 The *Consultant* does not respond directly to a Request for Information unless authorised to do so by the *Service Manager*.

26.6 The *Consultant* acknowledges that the *Client* may, acting in accordance with Cabinet Office Freedom of Information Code of Practice, be obliged to disclose information without consulting or obtaining consent from the *Consultant* or despite the *Consultant* having expressed negative views when consulted.

26.7 The *Consultant* ensures that all information is retained for disclosure throughout the *period for retention* and permits the *Service Manager* to inspect such records as and when reasonably requested from time to time.

Option Z13 Confidentiality and Information Sharing

[applies]

26.8 Except to the extent set out in this clause or where disclosure is expressly permitted elsewhere in this contract, each Party shall

- treat the other Party's Confidential Information as confidential and safeguard it accordingly,

- not disclose the other Party's Confidential Information to any other person without prior written consent,
- immediately notify the other Party if it suspects unauthorised access, copying, use or disclosure of the Confidential Information and
- notify the Serious Fraud Office where the Party has reasonable grounds to believe that the other Party is involved in activity that may be a criminal offence under the Bribery Act 2010.

26.9 The clause above shall not apply to the extent that

- such disclosure is a requirement of the Law placed upon the party making the disclosure, including any requirements for disclosure under the FOIA or the Environmental Information Regulations pursuant to clause Z10 (Freedom of Information),
- such information was in the possession of the party making the disclosure without obligation of confidentiality prior to its disclosure by the information owner,
- such information was obtained from a third party without obligation of confidentiality,
- such information was already in the public domain at the time of disclosure otherwise than by a breach of this contract or
- it is independently developed without access to the other party's Confidential Information.

26.10 The *Consultant* may only disclose the Client Confidential Information to the people who are directly involved in Providing the Service and who need to know the information, and shall ensure that such people are aware of and shall comply with these obligations as to confidentiality. The *Consultant* shall not, and shall procure that the *Consultant's* people do not, use any of the Client Confidential Information received otherwise than for the purposes of this contract.

26.11 The *Consultant* may only disclose the Client Confidential Information to *Consultant's* people who need to know the information, and shall ensure that such people are aware of, acknowledge the importance of, and comply with these obligations as to confidentiality. In the event that any default, act or omission of any *Consultant's* people causes or contributes (or could cause or contribute) to the *Consultant* breaching its obligations as to confidentiality under or in connection with this contract, the *Consultant* shall take such action as may be appropriate in the circumstances, including the use of disciplinary procedures in serious cases. To the fullest extent permitted by its own obligations of confidentiality to any *Consultant's* people, the *Consultant* shall provide such evidence to the *Client* as the *Client* may reasonably require (though not so as to risk compromising or prejudicing the case) to demonstrate that the *Consultant* is taking appropriate steps to comply with this clause, including copies of any written communications to and/or from *Consultant's* people, and any minutes of meetings and any other records which provide an audit trail of any discussions or exchanges with *Consultant's* people in connection with obligations as to confidentiality.

26.12 At the written request of the *Client*, the *Consultant* shall procure that those members of the *Consultant's* people identified in the *Client's* request signs a confidentiality undertaking prior to commencing any work in accordance with this contract.

26.13 Nothing in this contract shall prevent the *Client* from disclosing the Consultant's Confidential Information

- to any Crown Body or any other Contracting Bodies. All Crown Bodies or Contracting Bodies receiving such Confidential Information shall be entitled to further disclose the Consultant's Confidential Information to other Crown Bodies or other Contracting Bodies on the basis that the information is confidential and is not to be disclosed to a third party which is not part of any Crown Body or any Contracting Body,
- to a professional adviser, contractor, consultant, supplier or other person engaged by the *Client* or any Crown Body (including any benchmarking organisation) for any purpose connected with this contract, or any person conducting an Office of Government Commerce Gateway Review,
- for the purpose of the examination and certification of the *Client's* accounts,
- for any examination pursuant to Section 6(1) of the National Audit Act 1983 of the economy, efficiency and effectiveness with which the *Client* has used its resources,
- for the purpose of the exercise of its rights under this contract or to a proposed successor body of the *Client* in connection with any assignment, novation or disposal of any of its rights, obligations or liabilities under this contract,
- and for the purposes of the foregoing, disclosure of the Consultant's Confidential Information shall be on a confidential basis and subject to a confidentiality agreement or arrangement containing terms no less stringent than those placed on the *Client* under this clause 26.13.

26.14 The *Client* shall use all reasonable endeavours to ensure that any government department, Contracting Body, people, third party or subcontractor to whom the Consultant's Confidential Information is disclosed pursuant to the above clause is made aware of the *Client's* obligations of confidentiality.

26.15 Nothing in this clause shall prevent either party from using any techniques, ideas or know-how gained during the performance of the contract in the course of its normal business to the extent that this use does not result in a disclosure of the other party's Confidential Information or an infringement of IPR.

26.16 The *Client* may disclose the Consultant's Confidential Information

- to Parliament and Parliamentary Committees or if required by any Parliamentary reporting requirement,

- to the extent that the *Client* (acting reasonably) deems disclosure necessary or appropriate in the course of carrying out its public functions.

Option Z14 Security Requirements

[does not apply]

Option Z16 Tax Compliance

[applies]

26.17 The *Consultant* represents and warrants that at the Contract Date, it has notified the *Client* in writing of any Occasions of Tax Non-Compliance or any litigation that it is involved in that is in connection with any Occasions of Tax Non-Compliance.

26.18 If, at any point prior to the *defects date*, an Occasion of Tax Non-Compliance occurs, the *Consultant* shall

- notify the *Client* in writing of such fact within 5 days of its occurrence and
- promptly provide to the *Client*
 - details of the steps which the *Consultant* is taking to address the Occasions of Tax Non-Compliance and to prevent the same from recurring, together with any mitigating factors that it considers relevant and
 - such other information in relation to the Occasion of Tax Non-Compliance as the *Client* may reasonably require.

Option Z22 Fair payment

[does not apply]

Option Z26 Building Information Modelling

[does not apply]

Option Z42 The Housing Grants, Construction and Regeneration Act 1996

[does not apply]

Option Z44 Intellectual Property Rights

[applies]

In this clause 70 only:

“**Document**” means all designs, drawings, specifications, software, electronic data, photographs, plans, surveys, reports, and all other documents and/or information prepared by or on behalf of the Consultant in relation to this contract.

70.1 The Intellectual Property Rights in all Documents prepared by or on behalf of the *Consultant* in relation to this contract and the work executed from them remains the property of the *Consultant*. The *Consultant* hereby grants to the *Client* an irrevocable, royalty free, non-exclusive licence to use and reproduce the Documents for any and all purposes connected with the construction, use, alterations or demolition of the *service*. Such licence entitles the *Client* to grant sub-licences to third parties in the same terms as this licence provided always that the *Consultant* shall not be liable to any licensee for any use of the Documents or the Intellectual Property Rights in the Documents for purposes other than those for which the same were originally prepared by or on behalf of the *Consultant*.

70.2 The *Client* may assign novate or otherwise transfer its rights and obligations under the licence granted pursuant to clause 70.1 to a Crown Body or to anybody (including any private sector body) which performs or carries on any functions and/or activities that previously had been performed and/or carried on by the *Client*.

70.3 In the event that the *Consultant* does not own the copyright or any Intellectual Property Rights in any Document the *Consultant* uses all reasonable endeavours to procure the right to grant such rights to the *Client* to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event that the *Consultant* is unable to procure the right to grant to the *Client* in accordance with the foregoing the *Consultant* procures that the third party grants a direct licence to the *Client* on industry acceptable terms.

70.4 The *Consultant* waives any moral right to be identified as author of the Documents in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Documents subjected to derogatory treatment in accordance with section 8 of that Act as against the *Client* or any licensee or assignee of the *Client*.

70.5 In the event that any act unauthorised by the *Client* infringes a moral right of the *Consultant* in relation to the Documents the *Consultant* undertakes, if the *Client* so requests and at the *Client's* expense, to institute proceedings for infringement of the moral rights.

70.6 The *Consultant* warrants to the *Client* that it has not granted and shall not (unless authorised by the *Client*) grant any rights to any third party to use or otherwise exploit the Documents.

