

GB-Shrewsbury: DMNH 016 - Shrewsbury Integrated Transport Package – Town Centre Package 1

Competitive Contract Notice

1. Title: GB-Shrewsbury: DMNH 016 - Shrewsbury Integrated Transport Package – Town Centre Package 1

2. Awarding Authority:

Shropshire Council

Shirehall, Abbey Foregate, Shrewsbury, SY2 6ND, United Kingdom

Tel. +44 1743252992, Fax. +44 1743253910, Email: procurement@shropshire.gov.uk, URL:

www.shropshire.gov.uk

Contact: Procurement, Attn: Procurement

3. Contract Type: Works

Sub Type: Realisation, by whatever means of work, corresponding to the requirements specified by the contracting authorities

4. Description: Works for complete or part construction and civil engineering work. Shropshire Council is looking to procure Principal Contractors for the next phase of the Shrewsbury Integrated Transport Package, which consists of Public Realm Enhancements located at three separate sites along Town Walls, Murivance and Claremont Bank corridor as follows:

- Town Walls/Belmont at the Crescent Lane junction.
- Town Walls and Murivance in the vicinity of Swan Hill and St John's Hill.
- St Chad's Terrace and Claremont Bank

At these sites kerbs will be realigned to provide wider footways and new pedestrian crossing points.

The footways will be repaved with high-quality natural stone and other conservation grade paving materials. The existing drainage will be upgraded where required and is planned to include

sustainable attenuation measures where possible. The existing street lighting will be upgraded. Carriageway resurfacing will also be undertaken. Some new street furniture is proposed. The traffic signs along the entire length of Town Walls/Murivance/St Chad's Terrace/Claremont Bank is to be

upgraded where required, with the creation of a new restricted parking zone. This will also entail the removal of the existing parking restriction markings. Works are due to commence in May 2018. Shropshire Council is inviting organisations to pre-qualify in order to be selected to be invited to

tender for the provision of these Works. As part of the pre-qualification process Contractors must be able to demonstrate their competence/suitability in the following areas:

•Health and Safety

oCDM2015 – willingness to accept the role of Principal Contractor

oCHAS Certification or equivalent approved scheme

oAccident Record (RIDDOR)

•Financial

oProven financial standing

oAdequate Insurance Cover

•Experience

oReference Projects/Contracts demonstrating ability to undertake public realm improvement schemes working in an urban and town centre environment with complex traffic/pedestrian management

arrangements and associated road-space permit restrictions

oOther Specialist Services that the Contractor is able to provide

•Equality

oCompliance with Equality and Diversity legislation

5. CPV Codes:

45200000 - Works for complete or part construction and civil engineering work.

6. NUTS Codes :

UKG22 - Shropshire CC

7. Main Site or Location of Works, Main Place of Delivery or Main Place of Performance: Shropshire CC,

8. Reference Attributed by the Awarding Authority: DMNH 016

9. Estimated Value of Requirement: Category F: 1M to 5M

Currency: GBP

10. Deadline for Expression of Interest: 24/11/2017 12:00:00

11. Address to which they must be sent:

Shropshire Council

Shirehall, Abbey Foregate, Shrewsbury, SY2 6ND, United Kingdom

Tel. +44 1743252992, Fax. +44 1743253910, Email: procurement@shropshire.gov.uk, URL:

www.shropshire.gov.uk

Contact: Procurement, Attn: Procurement

12. Other Information:

Other Information: The contracting authority considers that this contract may be suitable for economic operators that are small or medium enterprises (SMEs). However, any selection of tenderers will be based solely on the criteria set out for the procurement.

For more information about this opportunity, please visit the Delta eSourcing portal at:

<https://www.delta-esourcing.com/tenders/UK-GB-Shrewsbury:-DMNH-016---Shrewsbury-Integrated-Transport-Package-%E2%80%93-Town-Centre-Package-1/KN3X793R4J>

To respond to this opportunity, please click here:

<https://www.delta-esourcing.com/respond/KN3X793R4J>

Suitable for VCO: No

Procedure Type: OPEN

Period of Work Start date: 20/03/2018

Period of Work End date: 12/11/2018

Is this a Framework Agreement?: no



Shrewsbury Integrated Transport Package: Town Centre Package 1

Document Ref. 0

Instructions for Tender

For Shropshire Council

ECC Works (Third Edition 2013)
Options B

Contract Number: DMNH 016

Date: January 2018

Document Ref: 1070997/TC/Doc0

LIST OF DOCUMENTS

Document 0	Instructions for Tendering
Document 1	Conditions of Contract
Document 2	Specification & Preambles to the Bill of Quantities
Document 3	Bill of Quantities
Document 4	Pre-Construction Information

Shrewsbury Integrated Transport Package: Town Centre Package 1

INSTRUCTIONS FOR TENDERING AND GUIDANCE NOTES FOR AN ECC OPTION B PRICED CONTRACT WITH BILL OF QUANTITIES

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Location and Brief Description of Works

Part I: Instructions for Tendering

PREAMBLE

TENDERS MUST BE SUBMITTED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS. TENDERS NOT COMPLYING WITH THESE INSTRUCTIONS IN ANY PARTICULAR WAY MAY BE REJECTED BY THE EMPLOYER WHOSE DECISION IN THE MATTER SHALL BE FINAL.

1. These Instructions for Tendering relate to a contract for the construction, completion, testing, commissioning and maintenance of the following works: **Shrewsbury Integrated Transport Package: Town Centre Package 1**. The Employer will be Shropshire Council and all administrative functions will be performed by them at Shirehall, Abbey Foregate, Shrewsbury, SY2 6ND and whose project manager for the contract is Matt Johnson.
2. The works will be carried out under terms and conditions of the Engineering and Construction Contract (ECC), Third Edition, published in June 2005 and amended in June 2006 and April 2013 by Thomas Telford Ltd, using Option B priced contract with bill of quantities. Tenderers must familiarise themselves with these conditions and any modifications or additions made by the Employer.
3. A list of documents provided with this invitation and a list of documents to be returned with the Tender, is provided in the Guidance Notes at the end of these Instructions.

ECC FEATURES

4. Tenderers must be aware of the following:-
 - a. Programme: **tenderers are required to submit an outline programme**. The programme must include a broad outline as set out in clause 31.2 of ECC. It is required to enable the Employer to judge a tenderer's understanding and approach to the project and their ability to complete the works within the stated time using the methods and resources proposed. Any resultant award of contract will not imply acceptance of the programme;
 - b. Schedule of Cost Components: The shorter schedule will be used to value any compensation events arising during the contract. Tenderers must provide certain facts for this Schedule as required in Contract Data Part Two. That information will be used in evaluating the tender - see Annex A: Tender Assessment Sheet (Financial);
Tenders cannot be evaluated until all of the items are completed.
 - c. Contract award date: a period of about 8 weeks will be allowed between award of contract (starting date) and the Access Date specified in Contract Data Part One as a mobilisation period;
 - d. Completion date: this date has been specified in Contract Data Part One. Tenderers must enter their own completion date for the whole of the works (and any sections thereof) in Contract Data Part Two. This may be the same date provided or an earlier date (if an earlier date that date will then become the Completion date) but no premium will be applied in tender evaluation for earlier completion dates Tenderers must also calculate and enter appropriate quantities for any time related items in the preliminaries section of the bill of quantities
 - e. Discrepancies: if any discrepancy arises between the priced bill of quantities and the tendered price, the tendered price will take priority;
 - f. Management functions: The Employer has retained WSP Ltd who will take on full responsibility for performing the management functions and duties of *Project Manager* and *Supervisor* as defined by ECC. The designated official for each job is as follows:-

Project Manager: [REDACTED]

Email address: [REDACTED]

Supervisor: [REDACTED]

Email address: [REDACTED]

- g. Queries: any queries arising from the tender documents which may have a bearing on the offer should be raised with the *Project Manager* as soon as possible, via Delta eSourcing, but in any case not later than 7 calendar days prior to the date of return of tenders. The *Employer* will be ready to consider properly reasoned requests for an extension of the tender period.
- h. Adjudication: See Contract Data Part One and Option Y(UK)2 regarding Adjudication Procedure. Tenderers should indicate with their tender whether any of the proposed terms of appointment (at Annex B) are acceptable.
- i. Adjudicator: in the event of a dispute, an appointment will be made jointly by the *Employer* and the *Contractor*. If tenderers disagree with any of these proposals they must include their alternative proposals with their tender. Please note that the *Employer* and the *Contractor* shall each bear 50% of the costs of the Adjudicator.
- j. Site Information: tenderers are provided with the following documents:-
 - (a) Pre-Construction Information including Statutory Undertakers Plans, core logs Drawings as listed in Appendix 0/4
- k. Works Information: tenderers are provided with the following documents:-
 - (a) The Preamble to the Specification
 - (b) The Specification
 - (c) The Drawings as listed in the Appendices to the Specification
- l. Site Surveys: Tenderers' attention is drawn to clause 60.2 of ECC. Tenderers may make their own arrangement to carry out additional surveys. Prior notice must be sought from the *Employer* for such surveys.
- m. Additional clauses: tenderers' attention is drawn to the additional "Z" clauses which have been added to ECC and are set out in Contract Data Part One.
- n. Unit rates: these must be quoted in pounds and pence, as appropriate, to two decimal places. The terms 'nil' and 'included' are not to be used but should be indicated as '£0'. Figures must be inserted against each item or activity - credit values in favour of the *Employer* must not be used.
If necessary, the *Employer* may contact a tenderer whose tender has required arithmetical adjustment.
- o. ~~Activity schedule: tenderers are to submit an *activity schedule* with their tenders showing proposed payment profile. This will be a document referenced in accordance with Contract Data Part Two and will comprise a list of activities with an amount entered against each activity. Each amount is the sum due to the *Contractor* on completion of each activity unless it is included in a group. If groups of activities are required to be identified on the schedule, payment for each group becomes due when all the activities in that group are completed. Activity descriptions must be clear and complete so that the work included in each can be identified. NOT USED~~
- p. Mandatory activities: **NOT USED**

GENERAL REQUIREMENTS

- 5. Certification. Tenderers must satisfy themselves prior to submission of their tender that the following certificates are available as appropriate in relation to the work, goods and materials offered:-
 - (i) certificates of conformity with quality management schemes;
 - (ii) certificates of conformity with product certification schemes (where the product is not marked);

- (iii) British Board of Agrément Roads and Bridges Certificates;
- (iv) manufacturers' and suppliers' test certificates.

6. Special Requirements: tenderers should note the special requirements of statutory/privatised bodies as set out in Appendix D to Contract Data Part One. It may be necessary when arranging insurance cover required by clause 84 of ECC to let insurers know of these special requirements.

7. Pollution: tenderers should note any special arrangements in the Specification for disposal of hazardous material. Tenderers should also note the need to comply at their own expense with the duty of care applicable to the carrying, importing, treating, keeping and disposing of waste (including toxic or hazardous waste) as required by the Environmental Protection Act 1990 and any other relevant environmental legislation. If a waste management license or authorisation is required from the Environment Agency responsibility for obtaining it falls to the *Contractor*.

8. Invitation to Tender

The fact that a Tenderer has been invited to submit a tender does not necessarily mean that it has satisfied the Council regarding any matters raised in the pre-tender questionnaire submitted. The Council makes no representations regarding the Tenderer's financial stability, technical competence or ability in any way to carry out the required services. The right to return to any matter raised in any pre-tender questionnaire submitted as part of the formal tender evaluation is hereby reserved by the Council.

The Invitation to Tender is issued on the basis that nothing contained in it shall constitute an inducement or incentive nor shall have in any other way persuaded a tenderer to submit a tender or enter into a Contract or any other contractual agreement.

9. Confidentiality

The Invitation to Tender documents must be treated as private and confidential. Tenderers should not disclose the fact that they have been invited to tender or release details of the Invitation to tender document other than on an "in confidence" basis to those who have a legitimate need to know or who they need to consult for the purpose of preparing the tender as further detailed in these Instructions for Tendering.

Tenderers shall not at any time release information concerning the invitation to tender and/or the tender documents for publication in the press or on radio, television, screen or any other medium without the prior consent of the Council.

All information supplied by the Council in connection with or in these Tender Documents shall be regarded as confidential to the Council unless the information is already within the public domain or subject to the provisions of the Freedom of Information Act 2000.

The Contract documents and publications are and shall remain the property of the Council and must be returned upon demand.

Tenderers shall ensure that each and every sub-contractor, consortium member and/or professional advisor to whom it discloses these papers complies with the terms and conditions of this ITT.

The contents of this Invitation to Tender are being made available by the Council on condition that:

- Tenderers shall at all times treat the contents of the Invitation to tender and any related documents as confidential, save in so far as they are already in the public domain and Tenderers shall not, subject to the provisions relating to professional advisors, sub-contractors or other persons detailed below, disclose, copy, reproduce, distribute or pass any of the contents of the Invitation to tender to any other person at any time or allow any of these things to happen;
- Tenderers shall not use any of the information contained in this Invitation to tender for any purpose other than for the purposes of submitting (or deciding whether to submit) the tender; and
- Tenderers shall not undertake any publicity activity within any section of the media.
- Tenderers may disclose, distribute or pass this Invitation to tender to their professional advisors, sub-contractors or to another person provided that:
 - this is done for the sole purpose of enabling an Invitation to tender to be submitted and the person receiving the Information undertakes in writing to keep the Invitation to Tender confidential on the same terms as if that person were the Tenderer; or

- the Tenderer obtains the prior written consent of the Council in relation to such disclosure, distribution or passing of the Invitation to Tender; or
- the disclosure is made for the sole purpose of obtaining legal advice from external lawyers in relation to the procurement or to any Contract(s) which may arise from it; or
- the Tenderer is legally required to make such a disclosure.

The Council may disclose detailed information relating to the Invitation to Tender to its officers, employees, agents, professional advisors or Governmental organisations and the Council may make any of the Contracts and procurement documents available for private inspection by its officers, employees, agents, professional advisors, contracting authorities or Governmental organisations.

10. Form of Tender: tenders must be made on the accompanying Form of Tender which must be signed by, or on behalf of, the tenderer and returned together with all the information requested in Part II of this document. The completed documentation must be submitted to the address and by the date and time stated below. No unauthorised alteration or addition should be made to any component of the tender documents. The Tenderer's attention is drawn to the date and time for receipt of tenders and that no submission received after closing time will be considered.

11. Tender Preparation and Costs

It shall be the responsibility of Tenderers to obtain for themselves at their own expense all information necessary for the preparation of their Tender. No claim arising out of want of knowledge will be accepted. Any information supplied by the Council (whether in the Tender Documentation or otherwise) is supplied only for general guidance in the preparation of tenders.

Any Tenderer considering making the decision to enter into a contractual relationship with the Council must make an independent assessment of the Tender opportunity after making such investigation and taking such professional advice as it deems necessary.

Tenderers will be deemed for all purposes connected with their Tender submission where appropriate to have visited and inspected the Council, its assets, all the locations in respect of the delivery of the services/supplies/works and to have satisfied themselves sufficiently as to the nature, extent and character of the services supplies/works sought, and the human resources, materials, software, equipment, machinery, and other liabilities and other matters which will be required to perform the contract.

The Council will not be liable for any costs incurred by Tenderers in the preparation or presentation of their tenders.

12. Accuracy and Ambiguities

It shall be the Tenderer's responsibility to ensure that all calculations and prices in the Tender documentation are correct at the time of submission.

The Tenderer is deemed to have made him/herself acquainted with the Council's requirements and tender accordingly. Should the Tenderer be in any doubt regarding the true meaning and intent of any element of the specification he is invited to have these fully resolved before submitting his Tender. No extras will be allowed for any loss or expense involved through any misunderstanding arising from his/her failure to comply with this requirement.

Any Tender error or discrepancy identified by the Council shall be drawn to the attention of the Tenderer who will be given the opportunity to correct, confirm or withdraw the Tender.

13. Warranty

The Tenderer warrants that all the information given in their Tender is true and accurate. The information provided will be deemed to form part of any contract formed under this contract.

The Tenderer warrants that none of their current Directors have been involved in liquidation or receivership or have any criminal convictions

14. Qualified tenders: tenders must not be qualified or accompanied by statements or a covering letter that might be construed as rendering the tender equivocal and/or placing it on a different footing from other tenders. Only tenders submitted without qualification and strictly in accordance with the tender document as issued (or subsequently amended by the *Employer*) will be accepted for consideration. The *Employer's* decision on whether or not a tender is acceptable will be final and

the tenderer will not be consulted. Qualified tenders will be excluded from further consideration and the tenderer notified.

15. Publication and Transparency: tenderers must note that the amount of the successful tender and the name of the tenderer will be published.
Further to its obligations regarding transparency of expenditure, the Council may be required to publish information regarding tenders, contracts and expenditure to the general public, which could include the text of any such documentation, except for any information which is exempt from disclosure in accordance with the provisions of the Freedom of Information Act to be determined at the absolute discretion of the Council.
16. E-Procurement
As part of its procurement strategy Shropshire Council is committed to the use of technology that can improve the efficiency of procurement. Successful Tenderers may be required to send or receive documents electronically. This may include purchase orders, acknowledgements, invoices, payment advices, or other procurement documentation. These will normally be in the Council's standard formats, but may be varied under some circumstances so as not to disadvantage small and medium suppliers.
17. Payment: tenderers must note that the principles governing public procurement require that as far as is reasonably possible payments for goods, works or services are made after delivery. Any indication of advance pricing within a tender will be examined to decide whether a tender in such form is acceptable. If the *Employer* considers that advance pricing has occurred it reserves the right to require the tenderer to spread such pricing over the duration of the *works*.
18. Tender acceptance: the *Employer* does not bind himself to accept the lowest or any tender.
19. Insurance: details of insurance policies held or proposed meeting requirements stated in the Insurance Table within clause 84 of ECC must be submitted with tenders for the *Project Manager's* approval.
20. Claims within excess: tenderers must include with their tenders a statement undertaking responsibility for dealing with claims, or parts of such claims, within the excess amount.
21. Insurance queries: should be raised in writing with the *Project Manager* at the earliest opportunity but in any event 14 days before return of the tender. Tenderers should note that failure to submit required insurance details will delay consideration of their tender by the *Employer*. A contract will not be awarded to a tenderer until their existing or proposed insurances have been verified.
22. Access to private land: arrangements for inspection of the Site which involve access to land not owned by the *Employer* must be made through the *Project Manager* to enable him to make initial contact with land owners. Responsibility for obtaining permission to enter such land and liability for any damage or disturbance caused whilst on such land rests with the tenderer. Such permission cannot be guaranteed in advance. Whilst on private land care must be taken by tenderers to minimise disturbance to occupiers.
23. Public information: tenderers should note requirements in the Works Information for the erection of information boards to advise the travelling public on the progress of the *works*.
24. CDM: Tenderers must be able to satisfy the *Employer (Referred to as The Client under the CDM Regulations)*, that they have sufficient skill, experience and knowledge, and have made available adequate resources for health and safety as set out at Annex C.
25. Pre-Construction Information (PCI): an outline plan is in Annex D. If tenderers wish to make any revisions to it the agreement of the Principal Designer should be sought in writing, directed through the *Employer*, prior to the return of the tender. The successful tenderer, in his role as Principal Contractor, will be required to develop the Construction Phase Plan (CPP) in accordance with the requirements of the CDM Regulations and co-operate with the Principal Designer and *Employer* to enable them to fulfil their duties under the Regulations.

26. Principal Contractor: the attention of tenderers is drawn to the Construction (Design and Management) Regulations 2015. It is proposed to formally appoint the successful tenderer as Principal Contractor under the Regulations at the time of contract award tenderers shall include a written undertaking that if awarded the contract they will be willing to accept a) the appointment of Principal Contractor, b) the duties thereof in accordance with the CDM Regulations, c) confirm that the Construction Phase Plan will be submitted electronically strictly in accordance with the Construction (Design and Management) Regulations 2015 Guidance Document L153 Appendix 3.
27. Considerate Constructor's Scheme: the successful tenderer will be required to register the site under the Considerate Constructor's Scheme. Tenderers must allow all costs for registering the site, including the appropriate fee and for using best endeavours to comply with the Scheme's Code of Considerate Practice. The cost of this scheme is deemed to be included in the tender and no additional costs will be met by the Employer. For details apply to Construction Industry Board's Considerate Constructor's Scheme, PO Box 75, Great Amwell, Ware SG12 9JY. Tel/fax: 0800 783 1423 email - enquiries@ccscheme.org.uk

ALTERNATIVE DESIGNS

28. Alternative tender: where a tenderer wishes to submit a tender involving modifications to design or an alternative design not specifically provided for in the tender invitation, this should be submitted as an "Alternative Tender". No alternative tender shall be submitted unless a tender conforming to the tender invitation is also submitted. An alternative tender must be free of qualifications and be fully priced to show clearly how and where costs would differ from the conforming tender.
29. Submission Procedure: An alternative tender must be accompanied by all necessary supporting information including drawings and a priced addendum to the bill of quantities. Materials, workmanship and design of alternative proposals must comply with the most current Design Manual for Roads and Bridges and the Specification for Highway Works, which are all published by the Stationery Office. An alternative tender will be assessed on its merits. If accepted, the alternative design will become the design for the purpose of the contract and the *Employer* will take on full copyright responsibility.
30. Assessment: A decision to adopt an alternative design will be based on the likely cost savings of the proposals. In assessing the overall saving, account will be taken of the effect of any deferment in starting and completion dates of the project and the cost to the *Employer* of maintenance, additional engineering and administrative resources involved in assessing the alternative design and in implementing it through to completion of contract.

TENDER EVALUATION AND SUBMISSION

31. Financial submission: This must include the following:
- (i) the completed Form of Tender, Contract Data Part Two and Tender Assessment Sheet (Financial);
 - (ii) the tendered bill of quantities;
 - (iii) all other information required to be submitted at the tender stage.

Tender Evaluation

32. The Tenderers may be called for interview to seek clarification of their tender or additional or supplemental information in relation to their tender. The presentations will not carry any weighting to the final score achieved by Tenderers, but will be used to clarify and moderate issues raised in the Tenderer's submissions. Any areas of discrepancy between submissions and information gained from the presentations will be reviewed and scores previously awarded will be amended if necessary.

If the Council suspects that there has been an error in the pricing of a Tender, the Council reserves the right to seek such clarification, as it considers necessary from the Tenderer in question.

33. Financial scoring: the initial financial ranking basis of compliant tenders will be based on the tendered price, adjusted in accordance with Annex A.

34. Returning Tenders:

Tenders should be made on the enclosed Tender Response Document. Your Tender must be completed, signed and returned along with a signed copy of the instructions for tendering through our Delta Tenderbox. You are recommended to keep a copy of all tender documents and supporting documents for your own records.

Please pay particular attention to the points below concerning the returning of tenders.
Returning of Tenders:

- The deadline for returning tenders is **12.00 noon** on **2nd March 2018** any tenders received after this time will not be accepted
- Tenders are to be submitted through Delta, our electronic tender portal
- Please ensure that you allow yourself at least two hours when responding prior to the closing date and time, especially if you have been asked to upload documents. If you are uploading multiple documents you will have to individually load one document at a time or you can opt to zip all documents in an application like WinZip. Failure to submit by the time and date or by the method requested will not be accepted.
- Once you upload documentation ensure you follow through to stage three and click the 'response submit' button. Failure to do so, will mean the documents won't be viewable by the Council.

Tender For: **Shrewsbury Integrated Transport Package: Town Centre Package 1**

Contract Number: DMNH 016

Part II: Guidance Notes to Tenderers

35. Project Manager and Supervisor roles: neither of these two officers acts impartially but are both appointed by, and represent the direct interests of, the Employer. The Supervisor is normally resident on Site with the main duty of examining and checking workmanship to ensure that requirements of the contract are being met. The Project Manager is responsible for managing the contract and for protecting the direct interests of the Employer. He is not normally resident on Site but will make regular and frequent visits. Both the Project Manager and Supervisor are empowered to carry out actions and make decisions required under ECC.
36. List of documents with Invitation to Tender: the following is a list of documents included with this invitation:
1. Instructions for Tendering and Guidance Notes;
 2. Form of Tender
 3. Contract Data Parts One and Two, together with Appendices
 4. Works Information, including information as listed in paragraph 4k of IFT
 5. Site Information, including information as listed in paragraph 4j of IFT
 6. Bill of Quantities
37. **Documents to be returned with tender**: the following is a summary of information that **must** be submitted with the tender:-
- i) Completed Form of Tender
 - ii) Tendered bill of quantities.
 - iii) Completed Contract Data Part Two with outline programme in accordance with Appendix 1/13.
 - iv) A completed Health and Safety questionnaire.
 - v) Written confirmation that proposed nominations for adjudicator and terms of appointment are acceptable. If they are not, set out alternative proposals.
 - vi) Written undertaking stating willingness if awarded the contract to accept the appointment and duties of Principal Contractor as stated in Paragraph 26.
 - vii) Details of the tenderer's insurance policies
 - viii) a statement undertaking responsibility for dealing with claims, or parts of such claims, within the excess amount
 - ix) If an Alternative Design (either partial or whole) is being submitted include the following additional information:
 - (a) Revised plans, drawings and documentation
 - (b) Schedule of changes from the original design.

- (d) Report on the Environmental Impact of the alternative design, including mitigation measures.
- (e) A fully priced extension to bill of quantities.
- (f) A statement setting out the cost savings
- (g) A statement on how the outline Pre-construction information would change resulting from the alternative design.
- (h) The following completed forms (obtainable from the *Project Manager*):
 - Approval in Principle forms for each alternative structure
 - Addendum Approval in Principle Forms
 - Stage 1 Safety Audit Certificate.
- ix) HM Revenue and Customs new Construction Industry Scheme contractor registration details for verification, namely –
 - Company Unique Tax Reference (UTR);
 - Company Name;
 - Company Trading Name;
 - Company Registration Number.

TAX AND NATIONAL INSURANCE CONTRIBUTIONS

38. Construction Industry Scheme Regulations: the specified work will be a construction operation as defined in the Inland Revenue's Construction Industry Scheme Regulations.

The Contractor must provide HM Revenue and Customs new Construction Industry Scheme contractor registration details for verification, namely –

- Company Unique Tax Reference (UTR);
- Company Name;
- Company Trading Name;

Company Registration Number.

Until you present the appropriate documentation the Employer is not permitted to make any payments for work done.

Tender Assessment Sheet (Financial)

This sheet is only for the purpose of assisting the Employer to assess tenders and will not be part of the contract. The amounts stated may not be expended and may be exceeded. Other factors may be taken into account in assessing tenders. These may include cashflow effects, advance payments, design by the Contractor.