70.7 The *Consultant* supplies copies of the Documents to the *Client* and to the *Client's* other contractors and consultants for no additional fee to the extent necessary to enable them to discharge their respective functions in relation to this contract or related service.

70.8 After the termination or conclusion of the *Consultant's* employment hereunder, the *Consultant* supplies the *Client* with copies and/or computer discs of such of the Documents as the *Client* may from time to time request and the *Client* pays the *Consultant's* reasonable costs for producing such copies or discs.

70.9 In carrying out the *service* the *Consultant* does not infringe any Intellectual Property Rights of any third party. The *Consultant* indemnifies the *Client* against claims, proceedings,

compensation and costs arising from an infringement or alleged infringement of the Intellectual Property Rights of any third party.

Option Z45 HMRC Requirements

[does not apply]

Option Z46 MoD DEFCON Requirements

[does not apply]

Option Z47 Small and Medium Sized Enterprises (SMEs)

[does not apply]

Option Z48 Apprenticeships

[does not apply]

Option Z49 Change of Control

[applies]

19.1 The *Consultant* notifies the *Client* and the *Service Manager* immediately in writing and as soon as the *Consultant* is aware (or ought reasonably to be aware) that it is anticipating, undergoing, undergoes or has undergone a Change of Control and provided such notification does not contravene any Law. The *Consultant* ensures that any notification sets out full details of the Change of Control including the circumstances suggesting and/or explaining the Change of Control.

91.9 The *Client* may terminate the *Consultant's* obligation to Provide the Service (which shall take effect as termination under reason R11) within six months from

- being notified in writing that a Change of Control is anticipated or is in contemplation or has occurred; or
- where no notification has been made, the date that the *Client* becomes aware that a Change of Control is anticipated or is in contemplation or has occurred but shall not be permitted to terminate where an approval was granted prior to the Change of Control.

Option Z50 Financial Standing

[applies]

91.10 The *Client* may terminate the *Consultant's* obligation to Provide the Service (which shall take effect as termination under reason R11) where in the reasonable opinion of the *Client* there is a material detrimental change in the financial standing and/or the credit rating of the *Consultant* which:

- adversely impacts on the *Consultant's* ability to perform its obligations under this contract; or

- could reasonably be expected to have an adverse impact on the *Consultant's* ability to perform its obligations under this contract.

Option Z51 Financial Distress

[does not apply]

Option Z52 Records, audit access and open book data

[does not apply]

Option Z100 Data Protection

[does not apply]

Option Z101 Cyber Essentials

[does not apply]

Other additional conditions

Contract Data

The *Consultant's* Contract Data

The *Consultant* is

Name

WSP UK Limited

Address for communications

WSP House
70, Chancery Lane
London
WC2A 1AF

Address for electronic
communications

[REDACTED]