<u>Item</u>				<u>Amount £</u>
1. Not used				
Data for Shorter Schedule of Cost Components				
2. Equipment Depreciation and Maintenance				
	% of £	N/A	=	..... N/A
3. Working Areas Overheads				
	% of £	N/A	=	..... N/A
4. Manufacture and Fabrication				
Total number of hours to be divided equally between each of the tendered categories:				
	hours at £		per hour:	
	hours at £		per hour:	
	hours at £		per hour:	
	hours at £		per hour:	
Sub Total		_____	=	.....
Manufacture and fabrication overheads				
	% of £	(above Sub-Total)	=	.....
5. Design				
Total number of hours to be divided equally between each of the tendered categories:				
	hours at £		per hour:	
	hours at £		per hour:	
	hours at £		per hour:	
	hours at £		per hour:	
Sub Total		_____	=	.....
Design Overheads				
	% of £	(above Sub-Total) =		.....

Direct Costs

6. People Overheads *1
% of £ *1 = _____

7. Adjustment for Equipment in published list *2
% of £ *2 = _____

8. Materials *3

(a) Direct Costs Sub total = _____

(b) Direct Fee Percentage = % of £ (Above (a) Direct Costs sub-total) _____

Subcontracted costs

9. Subcontractors

(c) Subcontractor Cost *4

(d) Subcontractor Fee Percentage = % of £ *4 (Above (c) Sub-contractor cost) _____

Total for Tender Assessment Purposes Only = (a + b + c + d) _____

ADJUDICATOR’S APPOINTMENT (2)

THIS AGREEMENT is made on the day of -

BETWEEN:

(1)

of

(the referring Party);

(2)

of

(the other Party)

(together called the Parties) and

(3)

of

(the Adjudicator).

A dispute has arisen between the Parties under a Contract between them dated in connection with

This dispute has been referred to adjudication in accordance with the CIC Model Adjudication Procedure (the Procedure) and the Adjudicator has been requested to act.

IT IS AGREED that:

- 1 The rights and obligations of the Adjudicator and the Parties shall be set out in this Agreement.
- 2 The Adjudicator confirms that he is independent of the Parties, and undertakes to use reasonable endeavours to remain so, and that he shall exercise his task in an impartial manner. He shall promptly inform the Parties of any facts or circumstances which may cause him to cease to be so independent.
- 3 The Adjudicator agrees to adjudicate the dispute in accordance with the Procedure.
- 4 The Adjudicator shall comply, and shall take all reasonable steps to ensure that any persons advising or aiding him shall comply, with the Official Secrets Act 1989. Any information concerning the Contract obtained either by the Adjudicator or any person advising or aiding him is confidential, and shall not be used or disclosed by the Adjudicator or any such person except for the purposes of this Agreement.
- 5 The Parties agree jointly and severally to pay the Adjudicator's fees and expenses as set out in the attached schedule and in accordance with the Procedure.
- 6 The Adjudicator is not liable for anything done or omitted in the discharge or purported discharge of his functions as adjudicator, unless the act or omission is in bad faith. Any employee or agent of the Adjudicator is similarly protected from liability.
- 7 This Agreement shall be interpreted in accordance with the law of England and Wales.

Schedule

1. The Adjudicator shall be paid £ per hour in respect of all time spent on the adjudication.
2. The Adjudicator shall be reimbursed the cost of legal or technical advice obtained in accordance with the Procedure and other extraordinary expenses necessarily incurred.
3. The Adjudicator is/is not* currently registered for VAT. Where the Adjudicator is registered for VAT, it shall be charged additionally in accordance with the rates current at the date of the work done.

Signed on behalf of the referring Party

.....

Signed on behalf of the other Party

.....

Signed on behalf of the Adjudicator

.....

* Delete as necessary

QUESTIONNAIRE ON HEALTH AND SAFETY FOR THE PURPOSES OF CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015

APPOINTMENT OF PRINCIPAL CONTRACTOR

Please supply either a copy of your Contractors Health & Safety Assessment Scheme (CHAS) accreditation Certificate or a written statement is required on the following:-

What is your technical and managerial approach for dealing with the risks specified in the Pre-works Information issued with the tender documents?

Responses are required to the following questions in respect to your company's organisation and management and proposals for this contract:-

- (a) Provide information about your accident record in the format shown in Appendix A attached.
- (b) Provide evidence of the company's commitment to and policy on health and safety.
- (c) What arrangements are there for keeping that policy under regular review?
- (d) Which senior director is named as being responsible and has the company's policy statement been signed by him?
- (e) What are the management arrangements for delegating responsibility to named individuals?
- (f) What is the proposed management structure for this particular contract? Provide details of the qualifications, experience and health and safety training of the individuals nominated for this contract.
- (g) Provide evidence that you have clear and detailed working methods for achieving the company's policy objectives.
- (h) What is the system and responsibility for reporting health and safety matters within your company?
- (i) What co-operation and involvement is expected of employees, subcontractors and the self-employed?
- (j) What procedures are there for safety inspections and audits?
- (k) What is the employee training programme?
- (l) What trade union or employee safety structure is in operation?
- (m) What is the system for control of subcontractors?

Additionally confirm that appropriate provision has been made in your tender for the following and provide evidence of your company's procedures for same:

- (a) induction training for new starters, tool-box talks and other training for special risk situations, etc.
- (b) maintenance of safe systems of work, including whether there are written risk assessments and method statements.
- (c) work equipment.
- (d) personal protective equipment.
- (e) adequate and appropriate plant, including arrangements for inspection and testing.
- (f) control of substances hazardous to health, including correct identification, assessment, storage and handling in accordance with COSHH Regulations.

- (g) protection of the workforce and the public against vibration and noise.
- (h) visual display terminals - taking into consideration their siting, design, use of ergonomic layout.
- (i) manual handling, including assessing ergonomics of workplace layouts and work activities.
- (j) first-aid, including provision of trained first-aiders and the keeping of documented medical records.
- (k) reporting accidents and incidents in conformance with the requirements of the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) and the keeping of proper records related thereto.
- (l) suitable and sufficient accident investigation procedures.
- (m) arrangements for visitors to the site.

APPENDIX A

COMPANY ACCIDENT RECORD

Information Required	2011	2012	2013	2014	2015
Average workforce (including direct employees and subcontractors/self-employed)					
Total hours worked in period					
Number of Fatal Injury Incidents					
Number of Major Injury Incidents (RIDDOR)					
Number of 3-day Injury Incidents (RIDDOR)					
Incident Rate (see below)					
Frequency Rate (see below)					
Number of Dangerous Occurrence Incidents (RIDDOR)					
Number of Prosecutions by HSE or Environment Agency					
Number of Prohibition Notices by HSE or Environment Agency					
Number of Improvement Notices by HSE or Environment Agency					
Any restrictive clauses in relation to Company's Employer's Liability or Public Liability Insurance					

Calculation of Incident Rate and Frequency Rate (Method taken from HSG 65 "Successful Health and Safety Management" 2nd Edition (Reprint 2008))

$$\text{Incident Rate} = \frac{\text{Number of Reportable injuries in financial year}}{\text{Average number employed during year}} \times 100,000$$

$$\text{Frequency Rate} = \frac{\text{Number of Reportable injuries in period}}{\text{Total hours worked during the period}} \times 1,000,000$$

PRE-CONSTRUCTION HEALTH & SAFETY INFORMATION

(The information is contained in document 4)

~~ILLUSTRATIVE ACTIVITY SCHEDULE NOT USED~~

~~SITE RENTAL ASSESSMENT (EXAMPLE ONLY)~~ **NOT USED**

Location and Brief Description of Works

Shrewsbury Integrated Transport Package: Town Centre Package 1

Shrewsbury Integrated Transport Package: Town Centre Package 1, consists of Public Realm Enhancements located at three separate sites along Town Walls, Murivance and Claremont Bank corridor as follows:

- Site 08 St Chad's Terrace and Claremont Bank
- Site 10 Town Walls and Murivance in the vicinity of Swan Hill and St John's Hill.
- Site 11 Town Walls/Belmont at the Crescent Lane junction.

Constructing new kerblines in Yorkstone and granite, widening existing footways, altering existing drainage, realigning existing junctions and updating and improving pedestrian crossings. Footways are to be repaved in high-quality natural stone and Pre-Cast Concrete (PCC) conservation grade materials. The carriageways are to be reconstructed or resurfaced in Stone Mastic Asphalt (SMA) type materials, including raised tables and/or coloured junction areas. The existing traffic signs are to be renewed along the full length of Town Walls, Murivance, Claremont Bank and a number of side roads as part of the implementation of a 'Restricted Zone' to replace the existing parking restriction markings, which also require removal as part of the contract. The works also include landscaping features, consisting of new wayfinding signs, benches, bins, tree pits at Claremont Bank and a 'bio-retention' SUDS planting bed at Murivance.



Shrewsbury Integrated Transport Package: Town Centre Package 1

Document Ref. 1

Conditions of Contract

Form of Tender
Conditions of Contract

LIST OF DOCUMENTS

Document 0	Instructions for Tendering
Document 1	Conditions of Contract:
Document 2	Specification & Preambles to the Bill of Quantities
Document 3	Bill of Quantities
Document 4	Pre-construction information

**Shrewsbury Integrated Transport Package:
Town Centre Package 1**

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Engineering and Construction Contract
(Third Edition 2013)

FORM OF TENDER

(ECC COLLUSIVE)

TENDER
FOR THE CONSTRUCTION, COMPLETION,
TESTING AND COMMISSIONING OF
*Shrewsbury Integrated Transport Package:
Town Centre Package 1*

To: Shropshire Council, Shirehall, Abbey Foregate, Shrewsbury, Shropshire SY2 6ND.

Having examined the Conditions of Contract, being Option **B** of the Engineering and Construction Contract (Third Edition 2013), together with Contract Data Parts One and Two, the Works Information and the Site Information for the construction of the above mentioned Scheme we offer to Provide the Works and maintain the same until the *defects date* in conformity with the said Conditions of Contract, the Contract Data Parts One and Two, the Works Information and the Site Information for a Price of £.....

We undertake to start the works on the date stated in Contract Data Part One and complete the works on the date stated in Contract Data Part Two of the Conditions of Contract.

We attach the following completed documents which form part of our offer:-

Contract Data Part Two
Bill of Quantities

We agree to enter, when required, into a formal Deed under seal for carrying out these works in the form which has been provided to us by you with the tender documentation. Unless and until such a Deed is prepared and executed this tender, together with your written acceptance thereof, shall constitute a binding contract between us. We understand that you are not bound to accept the lowest, or any tender you may receive.

We certify that this tender is made in good faith and that we have not fixed or adjusted the amount of the tender by or under or in accordance with any agreement or arrangement with any other person. We also certify that we have not, and we undertake that we will not:-

- (i) Before the award of any contract for the work:-
 - (a) communicate to any person other than a person who has been duly authorised by the Council the amount or approximate amount of the tender or proposed tender, except where the disclosure, in confidence, of the approximate amount of the tender was necessary to obtain insurance premium quotations required for the preparation of the tender;
 - (b) enter into any agreement or arrangement with any person that he shall refrain from tendering or as to the amount of any tender to be submitted;
- (ii) Pay, give or offer or agree to pay or give any sum of money or other valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done in relation to any other tender or proposed tender for the work, any act or thing of the sort described at (i) (a) or (b)

We also certify that the principles described in paragraph (i) and (ii) above have been, or will be, brought to the attention of all subcontractors, suppliers and associated companies providing services or materials connected with the tender and any contract entered into with such subcontractors, suppliers or associated companies will be made on the basis of compliance with the above principles by all parties.

In this certificate, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions. The word "person" includes any persons and any body or association, corporate or unincorporate; "any agreement or arrangement" includes any transaction, formal or informal and whether legally binding or not; and "the works" means the work in relation to which this tender is made.

Dated this day of 20

Signature In capacity of

(e.g. Director, Secretary, etc)

Name
(in capitals)

Duly authorised to sign tenders for and on behalf of:

.....
Registered Address Tel No.

..... Fax No.

..... E-mail

*Shrewsbury Integrated Transport Package:
Town Centre Package 1*

CONTRACT DATA PART ONE

DATA PROVIDED BY THE EMPLOYER

In respect of the Institution of Civil Engineers'
Engineering and Construction Contract
(Third Edition 2013)

Shropshire Council
Development Services
Shirehall
Abbey Foregate
Shrewsbury
SY2 6ND

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Appendix A: Form of Agreement by Deed

~~Appendix B: Certificates~~ **Not Used**

~~Appendix C: Form of retention bond~~ **Not Used**

Appendix D: Special Requirements

~~Appendix E: Form of Parent Company Guarantee~~ **Not Used**

~~Appendix F: Terms and Conditions of Novated Contracts~~ **Not Used**

Appendix G: Collateral Warranty

CONTRACT DATA PART ONE

1. General

1.1 The conditions of contract are the core clauses and the clauses for Options **B**, dispute resolution Option **W2, X2, X7, X15, X16, X18 Y (UK)2, Y (UK)3** and **Z** of the NEC3 Engineering and Construction Contract (April 2013).