The service is

Groundwater Modelling - Broads SAC Sustainable Abstraction
Work

The starting date is

12th August 2023

The completion date is

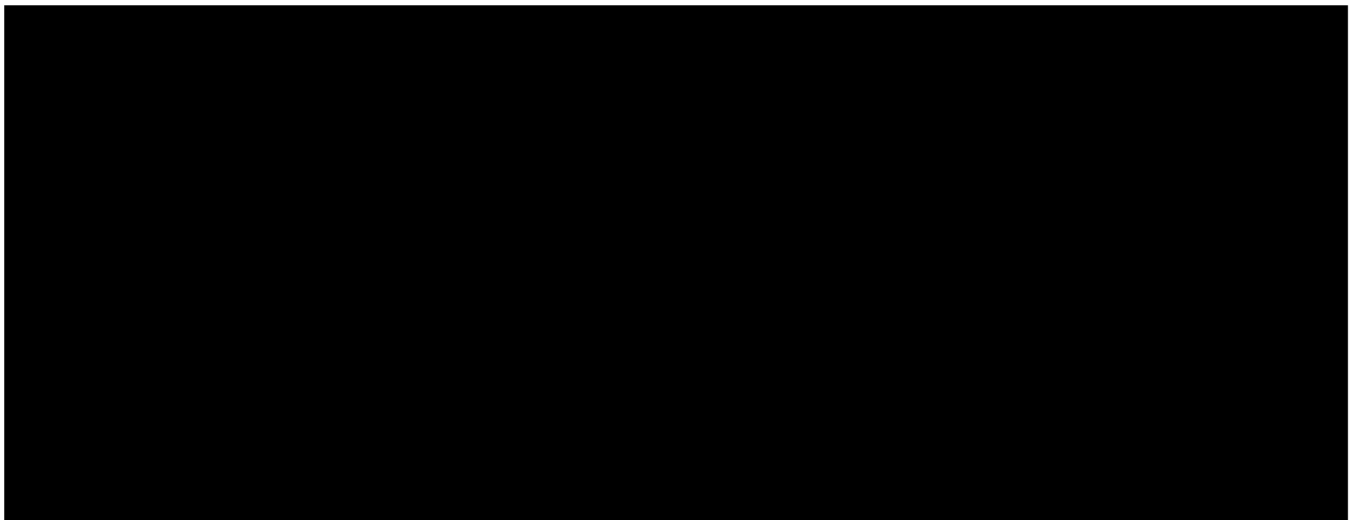
31st March 2025

The delay damages are

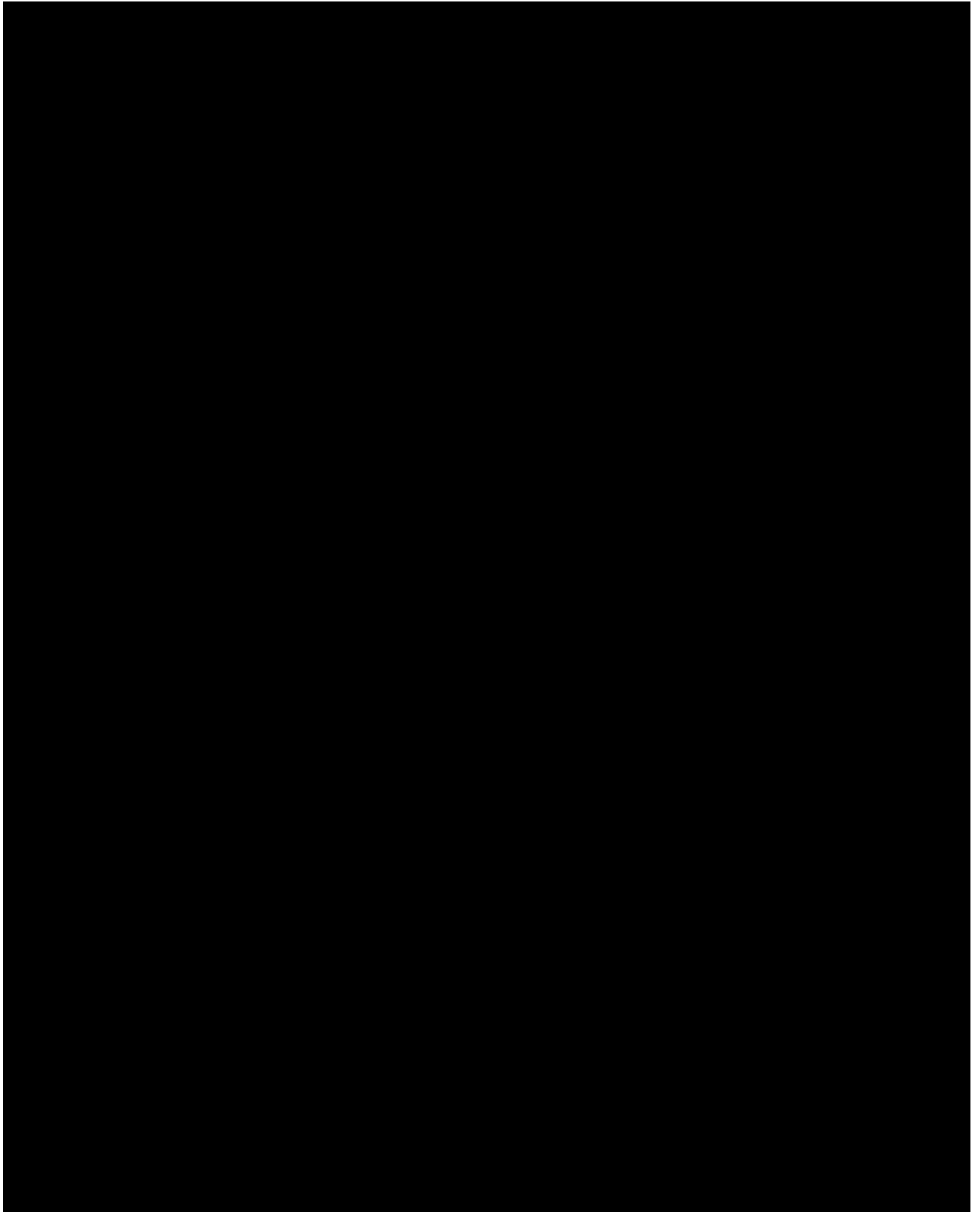
n/a | per day

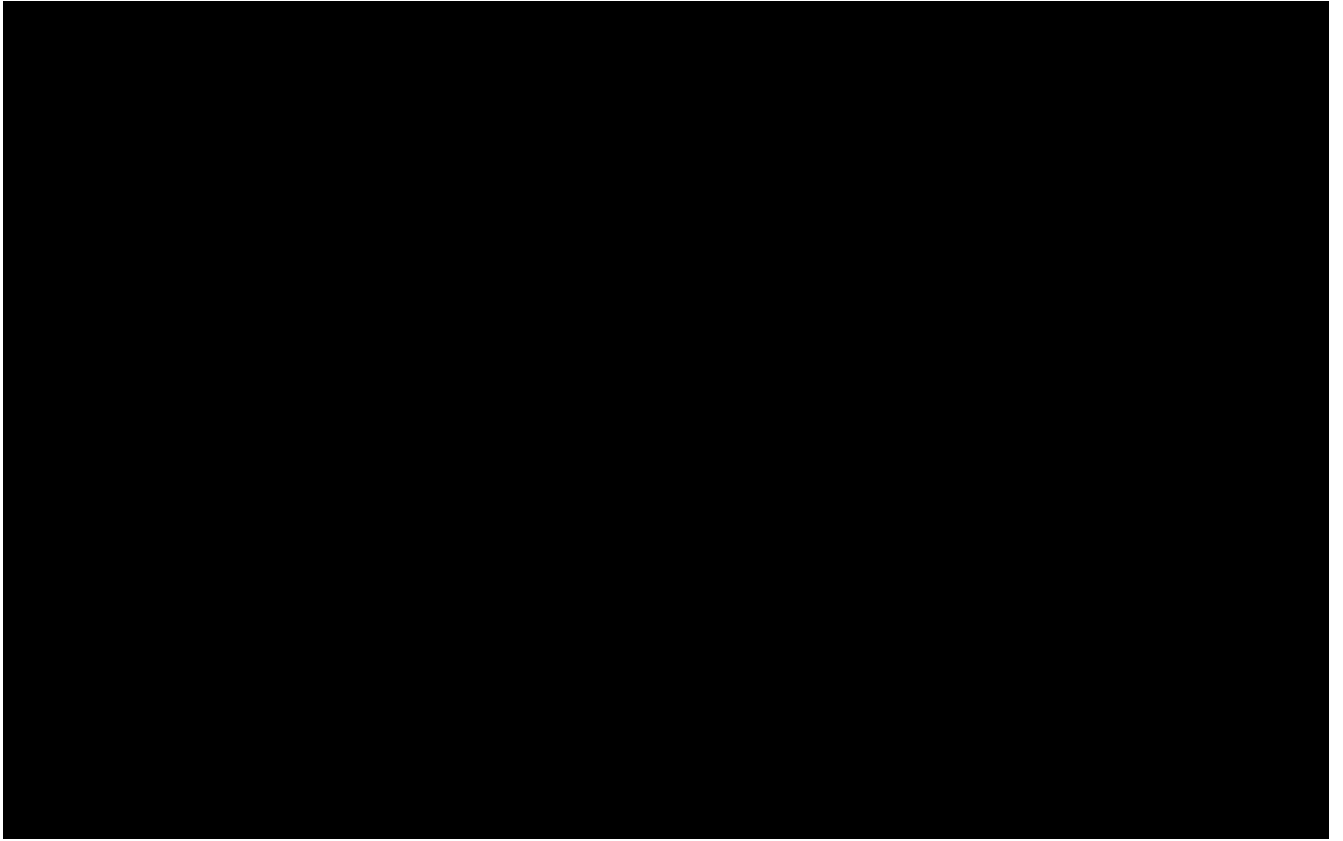
The *fee percentage* is %

The *people rates* are



The *key persons* are





The *Consultant's* Offer



Price List

[illegible]

The method and rules used to compile the Price List are

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Scope

6. The Scope should be a complete and precise statement of the *Client's* requirements. If it is incomplete or imprecise, there is a risk that the *Consultant* will interpret it differently from the *Client's* intention. Information provided by the *Consultant* should be listed in the Scope only if the *Client* is satisfied that it is required, is part of a complete statement of the *Client's* requirements and is consistent with other parts of the Scope.

1. Purpose of the Service

Provide a brief summary of why the service is being commissioned and what it will be used for.

Consultancy services are to be procured to support the Environment Agency with groundwater investigation, groundwater modelling, and interpretation and reporting of groundwater model results.

These services are to be procured to support the Environment Agency with:

- The ongoing Restoring Sustainable Abstraction (RSA) investigation for the Broads SAC
- A catchment-wide review of time-limited abstraction licences for the Broads SAC.

In order to continue with this work the proposed Direct Award is to be made through the Crown Commercial Service (CCS) Framework, Lot 6: Environmental, Environmental and Sustainability Technical advisory services in support of construction related projects and programmes. Agreement ID: RM6165

2. Description of the service

Give a complete and precise description of what the *Consultant* is required to do.

The main aims of the project are to support the EA in the following:

- To prioritise investigation of the Broadland sites within the Bure, Ant & Thurne catchments, followed by those within the Yare & Tas and Waveney catchments.
- To determine the degree of historical impacts on RSA sites within the Broadlands area (See Table 1) and identification of those licensed groundwater abstractions deemed to be having an adverse effect on the integrity of said sites either individually or in combination with other licensed abstractions.

- To run abstraction scenarios, as instructed by the EA, to determine a 'solution' which, when implemented, results in impacts that are deemed not to represent an adverse effect on the integrity of the sites.

To achieve these aims, the specific objectives of the project are as follows (note that some of the following specific objectives have already been completed for a number of sites within the Bure, Ant and Thurne catchments):

- To review the currently model representation associated with each site and refine if deemed necessary.
- To define Hydrological Sub-units (HSUs) for each site. Many of the sites will comprise a single HSU, whilst some will require coverage through multiple HSUs.
- To identify an 'area of interest' within which abstractions will form the focus of investigations. To perform a comprehensive review of the representation of abstractions within the area of interest (EA action) and ensure appropriate representation is included in the historical baseline scenario.
- To carry out validation of groundwater monitoring data from locations within the relevant wetland sites and use this information, as well as conceptual understanding and surface water stage data, to inform appropriate model refinements.
- To run historical, naturalised and fully licensed (in this case 'Run 7A corrected', also referred to as Run B1) scenarios and run the Batched Abstraction Modelling (BAM) tool, from which output will assist the EA in identifying those abstractions still likely to have an adverse effect, and to inform design of a new 'solution' abstraction scenario.
- To produce model output to illustrate the level of abstraction impacts at each site under selected scenarios (including the new 'solution') and to indicate the degree to which each scenario is compliant with respect to acceptable impacts (compared to site specific criteria and benchmarks/targets determined by the EA and Natural England).
- To report on the modelling results. This is likely to comprise three separate documents covering the Bure, Ant & Thurne, Yare & Tas and Waveney Reporting Areas.

3. Existing information

List existing information which is relevant to the service. This can include documents which the *Consultant* is to further develop

The Environment Agency, through consultation with Natural England and other stakeholders, have identified a set of criteria and associated targets against which to assess the significance of impacts from abstraction on the Ant Broads and Marshes SSSI, as well as on two smaller nearby SSSIs, namely Alderfen Broad and Broad Fen. On the basis of the modelled impact assessment for historical and fully licensed levels of abstraction, along with field evidence of in quality of European Features, the Environment Agency are not able to conclude that licensed abstraction is not, or will not, adversely affect the integrity of the Broads European sites.