1.2 The *works* are:

Shrewsbury Integrated Transport Package: Town Centre Package 1, consists of Public Realm Enhancements located at three separate sites along Town Walls, Murivance and Claremont Bank corridor as follows:

- Town Walls/Belmont at the Crescent Lane junction.
- Town Walls and Murivance in the vicinity of Swan Hill and St John's Hill.
- St Chad's Terrace and Claremont Bank

At these sites kerbs will be realigned to provide wider footways and new pedestrian crossing points. The footways will be repaved with high-quality natural stone and other conservation grade paving materials. The existing drainage will be upgraded where required and is planned to include sustainable attenuation measures where possible. The existing street lighting will be upgraded. Carriageway resurfacing will also be undertaken. Some new street furniture is proposed. The traffic signs along the entire length of Town Walls/Murivance/St Chad's Terrace/Claremont Bank are to be upgraded where required, with the creation of a new restricted parking zone. This will also include the removal of the existing parking restriction markings.

1.3 The *Employer* is **Shropshire Council, Highways and Transport, Shirehall, Abbey Foregate, Shrewsbury SY2 6ND.**

1.4 The *Project Manager* is: Name: [REDACTED]
Address: **WSP**
2nd Floor
Shirehall
Abbey Foregate
Shrewsbury SY2 6ND

1.5 The *Supervisor* is: Name: [REDACTED]
Address: **WSP**
2nd Floor
Shirehall
Abbey Foregate
Shrewsbury SY2 6ND

1.6 The principal designer is: Name: [REDACTED]
Address: **WSP**
2nd Floor
Shirehall
Abbey Foregate
Shrewsbury SY2 6ND

personal info

1.7 The CDM advisor is: Name: [REDACTED]
Address: **WSP**
2nd Floor
Shirehall
Abbey Foregate
Shrewsbury SY2 6ND

The *Employer* has appointed the CDM Advisor to act as his agent in order to assist the client in discharging his duties under CDM 2015 (see Z44).

1.8 The *Adjudicator* is only appointed if deemed necessary by either the *Contractor* or the *Employer*.

1.9 The Works Information is in: **The Preamble to the Specification,
The Specification and on the drawings as listed in the
Appendices to the Specification**

1.10 The Site Information is in: **The Appendices within the contract Documents and the
Pre-Construction information**

1.11 The *boundaries of the site* are: **As stated in Appendix 1/7**

1.12 The *language of this contract* is **English**.

1.13 The *law of the contract* is the law **of England and Wales, subject to the jurisdiction of the
Courts of England and Wales**.

1.14 The *period for reply* to a communication is **7 days**.

1.15 The Adjudicator Nominating Body is **The Institution of Civil Engineers**.

1.16 The *tribunal* is **arbitration**.

1.17 The *arbitration procedure* is **the latest version of the Institution of Civil Engineers
Arbitration Procedure or any amendments to it in force when the arbitrator is appointed**.

1.18 The place where arbitration is to be held is **London**

1.19 The person or organisation who will choose an arbitrator

- If the Parties cannot agree a choice or
- If the *arbitration procedure* does not state who selects an arbitrator is
The Institution of Civil Engineers

1.20 The following matters will be included in the Risk Register

1. All residual risks identified in the Pre-Construction Information
2. The Contractor will submit a programme for approval within one week following the *starting* date. Failure to agree an accepted programme in accordance with the conditions of contract may delay first access date. Risk owner is the *Contractor*.
3. The Contractor is responsible for sourcing and supplying all construction materials required to meet the accepted programme, including any approval periods required. The Contractor is responsible for any delays in the programme associated with the rejection of samples supplied.

2. The Contractor's Main Responsibilities

- 2.1 The Contractor's liability for the Employer for indirect or consequential loss is **Unlimited**.
- 2.2 For any one event, the Contractor's liability to the Employer for loss or damage to the Employer's property is **Unlimited**
- 2.3 The Contractor's liability for Defects due to his design that are not listed on the Defects Certificate is **limited to 'reasonable skill and care'**.
- 2.4 The Contractor's total liability to the Employer for all matters arising under or in connection with this contract, other than excluded matters, is **Unlimited**
- 2.5 The *end of liability date* shall comply with **The Latent Damage Act 1986**
- 2.6 The Contractor ensures any subcontractor appointed to undertake design works enters into the *collateral warranty agreement* included with this tender (see Z49)

The *collateral warranty agreement* is:

<u>Agreement reference</u>	<u>Parties</u>
Collateral Warranty to be provided by a Subcontractor as set out in Appendix G	Shropshire Council

3. Time

- 3.1 The *starting* date is: **25th April 2018**
- 3.2 The *access dates* are:

Part of the Site	Date
St Chad's Terrace and Claremont Bank	21 st June 2018
Town Walls and Murivance in the vicinity of Swan Hill and St John's Hill.	14 th September 2018
Town Walls/Belmont at the Crescent Lane junction.	1 st September 2018
- 3.3 The *completion date* for the whole of the works is: 9th November 2018

3.4 The *completion date* for each *section* of the *works* is:

section	description	completion date
St Chad's Terrace and Claremont Bank	All works	14 th September 2018
Town Walls and Murivance in the vicinity of Swan Hill and St John's Hill.	All works	9 th November 2018
Town Walls/Belmont at the Crescent Lane junction.	All works	9 th November 2018

3.5 The *Employer* is not willing to take over the *works* before the *Completion Date*.

3.6 The *Contractor* is to submit a first programme for acceptance within **1 week** following the *starting date*

3.7 The *Contractor* submits revised programmes at intervals no longer than: **2 weeks**.

3.8 The ~~key dates and conditions~~ to be met are

Condition to be met	Key date
NOT USED	

3.9 The ~~bonus for each sections~~ of the *works* is: (See Z20)

section	description	amount per day
[section]	[description]	[amount]

Remainder of the *works* [amount]

Not Used

3.10 Delay damages for the *sections* of the *works* are:

<i>section</i>	<i>description</i>	<i>amount per day</i>
Site 50	As 3.12	As 3.12

3.11 The bonus for the whole of the *works* is: £...[Amount]..... per day. (See Z20)

Not Used

3.12 Delay damages for Completion of the whole of the *works* are: £ (Final Award Price x 15%/365) + daily site supervision costs] per day. [The amount of site supervision costs for this contract per day is £750.]

4. Testing and Defects

4.1 The *defects date* is **104** weeks after Completion of the whole of the *works*.

4.2 The *defect correction period* is **4** weeks

- The defect correction period for Part of the *works* **NOT USED**

5. Payment

5.1 The *currency of this contract* is the **pound sterling (£)**.

5.2 The *assessment interval* is **four** weeks (not more than five).

5.3 The period for payments is **28 Days** (See Clause Z19).

5.4 The *interest rate* is **2%** per annum (not less than 2) above the **average base rate in force from time to time at the following banks: Barclays, Lloyds TSB, National Westminster and HSBC unless the provisions of the Late Payment of Commercial Debts (Interest) Act 1998 otherwise require.**

5.5 The retention free amount is: **nil**.

5.6 The retention percentage is: **5%** (see Z32)

5.7 The bonus for timely daily clearance of the *carriageway* is: ~~Final award price x 15% ÷ 365 + £ [450] in £ per whole day. (See Z23) - Not Used~~

5.8 The lane rental charge for late Completion of the *works* is: ~~Final award price x 15% ÷ 365 + £ [375] in £ per day or part thereof. (See Z21) - Not Used~~

5.9 The lane rental charge for late daily clearance of the *carriageway* is: ~~Final award price x 15% ÷ 365 + £ [450] in £ per day or part thereof. (See Z24) - Not Used~~

5.10 The lane rental charge for correcting Defects during the defects period is: **Final award price x 15% ÷ 365 + £450 in £ per day or part thereof.** (See Z22)

5.11 The method of measurement is **the Method of Measurement for Highway Works contained in Section 1 of Volume 4 of the Manual of Contract Documents for Highway Works published by The Stationery Office**
amended as follows – **as detailed in the Preambles to the Bill of Quantities in Section 3 of this document.**

5.12 The proportions used to calculate the Price Adjustment Factor are:

~~{0.**} Linked to the index for {Description}~~

~~{0.**} Non-adjustable~~

~~1.00~~

Not Used

5.13 The *base date* for indices is: ~~{Date}~~

Not Used

5.14 The indices are those prepared by ~~[the Department of Transport and the Regions and published by The Stationery Office in the "Price Adjustment Formulae for Construction Contracts - Monthly Bulletin of Indices"-~~

- ~~• Index of the Cost of Labour in Civil Engineering Construction;~~
- ~~• Index of the Cost of Providing and Maintaining Constructional Plant and Equipment;~~
- ~~• Indices of Constructional Material Prices.]~~

Not Used

5.15 The Contractor's share percentages and the share ranges are:-

~~share range Contractor's share percentage~~

~~less than{**}..%{**}..%~~

~~from.. {**}..% to {**}..%{**}..%~~

~~from.. {**}..% to {**}..%{**}..%~~

~~greater than {**}..%{**}..%~~

Not Used

5.16 ~~The Contractor prepares forecasts of Defined Cost for the works at intervals no longer than [4] weeks.~~

Not Used

5.17 ~~The exchange rates are those published in [Publication Name] On [Date].~~

Not Used

6. Compensation Events

6.1 ~~The place where weather is to be recorded is: [*]~~

6.2 ~~The weather measurements to be recorded for each calendar month are~~

- ~~• the cumulative rainfall (mm)~~
- ~~• the number of days with rainfall more than 5mm~~
- ~~• the number of days with minimum air temperature less than 0 degrees Celsius~~
- ~~• the number of days with snow lying at [Time **:**] hours GMT~~
- ~~• and these measurements: [Windspeed]~~

Not Used

6.3 ~~The weather measurements are supplied by [The Met Office, Building Consultancy Group, Fitzroy Road, Exeter, Devon EX1 3PB.]~~

~~The weather data are the records of past weather measurements for each calendar month which were recorded at ...[Shawbury, Shropshire]...and which are available from [The Met Office].~~

WHERE NO RECORDED DATA IS AVAILABLE

Not Used

6.4 ~~Assumed values for the ten year return weather data for each weather measurement for each calendar month are [Compiler to compile]~~

Not Used

6.5 There are additional and/or modifications to compensation events
1. **Details are given in the list of additional Z clauses following paragraph 12 below**

7. Title

7.1 **See Z40**

8. Risks and Insurance

- 8.1 The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the *works*, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract for any one event is **£5,000,000 (five million pounds) for any one event with no limit to the number of events.**
- 8.2 If an insurance policy contains any excess amount the following levels will be permitted:- (See Z42)
- (a) for insurance risks relating to loss of or damage to the *works*, Plant and Materials, as follows:
 - i. where the tendered price is below £1m an excess limit of £5,000
 - ii. where the tendered price is above £1m an excess limit of £10,000
 - (b) For all other insurance risks included in the Insurance Table, i.e. relating to loss of or damage to equipment and property, bodily injury or death to the *Contractor's* employees and bodily injury or death to third parties, as follows:-
 - i. an excess limit of £2,500
 - ii. an excess limit over £2,500 will not be approved.
- 8.3 The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract **£5,000,000 (five million pounds) with no limit to the number of events.**
- 8.4 The *Employer* does not provide any of the insurances stated in the Insurance Table.
- 8.5 There are no additional *Employer's* risks.
- 8.6 The *Employer* does not provide any Plant or Materials.
- 8.7 The *Employer* provides no additional insurances.
- 8.8 The *Contractor* provides **these** additional insurances.
- Insurance against faults in design (Professional Indemnity Insurance) Cover Indemnity is £10,000,000 (for subcontractor insurance requirements see Z42).**

9. Termination

- 9.1 **See Z48**

10. Option Y(UK)2

- 10.1 The period for payment is **28 days** (See Z19)

11. Option Y(UK)3

- 11.1 **Option Y(UK)3**

The Contracts (Rights of Third Parties) Act 1999

- term person or organisation

[All excluded]

[All excluded]

12. Additional Conditions of Contract

The additional conditions of contract are **set out in the pages immediately following Contract Data Part One.**

Additional Conditions of Contract (Option Z)

Index

Z2	Confidentiality (M)
Z3	Public Interest Disclosure (M)
Z4	Prevention of Bribery (M)
Z5	Equalities (M)
Z6	Human Rights (M)
Z7	Health & Safety at Work (M)
Z8	Freedom of Information Act 2000 and Environmental Information Regulations 2004 (M)
Z9	Audit and Monitoring (M)
Z10	Goods Vehicles Operator's Licence (M)
Z11	Quality Submission - Not Used
Z12	Quality Management System - Not Used
Z13	Responsibility for Statutory Undertakers
Z14	Named Key Personnel
Z15	Named Subcontractors
Z16	Payment (M)
Z17	Recovery of Sums due from Contractor (M)
Z18	Retention Bond - Not Used
Z19	Dates of Payment (M)
Z20	Bonus for Early Completion - Not Used
Z21	Lane Rental Charge for Late Completion Not Used
Z22	Lane Rental Charge for Maintenance Work
Z23	Bonus for Timely Daily Clearance of Carriageway Not Used
Z24	Lane Rental Charge for Late Daily Clearance of Carriageway Not Used
Z25	Deletion of Certain Compensation Events
Z26	Work Suspension (M)
Z27	Parent Company Guarantee - Not Used
Z28	Special Requirements of Statutory Undertakers
Z29	Tax and National Insurance Contributions (M)
Z30	Effects of Weather on Work
Z31	Value Engineering
Z32	Retention Payment
Z33	Complaints Procedure (M)
Z34	Novation of Existing Contracts - Not Used
Z35	Safeguarding (M)
Z36	Agreement Status and Transparency (M)
Z37	Protection of Personal Data
Z38	Interpretation Provisions
Z39	Subcontracting
Z40	Employers Title to Equipment, Plant and Materials
Z41	Assignment
Z42	Insurance Excesses
Z43	Shropshire Council as Regulatory Body
Z44	CDM Advisor
Z45	Compliance with Legislation (M)
Z46	Third Party Rights - Not Used
Z47	Copyright (M)
Z48	Public Contracts Regulations 2015
Z49	Collateral Warranty Agreements

DEFINITIONS

In these Additional Conditions of Contract the following words shall have the following meanings:

'Agreement'	means the Agreement between the Employer and the Contractor
'Bribery Act'	The Bribery Act 2010 and any subordinate legislation made under that Act from time to time together with any guidance or codes of practice issued by the relevant government department concerning the legislation.
"Commercially Sensitive Information"	comprises the information of a commercially sensitive nature relating to the Contractor, its Intellectual Property Rights or its business which the Contractor has indicated to the Employer in writing that, if disclosed by the Employer, would cause the Contractor significant commercial disadvantage or material financial loss;
"Confidential Information"	any information, which has been designated as confidential by either Party in writing or that ought reasonably to be considered as confidential however it is conveyed, including information that relates to the business, affairs, developments, trade secrets, know-how, personnel and suppliers of the Employer or the Contractor, including Intellectual Property Rights, 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") ;
"Contractor Personnel"	all employees, agents, consultants and contractors of the Contractor and/or of any Sub-contractor paid or unpaid;
"Data Controller"	shall have the same meaning as set out in the Data Protection Act 1998
"Data Protection Legislation"	the Data Protection Act 1998, the EU Data Protection Directive 95/46/EC, the Regulation of Investigatory Powers Act 2000, the Telecommunications (Lawful Business Practice) (Interception of Communications) Regulations 2000 (SI 2000/2699), the Electronic Communications Data Protection Directive 2002/58/EC, the Privacy and Electronic Communications (EC Directive) Regulations 2003 and all applicable laws and regulations relating to processing of personal data and privacy, including where applicable the guidance and codes of practice issued by the Information Commissioner;
"Data Subject"	shall have the same meaning as set out in the Data Protection Act 1998;
"Employer Representative"	the representative appointed by the Employer
"EIR"	means the Environmental Information Regulations 2004 (as may be amended from time to time.)
"Exempt Information"	means any information or class of information (including but not limited to any document, report, Agreement or other material containing information) relating to this Agreement or otherwise relating to the parties to this Agreement which potentially falls within an exemption to FOIA (as set out therein)
"FOIA"	means the Freedom of Information Act 2000 and all subsequent regulations made under this or any superseding or amending enactment and regulations; any words and expressions defined in the FOIA shall have the same meaning in this clause
"FOIA notice"	means a decision notice, enforcement notice and/or an information notice issued by the Information Commissioner

“Information”	has the meaning given under section 84 of the Freedom of Information Act 2000;
“Intellectual Property Rights”	means all patents, registered and unregistered designs, copyright, trade marks, know-how and all other forms of intellectual property wherever in the world enforceable
“Law”	any applicable law, statute, bye-law, regulation, order, regulatory policy, guidance or industry code, rule of court or directives or requirements of any Regulatory Body, delegated or subordinate legislation or notice of any Regulatory Body;
“Material”	means all materials prepared by or on behalf of the <i>Contractor</i> for the <i>works</i> and all updates, additions and revisions to them and any designs, or inventions incorporated in them.
“Permitted Uses”	means the design, construction, completion, reconstruction, modification, extension, refurbishment, maintenance, funding, disposal, letting, fitting-out, advertisement, demolition, reinstatement, building information modelling and repair of the <i>works</i> .
“Personal Data”	shall have the same meaning as set out in the Data Protection Act 1998;
“Prohibited Act”	The following constitute Prohibited Acts:
	<ul style="list-style-type: none"> (a) To directly or indirectly offer, promise or give any person working for or engaged by the Employer a financial or other advantage to: <ul style="list-style-type: none"> (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 this Agreement; (c) committing any offence: <ul style="list-style-type: none"> (i) under the Bribery Act; (ii) under legislation creating offences concerning fraudulent acts; (iii) at common law concerning fraudulent acts relating to this Agreement or any other contract with the Employer; or (d) defrauding, attempting to defraud or conspiring to defraud the Employer.
“Public body”	as defined in the FOIA 2000
“Regulatory Bodies”	those government departments and regulatory, statutory and other entities, committees and bodies, including the <i>Employer</i> in its capacity as a local government authority, which, whether under statute, rules, regulations, codes of practice or otherwise, are entitled to regulate, investigate, or influence the matters dealt with in this Agreement or any other affairs of the Employer and "Regulatory Body" shall be construed accordingly;
“Request for Information”	means a written request for information pursuant to the FOIA as defined by Section 8 of the FOIA
“Services”	means any and all of the services to be provided by the Contractor under this Agreement including those set out in any schedules or service descriptions.

“Statutory Undertaker”	Statutory Undertaker means any person who has a statutory right or a right pursuant to a licence granted under any statute to place or maintain any apparatus (including any pipe conduit sewer drain or tunnel) on under or over the Site or to inspect adjust repair alter renew reposition or remove such apparatus.
“The Works”	Means the works to be undertaken in accordance with the terms of this Agreement which for the avoidance of doubt includes all documents annexed to, contained in or referred to within this Agreement.
“Working Day”	any day other than a Saturday, Sunday or public holiday in England and Wales.
‘Writing’	includes facsimile transmission and electronic mail, providing that the electronic mail is acknowledged and confirmed as being received.

1. General

Z2 Confidentiality (M)

- Z2.1 All plans, drawings, designs or specifications supplied by the *Employer* to the *Contractor* shall remain the exclusive property of, and shall be returned to the *Employer* on completion of the Works and shall not be copied, and no information relating to the Works shall be disclosed to any third party, except as required for the purpose of this Agreement .
- Z2.2 No photographs of any of the *Employer's* equipment, installations or property shall be taken without the *Employer's* prior consent in Writing except as necessary to Provide the Works. The *Contractor* shall keep secret and shall not divulge to any third party (except sub-contractors accepting a like obligation of secrecy, and then only to the extent necessary for the performance of the sub-agreement) all information given by the *Employer* in connection with the Agreement or which becomes known to the *Contractor* through his performance of the Agreement or use the same other than for the purpose of executing the Agreement.
- Z2.3 The *Contractor* shall not mention the *Employer's* name in connection with the Agreement or disclose the existence of the Agreement in any publicity material or other similar communication to third parties without the *Employer's* prior consent in Writing.
- Z2.4 The *Contractor* will keep confidential any information it becomes aware of by reason of the operation of this Agreement.
- Z2.5 Except to the extent set out in this clause or where disclosure is expressly permitted elsewhere in this Agreement, each party shall:
- Z2.5.1 treat the other party's Confidential Information as confidential; and
- Z2.5.2 not disclose the other party's Confidential Information to any other person without the owner's prior written consent
- Z2.6 Clause Z2.5 shall not apply to the extent that:
- Z2.6.1 such disclosure is a requirement of Law placed upon the party making the disclosure, including any requirements for disclosure under the Audit Commission Act 1998 or under the FOIA or the Environmental Information Regulations pursuant to the above clause regarding Freedom of Information;
- Z2.6.2 such information was in the possession of the party making the disclosure without obligation of confidentiality prior to its disclosure by the information owner;
- Z2.6.3 such information was obtained from a third party without obligation of confidentiality;

- Z2.6.4 such information was already in the public domain at the time of disclosure otherwise than by a breach of this Agreement; or
- Z2.6.5 it is independently developed without access to the other party's Confidential Information.
- Z2.7 The *Contractor* may only disclose the *Employer's* Confidential Information to the *Contractor* Personnel who are directly involved to Provide the Works who need to know the information, and shall ensure that such *Contractor* Personnel are aware of and shall comply with these obligations as to confidentiality.
- Z2.8 The *Contractor* shall not, and shall procure that the *Contractor* Personnel do not, use any of the *Employer's* Confidential Information received otherwise than to Provide the Works
- Z2.9 Nothing in this Agreement shall prevent the *Employer* from disclosing the *Contractor's* Confidential Information:
 - Z2.9.1 to any consultant, *contractor* or other person engaged by the *Employer*;
 - Z2.9.2 for the purpose of the examination and certification of the *Employer's* accounts or any other form of audit of the *Employer*;
- Z2.10 The *Employer* shall use all reasonable endeavours to ensure that any government department, employee, third party or Sub-contractor to whom the *Contractor's* Confidential Information is disclosed pursuant to this Agreement is made aware of the *Employer's* obligations of confidentiality.
- Z2.11 Nothing in this clause shall prevent either party from using any techniques, ideas or know-how gained during the performance of the Agreement 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 Intellectual Property Rights.
- Z2.12 The provisions of this Clause shall survive the expiration or termination of this Agreement.

Z3 Public Interest Disclosure (Whistle Blowing) (M)

- Z3.1 The *Contractor* will ensure that his employees and agents are made aware of the *Employer's* policy "Speaking Up About Wrongdoing" and that the details of this policy are fully explained to them and shall provide the *Employer* with evidence of doing so upon request.

Z4 Prevention of Bribery (M)

- Z4.1 The *Contractor*.

- a) shall not, and shall procure that all *Contractor* Personnel shall not, in connection with this Agreement commit a Prohibited Act;
 - b) warrants, represents and undertakes that it is not aware of any financial or other advantage being given to any person working for or engaged by the *Employer*, or that an agreement has been reached to that effect, in connection with the execution of this Agreement, excluding any arrangement of which full details have been disclosed in writing to the *Employer* before execution of this Agreement.
- Z4.2 The *Contractor* shall;
- a) if requested, provide the *Employer* with any reasonable assistance, at the *Employer's* reasonable cost, to enable the *Employer* to perform any activity required by any relevant government or agency in any relevant jurisdiction for the purpose of compliance with the Bribery Act;
 - b) the *Contractor* shall, within 10 working days of a request from the *Employer*, certify to the *Employer* in writing (such certification to be signed by an officer of the *Contractor*) the *Contractor's* compliance with this Clause Z4 and provide such supporting evidence of compliance with this Clause Z4 by The *Contractor* as the *Employer* may reasonably request.
- Z4.3 If any breach of Clause Z4.1 is suspected or known, the *Contractor* must notify the *Employer* immediately.
- Z4.4 If the *Contractor* notifies the *Employer* that it suspects or knows that there may be a breach of Clause Z4.1, the *Contractor* must respond promptly to the *Employer's* enquiries, co-operate with any investigation, and allow the *Employer* to audit books, records and any other relevant documentation. This obligation shall continue for two years following the expiry of termination of the Agreement.
- Z4.5 The *Employer* may terminate this Agreement by written notice with immediate effect, and recover from the *Contractor* the amount of any loss directly resulting from the cancellation, if the *Contractor* or *Contractor* Personnel (in all cases whether or not acting with the *Contractor's* knowledge) breaches Clause Z4.1. At the *Employer's* absolute discretion, in determining whether to exercise the right of termination under this Clause Z4.5, the *Employer* shall give consideration, where appropriate, to action other than termination of the Agreement unless the Prohibited Act is committed by the *Contractor* or a senior officer of the *Contractor* or by an employee, Sub-*Contractor* or supplier not acting independently of the *Contractor*. The expression "not acting independently of" (when used in relation to the *Contractor* or a Sub-*Contractor*) means and shall be construed as acting:
- a) with the authority; or,
 - b) with the actual knowledge;
of any one or more of the directors of the *Contractor* or the Sub-*Contractor* (as the case may be); or
 - c) in circumstances where any one or more of the directors of the *Contractor* ought reasonably to have had knowledge.
- Z4.6 Any notice of termination under Clause Z4.5 must specify:
- a) the nature of the Prohibited Act;
 - b) the identity of the party whom the *Employer* believes has committed the Prohibited Act; and
 - c) the date on which this Agreement will terminate.
- Z4.7 Any dispute relating to:
- a) the interpretation of Clause Z4; or
 - b) the amount or value of any gift, consideration or commission, shall be determined by the *Employer* and its decision shall be final and conclusive.

Z4.8 Any termination under Clause Z4.5 will be without prejudice to any right or remedy which has already accrued or subsequently accrues to the *Employer*.

Z5 Equalities (M)

Z5.1 The *Contractor* and any Sub-*Contractor* employed by the *Contractor* shall not unlawfully discriminate either directly or indirectly on such grounds as race or ethnic origin, disability, gender, sexual orientation, religion or belief, or age

- a) in the supply and provision of the Works under this Agreement, and
- b) in its employment practices.

Z5.2 Without prejudice to the generality of the foregoing, the *Contractor* and any Sub-*Contractor* employed by the *Contractor* shall not unlawfully discriminate within the meaning and scope of the Equalities Act 2010 (or other relevant legislation, or any statutory modification or re-enactment thereof).

Z5.3 In addition, the *Contractor* and any Sub-*Contractor* or person(s) employed by or under the control of the *Contractor* in providing services to the *Employer* will comply with the following general duties imposed on local authorities by Section 149 of the Equality Act 2010 to eliminate discrimination, harassment and victimisation and promote equality of opportunity between persons who share a protected characteristic and those who do not share it and to foster good relations between persons who share a protected characteristic and those who do not share it.

Z5.4 The *Contractor* and any Sub-*Contractor* employed by the *Contractor* will take all reasonable steps to observe as far as possible the Codes of Practice produced by the Equality and Human Rights Commission, which give practical guidance to *Employers* on the elimination of discrimination.