Largely based on modelled drawdown at the water table at 23 selected model cells, the Environment Agency identified those licences which, either alone or in combination, contributed most to potential adverse and significant effect on the integrity of the European Features. A total of 21 licences were identified in this way, as being most likely to have an adverse effect either alone or in combination at fully licensed rates across the SSSIs with seven identified as potentially having an adverse effect alone. A further 14 licences were identified as potentially having a 'significant' effect in combination.

As series of model scenarios which focused on various combinations of reduction, removal or 'business as usual' applied to the 35 licences were carried out with two scenarios (known as Run#7 and Run#9) coming close to achieving less than 2mm drawdown at the water table in all 23 cells. The results of the modelled scenarios were compared to the criteria at the scale of hydrological sub-units (HSUs) as agreed with Natural England and subsequent recommendations from the options appraisal were for groundwater abstraction licence reductions and removals identified for Run#7 to be taken forward, along with other changes (e.g. hands off flow conditions) made to twelve surface water licences.

Having made this recommendation, the Environment Agency anticipate the need for further support with regard to the following:

- ☐ Responding to stakeholder queries/initiatives/technical work eg. the BAWAG Strategy. This may require additional model scenarios.
- ☐ Provision of further Technical Notes, or adjustments to existing Technical Notes, potentially in response to Stakeholder queries/technical work.
- ☐ Preparing and responding to the 'Minded To' consultation, and generally providing a link between the Technical Report and the Draft Determination Report.
- ☐ Preparing for Appeals; and
- ☐ Preparing for a Judicial Review.

In addition, several reports, technical notes and other model-related products which were produced by Wood in previous years may require updating and/or amendment for the purposes of supporting consultations going forward.

In parallel to the RSA process, Time Limited Licences (TLL) within the Bure, Ant and Thurne catchments are about to undergo review. The Environment Agency's National Permitting Service (NPS) require support in determining acceptable levels of abstraction across the catchments with regard to meeting Water Framework Directive (WFD) objectives and, in some cases, enhanced criteria associated with the revised Common Standards Monitoring Guide (rCSMG). In the first instance, support will be a model-based assessment of existing and proposed (e.g., Run#7 above) levels of abstraction. It is anticipated that a period of

consultation with Natural England will follow this initial appraisal, after which support is likely to be required for additional (options) scenarios and Options Appraisal.

From the year 2000, the Environment Agency has been supported by the John Wood Group ("Wood") and its predecessor consultant organisations. WSP Global Inc. acquired the Environment & Infrastructure business of John Wood Group PLC (Wood) in 2022. WSP (and its predecessor organisations) were part of a series of framework consultancy contracts let by the former Anglian Region of the Environment Agency from 2000 to 2015 and were allocated most of the project work for Norfolk, as well as the RSA work which began in 2017 and is still ongoing. WSP have therefore built up a considerable body of knowledge relating to the hydrology and ecology of groundwater-fed wetlands within the area. WSP also supported the Environment Agency with the abstraction licence determination in the vicinity of Catfield Fen and two experts from WSP gave evidence at the Public Inquiry. Following a Judicial Review which took place in July 2022, the Environment Agency were told by the Court that we had to carry out further work to investigate abstraction issues in the wider Broads SAC, including our current work in the Ant Valley.

The plan the Environment Agency have shared with the Court sets out the measures required by the Court Order and the intention to extend the approach adopted previously in the Ant Valley SSSIs to all other parts of The Broads SAC. This assessment methodology was produced by WSP and therefore it is imperative they remain involved.

4. Specifications and standards

List the specifications and standards that apply to the contract.

This work will be carried out through adherence to WSP Environment & Infrastructure Solutions UK (WSP E&IS UK) Limited internal quality assurance and financial management systems. All significant changes in the programme and costs will be recorded as they develop. WSP E&IS UK will ensure that the EA Assignment Manager is aware of all actual or potential changes to costs and programme using regular progress meetings/telephone conferences. The EA and WSP E&IS UK assignment managers will work together to identify issues (technical, time, cost) and ensure that resolution is agreed in a timely manner.

Monthly Reporting

Monthly Progress Reports (bullet point summary) for this assignment will be produced by the WSP E&IS UK Assignment Manager and included in the Monthly Reports compiled for the overall suite of ongoing Anglian projects.

The WSP E&IS UK Assignment Manager will work closely with the overall WSP E&IS UK Anglian programme manager to ensure that reports (including financial information/fee notes) are produced in a timely and efficient manner.

The reports and fee notes will provide the basis for discussions during monthly meeting/telephone conferences between the EA, WSP E&IS UK assignment manager and the WSP E&IS UK Anglian programme manager.

Monthly Project Management Meetings/Teleconferences

An assignment management meeting will take place at a minimum of once a month between the EA and WSP E&IS UK Assignment Managers for the duration of the assignment, while there are active tasks ongoing. For efficiency, these will be in the form of Teams meetings. Similarly, progress on this assignment will be discussed between the WSP E&IS UK and EA overall Anglia programme managers during their monthly Teams meetings.

Technical Progress Meetings/Teleconferences

As well as 'general' project management meetings, technical progress meetings (Teams) will be conducted nominally on a fortnightly basis and/or associated with key milestones or deliverables. These will be attended by the respective EA and WSP E&IS UK assignment managers, and selected technical managers and staff from both organisations, as appropriate to the antecedent project stage.

Site Review and Model Refinement

Site review and model refinement will not be repeated for the sites previously investigated (i.e., A, Broad Fen, Alderfen Broad, Upper Thurne Broads & Marshes and Smallburgh Fen).

Model representation at the remaining sites will be reviewed, including routing within each site, surface water stage, and comparison between modelled groundwater levels and available site-specific observed data from the EA's wetland monitoring data held on the WISKI database. Where deemed appropriate, model refinements will be carried out with those sites within the Bure, Ant & Thurne catchments given priority. This priority refinement will include any sites within the Yare & Tas and Waveney catchments which could affect outcomes for the Bure, Ant & Thurne sites.

No refinements will be carried out on the basis of information/queries that may be received from third parties during the course of the programme described in Section 5, below.

Having carried out the site reviews and associated refinements, HSUs will be identified for each site and site assessment cells will be identified (again, priority given to sites within the Bure, Ant & Thurne catchments). It is noted that HSUs for the Bure Broads and Marshes have previously been defined – these will be reviewed and confirmed as appropriate.

As part of the site review, the EA will check the current model representation of historical abstractions and 'fully licensed' abstractions as represented in Run7A (including known

required corrections and new authorisations). This will be performed on all licensed abstractions within an 'area of interest' to be confirmed by the EA. Following this check, WSP will compile appropriate 'wel' files, including appropriate implementation of Hands-off-flow (HOF) conditions, river support schemes and 'special cases.'

Scope

5. Constraints on how the *Consultant* provides the Service

State any constraints on sequence and timing of work and on method and conduct of work including the requirements for any work by the *Client*.

RISKS AND MITIGATION

The generic risks and associated mitigations identified for this assignment are:

Risk	Mitigation
Failure to achieve benefit realisation	Internal/external consultation Use of standard methods
Failure to deliver to time and cost	Estimating contingency. Progress reporting

Additional risks and mitigations that have been identified during the more detailed planning of this Project are:

Risk	Mitigation
WSP resource conflicts resulting from unforeseen higher priority Anglian work requested by client	Early recognition of issues. Regular internal EA liaison between Groundwater Team and Broadlands Team. Agreement of alternative timescales and programme.
Unavailability of Agency staff due to other commitments and delays on completing 'critical path' tasks	Forward planning and identification of alternative schedules to meet the objectives.
Failure to deliver the work to time and cost	Monthly meetings to review progress and spend. Potential issues to be raised with the Environment Agency Assignment Manager as soon as possible. Good communication within Project Team to minimise delays and overspend
Impacts of Covid-19 on availability of resources and data	Early identification of data requirements and potential for delays

Contingency in task programmes	
Refinements prove to be more complex than anticipated in some areas and/or third-party observations/data are required to be considered.	<p>Early identification of issues and agreement of way forward.</p> <p>Early consideration of likely benefit of additional refinement and agreed programme adjustment.</p> <p>Potential caveats for follow-on work and report addenda.</p>
Failure to reach an acceptable new 'solution' within a single iteration beyond Run 7A.	<p>Early assessment of key output from Run7A and any subsequent scenarios leading to early confirmation of acceptability or otherwise.</p> <p>Early discussion of results and agreed adjustment to programme.</p>
Failure to agree key criteria and targets against which acceptability of impacts can be assessed.	<p>Early consultation between EA and Natural England. Early communication of criteria/targets to WSP.</p> <p>Agreed programme adjustments if delays realised.</p>

Scope

6. Requirements for the programme

State whether a programme is required and, if it is, what form it is to be in, what information is to be shown on it, when it is to be submitted and when it is to be updated

The purpose of this task is to ensure that delivery of the assignment is effectively planned and managed, balancing the critical success factors of quality, timescale, and cost.