Z5.5 In the event of any finding of unlawful discrimination being made against the *Contractor* or any Sub-*Contractor* employed by the *Contractor* during the contract period, by any court or employment tribunal, or any adverse finding or formal investigation by the Equality and Human Rights Commission over the same period, the *Contractor* and any Sub-*Contractor* shall inform the *Employer* of this finding and shall take appropriate steps to prevent repetition of the unlawful discrimination.

Z5.6 The *Contractor* and any Sub-*Contractor* employed by the *Contractor* will provide a copy of its policies to the *Employer* at any time upon request. In addition, the *Employer* may reasonably request other information from time to time for the purpose of assessing the *Contractor's* compliance with the above conditions.

Z6 Human Rights (M)

Z6.1 The *Contractor* where appropriate takes account of the Human Rights Act 1998 and shall not do anything in breach of it.

Z7 Health & Safety at Work (M)

Z7.1 The *Contractor* will at all times in providing services to the *Employer* comply with the provisions of the Health and Safety at Work Act 1974 and provide evidence of doing so the *Employer* at any time upon request.

Z8 Freedom of Information Act 2000 (FOIA) and Environmental Information Regulations 2004 (EIR) (M)

- Z8.1 The *Contractor* acknowledges that the *Employer* is subject to the requirements of the FOIA and the Environmental Information Regulations and shall assist and cooperate with the *Employer* to enable the *Employer* to comply with its Information disclosure obligations.
- Z8.2 The *Contractor* shall notify the *Employer* of any Commercially Sensitive Information provided to the *Employer* together with details of the reasons for its sensitivity and the *Contractor* acknowledges that any lists or schedules of Commercially Sensitive Information so provided are of indicative value only and that the *Employer* may be obliged to disclose such information.
- Z8.3 The *Contractor* shall and shall procure that its Sub-*Contractors* shall:
- Z8.3.1 transfer to the *Employer* 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;
- Z8.3.2 provide the *Employer*, at the *Contractor's* expense, with a copy of all Information in its possession, or power in the form that the *Employer* requires within five Working Days (or such other period as the *Employer* may specify) of the *Employer's* request; and
- Z8.3.3 provide, at the *Contractor's* expense, all necessary assistance as reasonably requested by the *Employer* to enable the *Employer* 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.
- Z8.4 The *Contractor* shall be responsible for determining in its absolute discretion and notwithstanding any other provision in this Agreement or any other agreement whether the Commercially Sensitive Information and/or any other Information is exempt from disclosure in accordance with the provisions of the FOIA or the Environmental Information Regulations and in considering any response to a Request for Information the *Contractor* may consult with the *Contractor* prior to making any decision or considering any exemption
- Z8.5 In no event shall the *Contractor* respond directly to a Request for Information unless expressly authorised to do so by the *Contractor*.
- Z8.6 The *Contractor* acknowledges that (notwithstanding the provisions of this Freedom of Information clause) the *Contractor* may, acting in accordance with the Department of Constitutional Affairs' Code of Practice on the Discharge of the Functions of Public Authorities under Part 1 of the Freedom of Information Act 2000 ("the Code"), be obliged under the FOIA, or the Environmental Information Regulations to disclose information concerning the *Contractor* or the Services:
- Z8.6.1 in certain circumstances without consulting the *Contractor*; or
- Z8.6.2 following consultation with the *Contractor* and having taken their views into account; provided always that where sub-clause Z8.6.1 above applies the *Employer* shall, in accordance with any recommendations of the Code, take reasonable steps, where appropriate, to give the *Contractor* advanced notice, or failing that, to draw the disclosure to the *Contractor's* attention after any such disclosure.
- Z8.7 The *Contractor* shall ensure that all Information required to be produced or maintained under the terms of this Agreement, or by Law or professional practice or in relation to the Agreement is retained for disclosure for at least the duration of the Agreement plus one year together with such other time period as required by the Agreement, law or practice and shall permit the *Employer* to inspect such records as requested from time to time.
- Z8.8 The *Employer* shall in no event be liable for any loss, damage, harm, or detriment, howsoever caused, arising from or in connection with the reasonable disclosure under FOIA, or any other Law, of any information (including Exempt Information) whether relating to this Agreement or otherwise relating to any other party .

Z9 Audit and Monitoring (M)

- Z9.1 The *Contractor* will allow access for the *Employer's* officers to all relevant information for the purposes of audit and the monitoring of the contract.
- Z9.2 The *Contractor* agrees that where requested in writing during the term of this contract it will ensure that an appropriately authorised representative of the *Contractor* with knowledge of the *works* shall attend a committee meeting of elected members of the *Employer* on the date of the committee meeting notified by the *Employer*.

Z10 Goods Vehicles Operator's Licence (M)

- Z10.1. Each goods vehicle used by the *Contractor* or his Subcontractors in connection with the contract displays the vehicle licence disc relevant to the goods operator's licence under which the vehicle is operated or, in the absence of an operator's licence disc, the vehicle carries documentation giving the operator's licence number, name and address. The *Employer* will notify the Vehicle Inspectorate Agency (VI) of the commencement of works so that VI may carry out spot-checks on goods vehicles to ensure that they are operating legally.

Z11 Quality Submission

- Z11.1 **Not Used**

Z12 Quality Management System

- Z12.1 **Not Used**

Z13 Responsibility for Statutory Undertakers

- Z13.1 The *Contractor* on behalf of the *Employer*

- identifies those measures which need to be taken as a consequence of or in order to facilitate the *works* with any Statutory Undertaker;
- settles a specification for the measures which need to be taken and determines by whom those measures are to be taken with the Statutory Undertaker;
- co-ordinates the taking of those measures and the execution of the *works* with the Statutory Undertaker;

and the *Employer* as the *Contractor's* principal shall, subject to Clause Z13.2, pay the Statutory Undertaker's allowable costs in respect of these measures.

- Z13.2 The *Contractor*

- is responsible (at no cost to the *Employer*) for ensuring the Statutory Undertaker's compliance with any agreement or arrangement entered into under Clause Z13.1;
- indemnifies and keeps indemnified the *Employer* against all claims demands actions and proceedings, and all costs charges and expenses incurred in connection therewith, which may be brought or made by any Statutory Undertaker in respect of loss of or damage to any property of the Statutory Undertaker or the increased cost of working or business interruption of the Statutory Undertaker under or in connection with any agreement or arrangement entered into under Clause Z13.1 with the Statutory Undertaker howsoever arising including but not limited to the negligence or default of the *Contractor*.

- Z13.3 The *Contractor* allows in the programme required under Clause 31 [The programme] any notice period required by a Statutory Undertaker in relation to any matter which is the subject of Clause Z13.1 and for all periods required in the taking of measures which are the subject of Clause Z13.1.

Z14 Named Key Personnel

- Z14.1 Acceptance by the *Employer* of key persons stated in the Contract Data Part Two does not constitute acceptance that such individuals are suitable for the roles assigned to them or serve to relieve the *Contractor* of his duties or obligations under the contract.
- Z14.2 The *Contractor's Site Agent* means the person named in the Contract Data Part Two being the most senior member of the *Contractor's* professional personnel normally present on Site.
- Z14.3 The *Contractor's Site Safety Officer* named in the Contract Data Part Two is responsible for dealing with questions regarding the safety and protection against accidents of all staff and labour and all other persons entitled to be on the Site. This officer shall be qualified for this work and shall have the authority to issue instructions on behalf of the *Contractor* and shall implement protective measures to prevent accidents.
- ~~Z14.4 The *Contractor's Quality Manager* named in the Contract Data Part Two manages the *Contractor's* obligations arising under Clause Z12 (Quality management system) and is the person to whom the *Project Manager* may take any enquiries in relation to the performance of such obligations.~~

NOT USED

- Z14.5 The *Contractor's General Foreman* named in the Contract Data Part Two is responsible for carrying out control and co-ordination on Site as required by *Contractor's Site Agent*.
- Z14.6 The *Contractor's Traffic Safety and Control Officer* named in the Contract Data Part Two is responsible for traffic safety and management.
- Z14.7 The *Contractor's Designer* named in the Contract Data Part Two is responsible for undertaking design work to ensure compliance with the Construction (Design and Management) Regulations 2015 or any amendment or substitution thereof.
- Z14.8 The *Contractor's Pedestrian Ambassadors'* named in the Contract Data Part Two are responsible for ensuring the smooth and safe movement of pedestrians around the site including access to premises and for providing a point of contact to those who require help
- Z14.9 The *Contractor's Public Liaison Officer* named in the Contract Data Part Two is responsible for assisting with all queries, complaints and general public questions.

Z15 Named Subcontractors

- Z15.1 Where the *Contractor* has nominated a Subcontractor in the Contract Data Part Two for part of the *works*, acceptance of the Contract Data Part Two by the *Employer* without qualification of such nomination is deemed to be a consent on the same legal basis as consent by the *Project Manager* under Clause 26.2. Any such Subcontractor is not removed by the *Contractor* from the part of the *works* for which he has been nominated without the prior written consent of the *Project Manager*.
- Z15.2 Neither the objection to nor any failure to raise an objection to a proposed Subcontractor either by or through the *Project Manager* relieves the *Contractor* of any liability or obligation under the contract.

Z16 Payment (M)

- Z16.1 Delete the first sentence of core clause 51.1 and replace with:-
"The *Project Manager* certifies a payment on or before the date on which a payment becomes due."
- Z16.2 Delete the first sentence of core clause 51.2 and replace with:-
"Each certified payment is made on or before the final date for payment."

Z17 Recovery of Sums Due from Contractor (M)

Z17.1 When under the contract any sum of money is recoverable from or payable by the *Contractor* such sum may be deducted from or reduced by the amount of any sum or sums then due or which at any time thereafter may become due to the *Contractor* under the contract or any other contract with any Department or Office of Shropshire Council.

Z18 Retention Bond - Not Used

~~Z18.1 On issue of the Completion Certificate for the whole of the works the *Employer* agrees to release all retained monies if the *Contractor* provides the *Employer* with a retention bond which is:~~

- ~~• provided by a bank or insurer which the *Employer* has accepted~~
- ~~• in the form required by Contract Data part one and~~
- ~~• for an amount equivalent to the amount of retention then held by the *Employer*~~

~~Z18.2 A reason for not accepting the bank or insurer is that its commercial position is not strong enough to carry the bond.~~

~~Z18.3 The *Employer* releases the retention bond to the *Contractor* on the last defects date.~~

Z19 Dates for Payment (M)

Z19.1 For the purpose of the Housing Grants, Construction and Regeneration Act 1996 as amended by the Local Democracy, Economic Development and Construction Act 2009,

- the *Project Manager's* certificate is the notice of payment from the *Employer* to the *Contractor* specifying the amount (if any) of the payment made or proposed to be made, and the basis on which that amount was calculated,
- the date on which a payment becomes due is seven days after the assessment date and
- the final date for payment is 28 days after the date on which the payment becomes due.

Z19.2 If the *Employer* intends to withhold payment after the final date for payment of a sum due under the contract, he notifies the *Contractor* not later than one day (the prescribed period) before the final date for payment by specifying

- the amount proposed to be withheld and the ground for withholding payment or
- if there is more than one ground, each ground and the amount attributable to it.

Z20 Bonus for Early Completion

~~Z20.1 The *Contractor* is paid a bonus calculated at the rate stated in the Contract Data Part One for each whole day from the earlier of~~

- ~~• Completion and~~
- ~~• the date on which the *Employer* takes over the works~~

~~until the Completion Date provided that he has removed all traffic management installations and has reopened the carriageway in a safe condition to the satisfaction of the *Supervisor* so as not to cause traffic flows to be impeded or restricted.~~

Not Used

Z21 Lane Rental Charge for Late Completion

Z21.1 The *Contractor* pays a lane rental charge at the rate stated in the Contract Data Part One from Completion Date for each day or part thereof until the earlier of

- ~~Completion and~~
- ~~the date on which the *Employer* takes over the works~~

~~if he fails to remove all traffic management installations and re-open the carriageway in a safe condition to the satisfaction of the *Supervisor* so as not to cause traffic flows to be impeded or restricted. Lane rental charges shall as they fall due be debts due from the *Contractor* to the *Employer* and shall be recoverable as a debt.~~

Z21.2 If the Completion Date is changed to a later date after lane rental charges have been paid, the *Employer* repays the amount of such overpayment to the *Contractor*.

Not Used

Z22 Lane Rental Charge for Maintenance Work

Z22.1 The *Contractor* pays a lane rental charge at the rate stated in the Contract Data Part One from the Completion Date for each day or part thereof until the *defects date* if he occupies any part of any carriageway footway or cycleway and causes traffic flows on any carriageway to be impeded or restricted for the purposes of correcting Defects.

Z22.2 Lane rental charges shall as they fall due be debts due from the *Contractor* to the *Employer* and shall be recoverable as a debt.

Z23 Bonus for Timely Daily Clearance of Carriageway

Z23.1 The *Contractor* is paid a bonus calculated at the rate stated in the Contract Data Part One for each day that he occupies any part of any carriageway in order to Provide the Works from the *access date* until the earlier of

- ~~the Completion Date and~~
- ~~the date on which the *Employer* takes over the works~~

~~provided he has removed all traffic management installations and has reopened the carriageway in a safe condition to the satisfaction of the *Supervisor* so as not to cause traffic flows to be impeded or restricted between the following hours:~~

- ~~[*] hours and [*] hours of each day.~~

Not Used

Z24 Lane Rental Charge for Late Daily Clearance of Carriageway

Z24.1 The *Contractor* pays a lane rental charge at the rate stated in the Contract Data Part One for each day or part thereof if on any day he fails to remove all traffic management installations and re-open the carriageway in a safe condition to the satisfaction of the *Supervisor* so as not to cause traffic flows to be impeded or restricted between the following hours:

- ~~— [*] hours and [*] hours of each day~~

~~Z24.2 Lane rental charges shall as they fall due be debts due from the Contractor to the Employer and shall be recoverable as a debt.~~

Not Used

Z25 Deletion of Certain Compensation Events

Z25.1 Delete the following core Clauses from Compensation events:-

- 60.1 (13) weather
- 60.1 (15) early take over of works

Z26 Work Suspension (M)

Z26.1 Suspension of performance is a compensation event if the *Contractor* exercises his right to suspend performance under the Housing Grants, Construction and Regeneration Act 1996.