General Management

This will be carried out through adherence to WSP UK Limited internal quality assurance and financial management systems. All significant changes in the programme and costs will be recorded as they develop. WSP will ensure that the EA Assignment Manager is aware of all actual or potential changes to costs and programme using regular progress meetings/telephone conferences. The EA and WSP assignment managers will work together to identify issues (technical, time, cost) and ensure that resolution is agreed in a timely manner.

Consultancy services are to be procured to support the Environment Agency with groundwater investigation, groundwater modelling, and interpretation and reporting of groundwater model results.

These services are to be procured to support the Environment Agency with:

- The ongoing Restoring Sustainable Abstraction (RSA) investigation for the Broads SAC
- A catchment-wide review of time-limited abstraction licences for the Broads SAC.

Both the RSA Investigation and the time-limited licence review have become contentious and have taken on a high political profile involving Secretary of State, local MPs, stakeholders and the National Farmers Union.

Concerns with regard to abstraction in Norfolk have been raised over a long period of time, but particularly since the nationwide droughts of the 1990s. There are a number of internationally important sites of wetland conservation interest in Norfolk, many of which have been given protected status under the Habitats Directive, such as the Broads Special Area of Conservation (SAC). The sites are typically dependent on an influx of groundwater to maintain their unique character. Natural England and other eNGOs have charted a decline in the quality of the ecology on these groundwater-fed wetlands and have identified water stress due to groundwater abstraction as a factor in this decline.

In June 2021 the Environment Agency (EA) issued a Closure Report (Environment Agency, 2021) on the Ant Broads and Marshes SSSI (ABM) Restoring Sustainable Abstraction (RSA) investigations and Options Appraisal. This was subsequently reviewed by the Broadland Agricultural Water Abstractors Group (BAWAG) who issued a 'rebuttal response' in December 2021, which included an assessment of monitoring data and the suitability of the Northern East Anglia Chalk (NEAC) Model to support the decision-making processes presented in the Closure Report.

Meanwhile, the EA had also commissioned production of a Technical Report (Wood, 2022a) which, in its respective Section 6, provided a factual account of the model results which underpinned the findings in the Closure Report (i.e. model-based impacts at the ABM, Alderfen Broad and Broad Fen SSSIs). Section 7 of the Technical Report provided a similarly factual account of model-based impacts at other groundwater dependent terrestrial ecosystems (GWDTEs) across the remainder of the Bure, Ant and Thurne Catchments, including (not exclusively) the Bryant's Heath, Winterton Horsey Dunes and Upper Thurne Broads and Marshes SSSIs. The Technical Report was issued in May 2022.

BAWAG identified a number of issues with regard to model representation in the vicinity of ABM. These were addressed as described in Wood, 2022b and an Addendum (Wood, 2022c) to the Technical Report presented a factual account of the revised model-based impacts at the wetland sites mentioned above, including Smallburgh Fen.

Following judicial review of the RSA outcomes for the ABM, similar investigations are now required across all RSA sites within the Broadlands SAC. As a result, the EA require further support on determining model-based impacts at the locations shown in Table 1, below.

Table 1 Sites Requiring Evaluation of Model-based Impacts.

Wood ABT Technical Report May 2022			New Technical Report Required	
Ant	Bure	Thurne	Yare	Waveney
Ant Broads & Marshes	Crostick Marsh	Calthorpe Broad	Yare Broads & Marshes	Geldeston Meadows
Broad Fen, Dilham	Bure Broads & Marshes	Priory Meadows	Cantley Marshes	Stanley & Alder Carrs
Alderfen Broad	Upton Broads & Marshes	Upper Thurne Broads & Marshes	Ducan's Marsh, Claxton	Bamby Broad & Marshes
Smallburgh Fen	Damgate Marshes, Acle	Ludham-Potter Heigham Marshes	Poplar Farm Meadows	Spratt's Water & Marshes
	Decoy Carr, Acle	Shallam Dyke Marshes, Thurne	Limpenhoe Meadows	
	Halvergate Marshes (part)	Hall Farm Fen, Hemsby	Hardley Flood	
		Trinity Broads	Halvergate Marshes (part)	
		Burgh Common & Muckfleet Marshes		

Scope

7. Information and other things provided by the *Client*

Describe what information and other things the *Client* is to provide and by when. Information is that which is not currently available but will become available during the contract. Other things could include access to a person, place (such as office space or a site) or the *Client's* information technology systems.

ITEM	DATE BY WHICH IT WILL BE PROVIDED

APPENDIX A - ANGLIAN BROADLANDS – SUPPORT TO THE RESTORING SUSTAINABLE ABSTRACTION PROGRAMME (POST-JUDICIAL REVIEW WORK)

1. Introduction

1.1 Background

In June 2021 the Environment Agency (EA) issued a Closure Report (Environment Agency, 2021) on the Ant Broads and Marshes SSSI (ABM) Restoring Sustainable Abstraction (RSA) investigations and Options Appraisal. This was subsequently reviewed by the Broadland Agricultural Water Abstractors Group (BAWAG) who issued a 'rebuttal response' in December 2021, which included an assessment of monitoring data and the suitability of the Northern East Anglia Chalk (NEAC) Model to support the decision-making processes presented in the Closure Report.

Meanwhile, the EA had also commissioned production of a Technical Report (Wood, 2022a) which, in its respective Section 6, provided a factual account of the model results which underpinned the findings in the Closure Report (i.e. model-based impacts at the ABM, Alderfen Broad and Broad Fen SSSIs). Section 7 of the Technical Report provided a similarly factual account of model-based impacts at other groundwater dependent terrestrial ecosystems (GWDTEs) across the remainder of the Bure, Ant and Thurne Catchments, including (not exclusively) the Bryant's Heath, Winterton Horsey Dunes and Upper Thurne Broads and Marshes SSSIs. The Technical Report was issued in May 2022.

BAWAG identified a number of issues with regard to model representation in the vicinity of ABM. These were addressed as described in Wood, 2022b and an Addendum (Wood, 2022c) to the Technical Report presented a factual account of the revised model-based impacts at the wetland sites mentioned above, including Smallburgh Fen. Following judicial review of the RSA outcomes for the ABM, similar investigations are now required across all RSA sites within the Broadlands SAC. As a result, the EA require further support on determining model-based impacts at the locations shown in Table 1, below.

Table 1 Sites Requiring Evaluation of Model-based Impacts

Wood ABT Technical Report May 2022			New Technical Report Required	
Ant	Bure	Thurne	Yare	Waveney
Ant Broads & Marshes	Crostick Marsh	Calthorpe Broad	Yare Broads & Marshes	Geldeston Meadows
Broad Fen, Dilham	Bure Broads & Marshes	Priory Meadows	Cantley Marshes	Stanley & Alder Carrs
Alderfen Broad	Upton Broads & Marshes	Upper Thurne Broads & Marshes	Ducan's Marsh, Claxton	Barnby Broad & Marshes
Smallburgh Fen	Damgate Marshes, Acle	Ludham-Potter Heigham Marshes	Poplar Farm Meadows	Spratt's Water & Marshes
	Decoy Carr, Acle	Shallam Dyke Marshes, Thurne	Limpenhoe Meadows	
	Halvergate Marshes (part)	Hall Farm Fen, Hemsby	Hardley Flood	
		Trinity Broads	Halvergate Marshes (part)	
		Burgh Common & Muckfleet Marshes		

1.2 Aims and Objectives

The main aims of the project are to support the EA in the following:

- To prioritise investigation of the Broadland sites within the Bure, Ant & Thurne catchments, followed by those within the Yare & Tas and Waveney catchments.
- To determine the degree of historical impacts on RSA sites within the Broadlands area (See Table 1) and identification of those licensed groundwater abstractions deemed to be having an adverse effect on the integrity of said sites either individually or in combination with other licensed abstractions.
- To run abstraction scenarios, as instructed by the EA, to determine a 'solution' which, when implemented, results in impacts that are deemed not to represent an adverse effect on the integrity of the sites.