Z27 Parent Company Guarantee

~~Z27.1 The Contractor provides a Company Guarantee in the form set out in Appendix E within 14 days of the Contract Date.~~

Not Used

Z28 Special Requirements of Statutory Undertakers

Z28.1 The *Contractor*

- complies at his own cost with all Special Requirements of Statutory Bodies as set out in Appendix D
- is not excused from the performance of any of his obligations under the contract or is entitled to any allowance of time or to any additional remuneration or compensation in consequence of the requirement to comply with this Clause
- acknowledges and agrees that the *Employer* does not warrant and has not warranted the accuracy or completeness of any data or information which has been or will be provided to the *Contractor* by the *Employer* or the *Project Manager* relating to the location, size, nature or condition of services in, on, over or under the Site or in the vicinity of the Site
- further acknowledges and agrees that he neither has nor will have any claim of any kind whatsoever against the *Employer* founded upon the accuracy or completeness of any such data or information.

Z29 Tax and National Insurance Contributions (M)

Z29.1 The *Contractor* must provide his HM Revenue & Customs new Construction Industry Scheme contractor registration details for verification; namely:

- Company Unique Tax Reference (UTR);

- ii) Company Name;
- iii) Company Trading Name;
- iv) Company Registration Number.

Z30 Effects of Weather on Work

Z30.1. No work is done when in the opinion of the *Project Manager* the weather conditions are such as to make the start or continuance of work undesirable and/or impracticable. In such circumstances the *Project Manager* will issue a certificate to the *Contractor* provided

- the *Contractor* has taken all reasonable steps to mitigate the effects of such weather conditions and
- the timely execution of the work is crucial to the *Contractor's* Accepted Programme

Z30.2 For purposes of the contract

- only continuous periods of 4 hours or more for which a certificate has been issued by the *Project Manager* are taken into account for calculating changes to the Completion Date
- the prices are not changed due to any costs associated with this clause
- the *Contractor* does not pay lane rental charges (clauses Z21 and Z24) for periods covered by such a certificate.

Z31 Value Engineering

Z31.1. The *Contractor* may at any time prior to or during the carrying out of the works submit to the *Project Manager* written proposals to change the Works Information which, in the *Contractor's* opinion, will significantly reduce the cost of the *works* or the cost of maintenance. Any proposal clearly states it is submitted for consideration under this clause and includes a detailed quotation, for consideration by the *Employer*, setting out the amount to which the *Contractor* may be entitled on the basis that he and the *Employer* shall share equally the relevant savings as determined in accordance with Clause 63 (Assessing Compensation Events).

Z31.2. Quotations for proposed savings comprise proposed changes to the Prices and any delay to the Completion Date. The *Contractor* submits details of his assessment with each quotation. If the programme for remaining work is affected by the proposal the *Contractor* includes a revised programme in his quotation showing the effect.

Z31.3. The *Employer* accepts such a proposal the *Project Manager* gives an instruction to the *Contractor* within the *[period for reply]* which changes the Works Information.

Z32 Retention Payment

Z32.1 Delete the wording in X16.2 from Option X16 and replace with:-

“The retention percentage is retained at the amount stated in the Contract Data Part 1 until the Defects Certificate is issued. No amount is retained in the assessments made after the Defect Certificate has been issued”.

Z33 Complaints Procedure (M)

- Z33.1 The *Contractor* shall operate a complaints procedure in respect of any goods, services or works provided under these terms and conditions, to the entire satisfaction of the *Employer*, and comply with the requirements of any regulatory body to which the *Contractor* is subject (including any change in such requirements) and ensure that its complaints procedure meets the following minimum standards:
- Z33.1.1 is easy to access and understand
 - Z33.1.2 clearly sets out time limits for responding to complaints and keeping the complainant and the *Employer* informed of progress
 - Z33.1.3 provides confidential record keeping to protect staff employed under this contract and the complainant
 - Z33.1.4 provides information to management so that services can be improved
 - Z33.1.5 provides effective and suitable remedies
 - Z33.1.6 is regularly monitored and audited and which takes account of complainant and *Employer* feedback
- Z33.2 The *Contractor* shall ensure that:
- Z33.2.1 under no circumstances is a complaint investigated by a member of its staff employed under this contract who may be part of the complaint.
 - Z33.2.2 Someone who is independent of the matter complained of carries out the investigation
 - Z33.2.3 The complainant is made aware that they are entitled to have the complaint investigated by the employer if they are not satisfied with either the process of investigation or finding of the *Contractor's* investigations
 - Z33.2.4 The *Contractor* will ensure that it responds to the complainant within a max of 10 days of receiving the complaint.
- Z33.3 The *Contractor* will make its complaints procedure available on request.
- Z33.4 The *Contractor* shall ensure that all its staff employed under this contract are made aware of its complaints procedure and shall designate one *Employee* (who shall be identified to the *Employer*) to whom a complaint may be referred should the complainant not be satisfied with the initial response to their complaint.
- Z33.5 The *Contractor* shall keep accurate and complete written records of all complaints received and the responses to them and shall make these records available to the *Employer* on request or at 12 monthly intervals in any event.
- Z33.6 Where the *Employer* is investigating a complaint the *Contractor* is required to participate fully in all investigations within the timescales requested by the *Employer*.
- Z33.7 The *Contractor* should note that if a complaint is made to the *Employer* by a third party relating to the goods, services or works provided, the Local Government Ombudsman has the power to investigate such a complaint and the *Employer* requires the *Contractor* to fully co-operate in such investigation. If the *Employer* is found guilty of mal-administration or injustice by the Local Government Ombudsman because of the act or default of the *Contractor* the *Contractor* shall indemnify the *Employer* in respect of the costs arising from such mal-administration or injustice.

Z34 Novation of Existing Contracts

Z34.1 The *Contractor* accepts the novation to him of all of the *Employer's* obligations in the following existing contracts apart from those which relate to services that have already been provided prior to the Starting Date:

Full Details of these contracts are contained in Appendix F.

Z34.2 The novation of the *Employer's* obligations to the *Contractor* pursuant to Clause Z34.1 shall occur on the Starting Date.

Z34.3 For the purpose of this contract, the Suppliers/Fabricators in the contracts listed in Clause Z34.1 shall be referred to as the *Novated Contractors*.

For the purpose of this contract, the formation of the contracts listed in Clause Z34.1 shall be referred to as the Appointment.

The *Contractor* shall assume all of the obligations of the *Employer* under the Appointment and the *Novated Contractor* shall perform his obligations under the Appointment in favour of the *Contractor* in lieu of the *Employer*.

The *Employer* releases and discharges the *Novated Contractor* from any and all obligations and liabilities owed to the *Employer* under the Appointment.

The *Novated Contractor* undertakes to perform the Appointment and to be bound by its terms in every way as if the *Contractor* was, and had been from the inception, a party to the Appointment in lieu of the *Employer*.

The *Employer* shall remain liable for all payments due to the *Novated Contractor* under the Appointment for services provided prior to the Starting Date.

Notwithstanding any other provision in this agreement, nothing in this agreement is intended to confer on any person any right to enforce any of the provisions of this agreement which such person would not have had, but for the Contracts (Rights of Third Parties) Act 1999.

Not Used

Z35 Safeguarding (M)

Z35.1 Where the work being undertaken in this Agreement allows access to premises locations or activities where there is a likelihood of coming into contact with children or vulnerable adults the *Contractor* must ensure that it follows the guidance of the Disclosure and Barring Service to determine whether a Disclosure and Barring Service (DBS) check is required for Contractor Personnel. If in any doubt the *Contractor* should discuss the matter further with the officer of the Employer awarding the contract and raise any concerns arising from disclosures.

Z35.2 Where the Works requirement or specification determines that a DBS check should be carried out, the *Contractor* shall ensure that DBS checks are obtained and verified prior to the relevant *Contractor* Personnel commencing work on the Works.

Z36 Agreement Status and Transparency (M)

Z36.1 The parties acknowledge that, except for any information which is exempt from disclosure in accordance with the provisions of the FOIA, the content of this Agreement and any associated tender documentation provided by the *Contractor* (the Tender Submission) is not Confidential Information. The Council shall be responsible for determining in its absolute discretion whether any of the content of the Agreement or the Tender Submission is exempt from disclosure in accordance with the provisions of the FOIA.

Z36.2 Notwithstanding any other term of this Agreement, the *Contractor* hereby gives his consent for the Council to publish this Agreement and the Tender Submission in its entirety, including from time to time agreed changes to the Agreement, to the general public.

- Z36.3 The Council may consult with the *Contractor* to inform its decision regarding any exemptions but the Council shall have the final decision in its absolute discretion.
- Z36.4 The *Contractor* shall assist and cooperate with the Council to enable the Council to publish this Agreement and the Tender Submission.

Z37 Protection of Personal Data

- Z37.1 The Contactor shall;
- Z37.1.1 Process the Personal Data only in accordance with instructions from the *Employer* (which may be specific instructions or instructions of a general nature as set out in this Agreement or as otherwise notified by the *Employer* to the *Contractor* during the term of this Agreement);
 - Z37.1.2 Process the Personal Data only to the extent, and in such manner, as is necessary for the provision of the Works or as is required by Law or any Regulatory Body;
 - Z37.1.3 implement appropriate technical and organisational measures, including but not limited to ensuring that Personal Data is not stored on any portable equipment or storage device or media unless encrypted, to protect the Personal Data against unauthorised or unlawful processing and against accidental loss, destruction, damage, alteration or disclosure. These measures shall be appropriate to the harm which might result from any unauthorised or unlawful Processing, accidental loss, destruction or damage to the Personal Data and having regard to the nature of the Personal Data which is to be protected;
 - Z37.1.4 take reasonable steps to ensure the reliability of any *Contractor* Personnel who have access to the Personal Data;
 - Z37.1.5 obtain prior written consent from the *Employer* in order to transfer the Personal Data to any Sub-*Contractors* or Affiliates for the provision of the Works;
 - Z37.1.6 ensure that all *Contractor* Personnel required to access the Personal Data are informed of the confidential nature of the Personal Data and comply with the obligations set out in this Protection of Personal Data clause;
 - Z37.1.7 ensure that no *Contractor* Personnel publish, disclose or divulge any of the Personal Data to any third party unless directed in writing to do so by the *Employer*;
 - Z37.1.8 notify the *Employer* (within five Working Days) if it receives:
 - a) a request from a Data Subject to have access to that person's Personal Data; or
 - b) a complaint or request relating to the *Employer's* obligations under the Data Protection Legislation;
 - Z37.1.9 provide the *Employer* with full cooperation and assistance in relation to any complaint or request made, including by:
 - a) providing the *Employer* with full details of the complaint or request;
 - b) complying with a data access request within the relevant timescales set out in the Data Protection Legislation and in accordance with the *Employer's* instructions;
 - c) providing the *Employer* with any Personal Data it holds in relation to a Data Subject (within the timescales required by the *Employer*); and
 - d) providing the *Employer* with any information requested by the *Employer*;

- Z37.1.10 permit the *Employer* or the *Employer Representative* (subject to reasonable and appropriate confidentiality undertakings), to inspect and audit, in accordance with the Audit clause, the *Contractor's* data Processing activities (and/or those of its agents, subsidiaries and *Sub-Contractors*) and comply with all reasonable requests or directions by the *Employer* to enable the *Employer* to verify and/or procure that the *Contractor* is in full compliance with its obligations under this Agreement;
- Z37.1.11 provide a written description of the technical and organisational methods employed by the *Contractor* for processing Personal Data (within the timescales required by the *Employer*); and
- Z37.1.12 not process Personal Data outside the United Kingdom without the prior written consent of the *Employer* and, where the *Employer* consents to a transfer, to comply with:
- a) the obligations of a Data Controller under the Eighth Data Protection Principle set out in Schedule 1 of the Data Protection Act 1998 by providing an adequate level of protection to any Personal Data that is transferred; and
 - b) any reasonable instructions notified to it by the *Employer*
- Z37.1.13 The *Contractor* shall comply at all times with the Data Protection Legislation and shall not perform its obligations under this Agreement in such a way as to cause the *Employer* to breach any of its applicable obligations under the Data Protection Legislation.
- Z37.1.14 The *Contractor* shall ensure that its employees and agents are aware of and comply with this clause and shall indemnify the *Employer* against any loss or damage sustained or incurred as a result of any breach of this clause.

Z38 Interpretation Provisions

Z38.1 Delete existing clause 12.1 and replace with

"In this contract, except where the context shows otherwise

- words in the singular also mean in the plural and the other way round,
- words in the masculine also mean in the feminine and neuter and the other way round,
- references to a document include any revision made to it in accordance with this contract,
- references to a statute or statutory instrument include any amendment or re-enactment of it from time to time and any subordinate legislation or code of practice made under it and references to a standard include any current relevant standard that replaces it."