To achieve these aims, the specific objectives of the project are as follows (note that some of the following specific objectives have already been completed for a number of sites within the Bure, Ant and Thurne catchments):

- To review the currently model representation associated with each site and refine if deemed necessary.
- To define Hydrological Sub-units (HSUs) for each site. Many of the sites will comprise a single HSU, whilst some will require coverage through multiple HSUs.
- To identify an 'area of interest' within which abstractions will form the focus of investigations. To perform a comprehensive review of the representation of abstractions within the area of interest (EA action) and ensure appropriate representation is included in the historical baseline scenario.
- To carry out validation of groundwater monitoring data from locations within the relevant wetland sites and use this information, as well as conceptual understanding and surface water stage data, to inform appropriate model refinements.
- To run historical, naturalised and fully licensed (in this case 'Run 7A corrected', also referred to as Run B1) scenarios and run the Batched Abstraction Modelling (BAM) tool, from which output will assist the EA in identifying those abstractions still likely to have an adverse effect, and to inform design of a new 'solution' abstraction scenario.
- To produce model output to illustrate the level of abstraction impacts at each site under selected scenarios (including the new 'solution') and to indicate the degree to which each scenario is compliant with respect to acceptable impacts (compared to site specific criteria and benchmarks/targets determined by the EA and Natural England).
- To report on the modelling results. This is likely to comprise three separate documents covering the Bure, Ant & Thurne, Yare & Tas and Waveney Reporting Areas.

2. Tasks

2.1 Project Management

Purpose

The purpose of this task is to ensure that delivery of the assignment is effectively planned and managed, balancing the critical success factors of quality, timescale, and cost.

Approach

General Management

This will be carried out through adherence to WSP UK Limited internal quality assurance and financial management systems. All significant changes in the programme and costs will be recorded as they develop. WSP will ensure that the EA Assignment Manager is aware of all actual or potential changes to costs and programme using regular progress meetings/telephone conferences. The EA and WSP assignment managers will work together to identify issues (technical, time, cost) and ensure that resolution is agreed in a timely manner.

Monthly Reporting

Monthly Progress Reports (bullet point summary) for this assignment will be produced by the WSP Assignment Manager and included in the Monthly Reports compiled for the overall suite of ongoing Anglian projects.

The WSP Assignment Manager will work closely with the overall WSP Anglian programme manager to ensure that reports (including financial information/fee notes) are produced in a timely and efficient manner.

The reports and fee notes will provide the basis for discussions during monthly meeting/telephone conferences between the EA, WSP assignment manager and the WSP Anglian programme manager.

Monthly Project Management Meetings/Teleconferences

An assignment management meeting will take place at a minimum of once a month between the EA and WSP Assignment Managers for the duration of the assignment, while there are active tasks ongoing. For efficiency, these will be in the form of Teams meetings. Similarly, progress on this assignment will be discussed between the WSP and EA overall Anglia programme managers during their monthly Teams meetings.

Technical Progress Meetings/Teleconferences

As well as 'general' project management meetings, technical progress meetings (Teams) will be conducted nominally on a fortnightly basis and/or associated with key milestones or deliverables. These will be attended by the respective EA and WSP assignment managers, and selected technical managers and staff from both organisations, as appropriate to the antecedent project stage.

2.2 Technical Tasks

The technical tasks will be implemented in two semi-parallel running tranches. The leading tranche will deal with Broadland RSA sites within the Bure, Ant and Thurne catchments, whilst the second tranche will deal with those sites within the Yare & Tas and Waveney catchments. The component tasks within the two tranches will be similar, falling into three broad categories, namely: site review and model refinement; abstraction scenarios and BAM; and model output and reporting.

Site Review and Model Refinement

Purpose

The purpose of this task is to review model representation of each wetland site, to refine the model where appropriate and to identify/confirm site assessment cells and to define the HSUs against which impacts on key water balance criteria will be assessed.

Approach

Apart from Smallburgh Fen, site review and model refinement will not be repeated for the sites previously investigated (i.e. A, Broad Fen, Alderfen Broad, Upper Thurne Broads & Marshes).

Model representation at the remaining sites will be reviewed, including routing within each site, surface water stage, and comparison between modelled groundwater levels and available site-specific observed data from the EA's wetland monitoring data held on the WISKI database. Where deemed appropriate, model refinements will be carried out with those sites within the Bure, Ant & Thurne catchments given priority. This priority refinement will include any sites within the Yare & Tas and Waveney catchments which could affect outcomes for the Bure, Ant & Thurne sites.

No refinements will be carried out on the basis of information/queries that may be received from third parties during the course of the programme described in Section 5, below. Having carried out the site reviews and associated refinements, HSUs will be identified for each site and site assessment cells will be identified (again, priority given to sites within the Bure, Ant & Thurne catchments). It is noted that HSUs for the Bure Broads and Marshes have previously been defined – these will be reviewed and confirmed as appropriate.

As part of the site review, the EA will check the current model representation of historical abstractions and 'fully licensed' abstractions as represented in Run7A (including known required corrections and new authorisations). This will be performed on all licensed abstractions within an 'area of interest' to be confirmed by the EA. Following this check, WSP will compile appropriate 'wel' files, including appropriate implementation of Hands-offflow (HOF) conditions, river support schemes and 'special cases'.

Products

The products from this task will be as follows:

- ☐ Site-specific information packs summarising model representation and providing recommendations for model refinement in the vicinity of each wetland site;
- ☐ Documented agreed refinements;
- ☐ Locally refined NEAC Model;
- ☐ Mapped HSUs and confirmed site assessment cells;
- ☐ Record of licensed abstraction check and confirmation of quantities for use in a new 'fully licensed' run (likely to be referred to as Run B1 i.e. Broadlands1) – EA responsibility.
- ☐ Revised 'wel-file' representing abstractions for use in Run B1.

Abstraction Scenarios and BAM

Purpose

The purpose of this task is to produce abstraction scenarios (Historical, Naturalised and Run B1), against which overall impacts (in comparison to the Naturalised scenario) at each wetland can be assessed. It will also allow impacts from individual licences (included in Run B1) on each wetland to be evaluated (in terms of drawdown to the water table at each assessment cell) and a potential 'solution' scenario to be identified (by the EA), run and assessed.

Approach

The following abstraction scenarios will be run once the model refinements and artificial influences input files have been agreed and QA checked:

- ☐ Historical. The aim of the historical model run is to reproduce observed groundwater level and surface water flow data as accurately as possible – culmination of the process of model refinement or calibration. This run also helps to identify suitable criteria and thresholds for wetland (including RSA) impact assessments.

- Naturalised. All abstractions and discharges are removed for the naturalised model run, but no changes are made to the land use or drainage set up. This scenario provides a baseline against which impacts can be evaluated in respect to a 'naturalised' condition.
- Run7A-corrected (Run B1). This scenario includes any licensed abstractions deemed capable of causing an adverse effect either alone or in combination at any of the Ant Broads and Marshes assessment cells (Wood, 2022a) and Smallburgh Fen being reduced or set to zero. All other abstractions will be represented at fully licensed rates.

The Run7A-corrected (Run B1) scenario will then be subject to BAM analysis using a pre-defined list of licences specified by the EA. The resultant long-list outputs will summarise and rank the drawdown impacts of each abstraction licence-purpose-point on each receptor cell (RSA site assessment cells) and will be used to define the abstraction quantities to be used in a new 'solution' scenario.

Based on the outcomes from Run7A-corrected (Run B1), the EA will confirm whether this scenario represents an acceptable 'solution'. If not this scenario will be subject to BAM, following which the EA will confirm the abstraction regime to be included in a subsequent scenario, assumed to be the new 'solution'. The respective model input files will be created by WSP and the new 'solution' scenario will be run. Initial output from the new 'solution' scenario, including impacts on total surface flows at HSUs and groundwater level at assessment cells, will be provided to the EA to confirm whether further alterations to abstractions are required in order to reach an acceptable new 'solution'.

It is assumed that only one iteration will be required to identify/confirm a new 'solution' scenario. However, if additional iteration is required, BAM analysis will be carried out to allow the EA to identify further adjustments to abstractions and instruct WSP on the design of subsequent scenarios.

Previous RSA investigations have used a consistent model simulation period of 1970 – 2014 against which model calibration and water balances have been evaluated, and over which abstraction impacts and compliance with site specific targets have been assessed. For this project a more up to date simulation period (e.g. 1970 – 2020) will be used. Although use of the more up to date simulation period may be desirable (stakeholders might expect recent climatic and observation data to be included), there are cost implications with regard to production of model output and reporting in order to maintain total consistency across all Broadland sites.

Products

The products of this task will include the following:

- Three initial model scenarios, namely Historical, Naturalised and Run B1;
- Output regarding impacts on key criteria associated with HSUs and assessment cells;
- BAM output for Run B1 to inform potential new 'solution' (Run B2);
- Output from Run B2 regarding impacts on key criteria associated with HSUs and assessment cells.

Additional iterations, beyond Run B2, may be required to identify a new 'solution' and will involve additional costs above those described in Section 6.

Model Output and Reporting

Purpose

A substantial amount of model output is required to inform subsequent EA decision-making and to support project reporting. The purpose of this task is to produce model output suitable for subsequent use by the EA to inform decision-making and establishment of sustainable/acceptable levels of abstraction. As well as presenting the results of the modelbased impact assessment, the purpose of reporting is to illustrate the application of scientific best-practice through development of the conceptual understanding (based on field evidence and modelling) which underpins the EA's decision-making.

Approach

Key Model Output

The key model output represents key criteria against which levels of abstraction will be deemed acceptable with regard to the wellbeing of the Broadland RSA sites. Specific criteria and associated targets/benchmarks will be confirmed by the EA in consultation with Natural England. For the purposes of this proposal, it is assumed that the criteria and associated model output will be the same as that produced for Section 7 of Wood, 2022a, as described in Table 2, below (relevant key Figures are described under Reporting).

Key model output will also include groundwater level and river flow model calibration material on a regional scale for the Yare & Tas and Waveney Reporting Areas (regional calibration material for the Bure, Ant & Thurne Reporting Area was produced in Wood 2022a and is assumed not to be required for the Broadlands post-judicial review work). In addition, groundwater level calibration material will be produced for observation boreholes where they exist within all of the RSA Broadland sites.

It is assumed that full sets of cell-scale outputs are not required as part of the Broadlands post-judicial work (i.e. no requirement for time-series soil moisture deficit, water quality indices or groundwater level duration curves).

Reporting

For the Broadland sites within the Bure, Ant & Thurne Reporting Area, it is assumed that reporting will constitute an additional section, or further addendum to the existing Technical Report (Wood, 2022a). A synopsis for this document, detailing content (especially key figures and tables) will be agreed with the EA prior to commencing compilation.

For the Broadland sites within the Yare & Tas and Waveney catchments, a similar approach to the Bure, Ant and Thurne Technical Report (Wood, 2022a) is assumed and two reports will be produced (one covering Yare & Tas catchments, one covering the Waveney catchment). This includes updated sections providing regional context covering: Water Resources Background (Section 2); Summary Catchment Description and Data Integration (Section 3); Numerical Model Representation and Calibration (Section 4); Understanding of Catchment Behaviour (Section 5); and Water Resource Assessment and Impacts of Abstraction Scenarios (Section 6, including impacts at the Broadland sites). A synopsis for these two technical reports, detailing content (especially key figures and tables), will be agreed with the EA prior to commencing compilation.

Table 2 Key Assessment Criteria and Model Output

Hydrological Criteria	Target	Model Output
Surface Water Criteria		
Total surface flows though fenland cells	Less than 5% reduction from 'natural' across flow range	HSU spreadsheet including plots of scenario flows and flow impact duration curves. Tables showing absolute Q97 flows, scenario impacts on Q97 flows and impacts as a percentage of naturalised Q97 flow.
Inflow to Broads	rCSMG	HSU spreadsheet including plots of scenario flows and flow impact duration curves. Tables showing absolute Q97 flows, scenario impacts on Q97 flows and impacts as a percentage of naturalised Q97 flow.
Outflow from Broads	rCSMG	HSU spreadsheet including plots of scenario flows and flow impact duration curves. Tables showing absolute Q97 flows, scenario impacts on Q97 flows and impacts as a percentage of naturalised Q97 flow.
Groundwater Criteria		
Water Table Level	Drawdown from naturalised of 5 mm or less in the 'dry' period (August 1991).	Tables showing drawdown under key abstraction scenarios compared to naturalised in August 1991.
Total Groundwater UP flow (where applicable)	Less than 5% reduction from 'natural' across the full flow range.	HSU spreadsheet including plots of scenario flows and flow impact duration curves. Tables showing absolute Q97 flows, scenario impacts on Q97 flows and impacts as a percentage of naturalised Q97 flow.
Total Groundwater OUT flow	Less than 5% reduction from 'natural' across the full flow range.	HSU spreadsheet including plots of scenario flows and flow impact duration curves. Tables showing absolute Q97 flows, scenario impacts on Q97 flows and impacts as a percentage of naturalised Q97 flow.

The key tables to be included in the reports illustrating the degree of impact against site specific criteria are indicated in Table 2. Key figures illustrating the impacts of abstraction will be as follow (note, the following is not an exhaustive list of figures to be included in the reports):

- ☐ Spatial distribution of groundwater drawdown. These include drawdown maps for the modelled water table, Crag and Chalk in August 1991 for each key scenario (namely historical, Run7A-corrected (Run B1) and the new 'solution' scenario).
- ☐ Spatial distribution of modelled flow impacts. For each scenario (historical, Run7Acorrected (Run B1) and the new 'solution' scenario), these plots include maps showing groundwater-surface water interaction for the 'dry' period; riparian evapotranspiration for the 'dry' period; total groundwater outflow for the 'dry' period; total groundwater outflow impact in the 'dry' period; total surface flows at Q97; and total surface flow impact at Q97.
- ☐ Comparisons with EFIs at Q95 for surface water bodies under Run7A (Run B1) and the new 'solution' scenario.
- ☐ Stream cell compliance with EFIs at Q95 under Run7A (Run B1) and the new 'solution' scenario.

Products

The produces from this task will be the following reports, each including the ley tables and figured described above;

- ☐ Additional section or further addendum to the report entitled 'Bure, Ant and Thurne Catchments - Support to the Restoring Sustainable Abstraction Programme and Common End Date Time-limited Licence Review. Report on Hydrological Impacts of Abstraction and Performance of Scenarios Against Criteria for Assessing Acceptable Levels of Abstraction' (Wood, 2022a);
- ☐ Report as per Wood 2022a for the Yare and Tas Catchments;
- ☐ Report as per Wood 2022a for the Waveney Catchment.

3. Health and Safety

A health and Safety Risk Assessment for this desk-based project is included in Appendix A. Health and safety requirements for this project will be reviewed nominally on a monthly basis and, if necessary updated and amended should additional hazards and risks be identified.

4. Project Team

Key members of the project team will be as shown in in Table 4.1, together with their CCS grade. Other members of WSP's team of hydrogeologists, modellers and GIS staff will be utilised as required.

Anna Reed will be Project (Assignment) Manager including responsibility for coordination of the project programme and team, and in monthly liaison with Gordon Coombs who oversees all our Anglian modelling work and will be Project Director for this assignment. Anna will also QA of model outputs, as well as overseeing the definition of HSUs and production of the HSU impact spreadsheets.

Rob Soley will provide the technical direction and advice regarding model refinement and outputs. Rob will be supported by Josh Hall (NEAC Model Owner) who will oversee the review and any refinements required in the vicinity of the Broadland sites, as well as the production of abstraction scenarios and use of the BAM Tool. Josh will be supported by hydrogeologists/modellers including Hollie Whilde, as well as Rob East who will assist with BAM.

Gordon Coombs will be responsible for producing synopses and technical reporting, assisted by Anna Reed and supported by our hydrogeologists/modellers, GIS staff and graphics support.

Table 3 Project Team

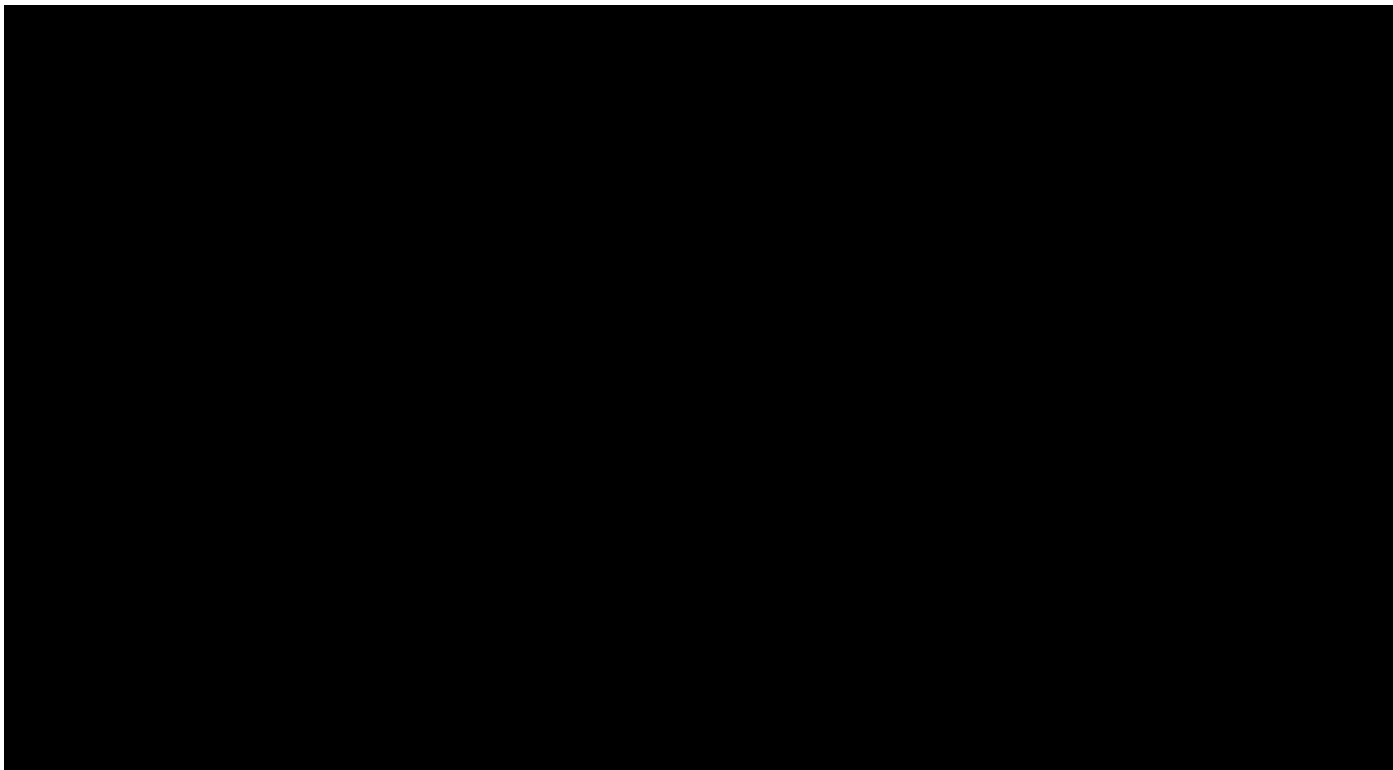
Name	CCS Framework Grade	Role
Gordon Coombs	Director	Anglian Programme Manager, Project Director and technical reporting lead
Anna Reed	Principal	Project Manager, overall technical coordinator and QA
Rob Soley	Director	Technical Adviser and reviewer
Josh Hall	Principal	NEAC Model Owner, modelling lead and BAM supervisor
Hollie Whild	Professional	Modeller/hydrogeologist
Rob East	Senior Professional	GIS lead and BAM.

5. Project Programme

A high-level project programme is included in Appendix B. The programme sets out the timetable for the work remaining on the project as of August 2023 and it is noted that substantial progress, especially on technical items 2.1 to 2., was made prior to this date as part of a preceding contract. The programme reflects priority given to investigation of the Broadland sites within the Bure, Ant and Thurne catchments and also includes the following assumptions:

- Adherence to the programme is dependent on a number of tasks for which the EA has a significant role in their completion. Most critical of these in the early stages is a detailed check and confirmation of how artificial influences are represented in the model for the historical and Run7A-corrected scenarios. Other EA tasks on which relatively early progress is dependent include ground truthing seepage reservoirs and confirmation of site-specific criteria and targets (in consultation with Natural England). Later in the programme, critical EA tasks include potential identification/design of a new 'solution' scenario and review of draft technical reports.
- It is assumed that no additional refinements will be carried out on the basis of queries or observations relating to calibration raised by third party stakeholders (including Natural England) during the course of the programme shown in Appendix B.
- The programme currently assumes that if Run7A-corrected proves not to represent an acceptable 'solution', only one iteration will be required to find/confirm a new 'solution' scenario.

6. Costs



7. Risks and Mitigation

7.1 Generic Risks and Mitigation

The generic risks and associated mitigations identified for this assignment are:

Risk	Mitigation
Failure to achieve benefit realisation	Internal/external consultation Use of standard methods
Failure to deliver to time and cost	Estimating contingency. Progress reporting

7.2 Additional Risks and Mitigation

Additional risks and mitigations that have been identified during the more detailed planning of this Project are:

Risk	Mitigation
WSP resource conflicts resulting from unforeseen higher priority Anglian work requested by client	Early recognition of issues. Regular internal EA liaison between Groundwater Team and Broadlands Team. Agreement of alternative timescales and programme.
Unavailability of Agency staff due to other commitments and delays on completing 'critical path' tasks	Forward planning and identification of alternative schedules to meet the objectives.
Failure to deliver the work to time and cost	Monthly meetings to review progress and spend Potential issues to be raised with the Environment Agency Assignment Manager as soon as possible. Good communication within Project Team to minimise delays and overspend

Impacts of Covid-19 on availability of resources and data	Early identification of data requirements and potential for delays
	Contingency in task programmes
Refinements prove to be more complex than anticipated in some areas and/or third party observations/data are required to be considered.	Early identification of issues and agreement of way forward.
	Early consideration of likely benefit of additional refinement and agreed programme adjustment.
	Potential caveats for follow-on work and report addenda.
Failure to reach an acceptable new 'solution' within a single iteration beyond Run 7A.	Early assessment of key output from Run7A and any subsequent scenarios leading to early confirmation of acceptability or otherwise.
	Early discussion of results and agreed adjustment to programme.
Failure to agree key criteria and targets against which acceptability of impacts can be assessed.	Early consultation between EA and Natural England. Early communication of criteria/targets to WSP.
	Agreed programme adjustments if delays realised.

8. Contractual

The Project will be carried out as a call off contract on the CCS Framework, RM6165 Lot 6.

9. References

Wood, 2022a. Bure, Ant and Thurne Catchments - Support to the Restoring Sustainable Abstraction Programme and Common End Date Time-limited Licence Review. Report on Hydrological Impacts of Abstraction and Performance of Scenarios Against Criteria for Assessing Acceptable Levels of Abstraction. Issue 4 Final. Report for Environment Agency, May 2022.

Wood, 2022b. Ant Broad and Marshes SSSI. BAWAG Rebuttal NEAC refinements. FINAL. PRIVATE & CONFIDENTIAL. Report for Environment Agency, May 2022.

Wood, 2022c. Bure, Ant and Thurne Catchments - Support to the Restoring Sustainable Abstraction Programme and Common End Date Time-limited Licence Review – Addendum.



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