Z39 Subcontracting (Additional Z clause to amend core clause 26)

Z39.1 Following clause 26.3 insert the following:

26.4 Notwithstanding the provision of clause 26.3 above the Contractor shall ensure that the conditions of contract for each subcontract include provisions as to the passing of title of Equipment, Plant and Materials that are no less onerous than those imposed on the Contractor under clauses 70 and 71.

Z40 Employer's Title to Plant and Materials

Z40.1 Delete clause 70 and replace with the following:

“70 Employer’s title to Plant and Materials

- 70.1 The value of Plant and Materials outside the Working Areas is excluded from the Price for Work Done to Date unless
- the Equipment, Plant and Materials is within the United Kingdom
 - the *Contractor* demonstrates to the satisfaction of the *Project Manager* that the *Contractor* has unencumbered title to the Plant and Materials,
 - the Plant and Materials is stored separately and is clearly and visibly marked as for the *Employer* and this contract,
 - the Plant and Materials is adequately protected against water, theft, vandalism and other casualties,
 - the Plant and Materials is insured against loss or damage while stored or in transit to the Working Areas for its full reinstatement value under a policy of insurance protecting the interests of the Parties in respect of the usual insured risks for the period until it is brought within the Working Areas.
- 70.2 Where the value of Plant and Materials outside the Working Areas is included in the Price for Work Done to Date
- the *Contractor’s* title in the Plant and Materials passes to the *Employer*,
 - the *Contractor* does not remove it from where it is stored except for use on the *works* and
 - the risk of loss or damage to the Plant and Materials remains with the *Contractor*.
- 70.3 The value of Plant and Materials within the Working Areas is excluded from the Price for Work Done to Date unless
- title in the Plant and Materials has already passed to the *Employer* under clause 70.2 or
 - the *Contractor* demonstrates to the satisfaction of the *Project Manager* that the *Contractor* has unencumbered title in the Plant and Materials.
- 70.4 The *Contractor’s* title in Plant and Materials passes to the *Employer* when it is brought within the Working Areas, but (subject to clause 80.1) the risk of loss or damage to the Plant and Materials remains with the *Contractor*.
- 70.5 The *Contractor* does not remove Plant and Materials within the Working Areas from where it is stored except for use on the *works* or with the *Project Manager’s* permission.
- 70.6 The title to Plant and Materials passes back to the *Contractor* if it is removed from the Working Areas with the *Project Manager’s* permission.”

Z40.2 Delete clause 71 and replace with the following:

“71 Marking Equipment, Plant and Materials Outside the Working Areas

- 71.1 The *Supervisor* marks Equipment, Plant and Materials which are outside the Working Areas if
- they are to be included in the Price for Work Done to Date and,
 - the *Contractor* has prepared them for marking as the Works Information and as clause 70.1 requires.

Z41 Assignment

- Z41.1 The *Contractor* does not assign his interest in or any rights arising under this contract without the consent of the *Employer*.
- Z41.2 The *Employer* may assign, charge or transfer his interest in this contract or any rights arising under it at any time without the consent of the *Contractor*. The *Employer* notifies the *Contractor* of any such assignment, charge or transfer.

Z42 Insurance

- Z42.1 Insurance policies are subject to an excess/ deductibles limitation as stated in *Contract Data Part One*.
- Z42.2 Where the contractor subcontracts design they shall procure that the subcontractor provides a collateral warranty as set out in the requirements of clause Z49 and shall also demonstrate that the subcontractor has the required level of professional indemnity insurance cover as set out in the requirements of clause Z42.3.
- Z42.3 Add the following to the insurance table in clause 84.2

Insurance against	Minimum level of cover or minimum level of indemnity	Period following Completion of the whole of works
Liability for failure to use the skill and care normally used by professionals providing design services similar to the <i>Contractors</i> design role in Providing the Works	£10 million in respect of each claim, without limit to the number of claims	12 years

Z43 Shropshire Council as Regulatory Body

- Z43.1 Shropshire Council's position as a Regulatory Body and as *Employer* under the Contract are separate and distinct. Actions taken in one capacity are deemed not to be taken in the other. Where the statutory consents must be obtained from Shropshire Council in its capacity as a Regulatory Body, the Contractor, is responsible for obtaining these and paying fees. Shropshire Council's acceptance of a tender and the *Project Manager's* instructing or varying the work does not constitute statutory approval or consent.
- An action by Shropshire Council as a Regulatory Body is not in its capacity as the *Employer* and is not a compensation event.

Z44 CDM Advisor

- Z44.1 The Client has appointed a CDM Advisor to act as his agent, in order to assist the Client in discharging Client duties under the Construction (Design Management) Regulations 2015 (CDM 2015). The CDM Advisor, named in Contract Data Part One shall have the following duties -
- Ensure that the Principal Contractor produces a Construction Phase Plan that fully takes into account all relevant Pre Construction Information.
 - Ensure that the plan is suitable for managing health and safety for the project.
 - Agree suitable arrangements with the contractor on behalf of the client and also visit site to ensure welfare facilities prescribed are installed as agreed.
 - Ensure the Principal Contractor complies with their duties through on-going dialogue, site visits and auditing where necessary.

- Ensure that the Principal Contactor provides information for the Health and Safety file.

Z45 Compliance with legislation (M)

Z45.1 The *Contractor* Provides the Works:

- in a proper and workmanlike manner, and
- in compliance with
 - all statutes, statutory instruments, regulations, rules and orders made under any statute or directive having the force of law which affect the *works* or performance of any obligations under this contract, and
 - any regulation, bye-law, permission or approval of any local authority or statutory undertaker having jurisdiction in relation to the *works* or with whose systems the *works* are, or are to be, connected.

Z45.2 The project that comprises or includes the works will use more than one contractor for the purposes of the Construction (Design and Management) Regulations 2015 (the "CDM Regulations"). The Contractor is the principal contractor under the CDM Regulations in respect of the works and performs all the functions and obligations required to be performed by the principal contractor under the CDM Regulations.

Z46 Third Party Rights

Z46.1 **Not Used**

Z47 Copyright (M)

Z47.1 The *Contractor* grants to the *Employer*, with immediate effect, an irrevocable, non-exclusive, royalty-free licence to copy and make full use of the Material for any purpose relating to the *works*, including without limitation any of the Permitted Uses.

Z47.2 The *Employer's* licence carries the right to grant sub-licences and is transferable to third parties without the consent of the *Contractor* and survives termination (for any reason) of the *Contractor's* employment under this contract.

Z47.3 The *Contractor* is not liable for use of the Material for any purpose other than that for which it was prepared or provided.

Z48 The Public Contracts Regulations 2015 (M)

Z48.1 The *Employer* may terminate the *Contractor's* obligation to Provide the Works if any of the provisions of paragraph 73(1) of The Public Contracts Regulations 2015 apply.

Z48.2 If the *Employer* terminates under the provisions of paragraph 73(1)(b) of the Public Contracts Regulations 2015 as a result of information not disclosed by the *Contractor* at the Contract Date, the procedures and amounts due on termination are the same as if the *Contractor* has substantially failed to comply with his obligations.

Z48.3 If the *Employer* otherwise terminates under the provisions of paragraph 73(1) of the Public Contracts Regulations 2015, the procedures and amounts due on termination are the same as if the Parties had been released under the law from further performance of the whole of this contract.

Z48.4 The *Contractor* does not appoint a Subcontractor or supplier if there are compulsory grounds for excluding the Subcontractor or supplier under regulation 57 of the Public Contracts Regulations 2015

Z48.5 The *Contractor* includes in any subcontract awarded by him provisions requiring that

- payment due to the Subcontractor or supplier under the subcontract is made no later than 30 days after receipt of a valid and undisputed invoice, unless this contract requires the *Contractor* to make earlier payment to the Subcontractor or supplier,
- invoices for payment submitted by the Subcontractor or supplier are considered and verified by the *Contractor* in a timely fashion,
- undue delay in considering and verifying invoices is not sufficient justification for failing to regard an invoice as valid and undisputed and
- any contract awarded by the Subcontractor or supplier for work included in this contract includes provisions to the same effect as these provisions.

Z49 Collateral Warranty Agreements

Z49.1 Upon request by the *Employer* the contractor shall procure that the subcontractor provides a fully executed *collateral warranty agreement* in the form as set out in Appendix G

APPENDIX A : FORM OF AGREEMENT BY DEED

FORM OF AGREEMENT FOR AN NEC3 ENGINEERING AND CONSTRUCTION CONTRACT

for works comprising

*Shrewsbury Integrated Transport Package:
Town Centre Package 1*

Between

SHROPSHIRE COUNCIL

and

THIS DEED made the

day of

20

BETWEEN

- 1) **SHROPSHIRE COUNCIL**
of Shirehall, Abbey Foregate, Shrewsbury, Shropshire SY2 6ND

("the *Employer*") and

- 2) [FULL COMPANY NAME OF CONTRACTOR] incorporated and registered in England and Wales
with company number [NUMBER]
whose registered office is at [REGISTERED OFFICE ADDRESS]
("the *Contractor*")

BACKGROUND

- (A) The *Employer* wishes to appoint the *Contractor* to Provide the Works at the Site.
(B) The *Contractor* has agreed to provide the Works in accordance with the *conditions of contract* specified in clause 4 of this Agreement.

NOW THIS DEED WITNESSES as follows:-

INTERPRETATION

1. In this Deed unless the context otherwise requires:
(a) any term used with initial capital letters has the meaning given to it in the *conditions of contract*; and
(b) any italicised term has the meaning given to it in the Contract Data.

CONTRACTOR'S RESPONSIBILITIES

2. The *Contractor* will Provide the Works in accordance with the *conditions of contract* specified in clause 4 below

EMPLOYER'S RESPONSIBILITIES

3. The Employer will pay the *Contractor* for the *works* and carry out his other duties in relation to them in accordance with the *conditions of contract*

CONTRACT FOR THE WORKS

4. The contract for the *works* comprises the *conditions of contract* in the form of the NEC3 Engineering and Construction Contract April 2013 incorporating the following options:
(a) **Main Option B - Priced Contract with Bill of Quantities;**
(b) Dispute resolution Option **W2;**
(c) Secondary Option Clauses **X2, X7, X15, X16, X18, Y (UK)2, Y (UK)3;** and
(d) Option Z Additional conditions of contract, comprising clauses **Z2 to Z49** inclusive (*the additional conditions of contract*) as annexed to this Agreement

together with this Agreement, **the Shorter Schedule of Cost Components, the Priced Bill of**

Quantities Option B the completed Contract Data, the Works Information, this Agreement and the following documents:

- (e) Instructions for Tendering
- (f) the Specification (including Preamble)
- (g) the Bill of Quantities (including Preamble) Option B
- (g) the Drawings as listed in Appendix 0/4 to the Specification
- (h) The Contractor's Tender dated [] comprising:
 - i) Completed Form of Tender
 - ii) Tendered Bill of Quantities Option B
 - iii) Completed Contract Data Part 2
 - iv) Outline Programme of Works
 - v) CHAS certificate
 - vi) Adjudicators nominations
 - vii) Acceptance of Principal Contractor status
 - viii) Insurance Policies and Statement regarding excesses
 - ix) CIS details
 - x) Tender Amendments No. [] dated []

CONTRACT DATA

- 5. A copy of the completed Contract Data is annexed to this Agreement

PRIORITY OF DOCUMENTS

- 6. If there is any ambiguity or inconsistency in or between the documents comprising this contract, the priority of the documents is in accordance with the following sequence:
 - (a) this Agreement;
 - (b) the completed Contract Data,
 - (c) the *additional conditions of contract*;
 - (d) the *other conditions of contract*;
 - (e) the Works Information; and
 - (f) any other document forming part of the contract.

- 7. The Employer and the Contractor hereto acknowledge and agree that this Agreement shall govern all works and services carried out by the Contractor in connection with the *Works* prior to the date of this Agreement, all of which works and/or services shall be deemed to have been carried out subject to the terms of this Agreement.

This Agreement has been executed as a deed and is delivered and takes effect on the date stated at the beginning of it.

Executed as a deed by affixing the
COMMON SEAL of **SHROPSHIRE**
COUNCIL in the presence of:

.....
Authorised Signatory

Executed as a deed by [NAME OF
CONTRACTOR] acting by a director and a
director OR its company secretary

.....
Signature
Director

.....
(Print Name)

.....
Signature
Director OR Secretary [Delete as appropriate]

.....
(Print Name)

OR

Executed as a deed by [NAME OF
CONTRACTOR] acting by a director, in the
presence of:

.....
Signature
Director

.....
[SIGNATURE OF WITNESS]

.....
(Print Name)

.....

.....

.....

[PRINT NAME, ADDRESS AND OCCUPATION
OF WITNESS]

Completed Contract Data

[ATTACH CONTRACT DATA]

APPENDIX B: CERTIFICATES

NOT USED

APPENDIX C: FORM OF RETENTION BOND

Not Used

APPENDIX D: SPECIAL REQUIREMENTS

List here any appropriate Special Requirements in relation to statutory bodies, e.g.:-

Electricity Generating and Distribution Companies
BT OpenReach
Water and Sewerage Companies
National Grid plc

**SPECIAL REQUIREMENTS IN RELATION TO ELECTRICITY
GENERATING AND DISTRIBUTION COMPANIES**

1. For the purposes of this Special Requirement the following terms shall have the meanings assigned to them:-
 - (a) 'Company' means:-
Western Power Distribution
Toll End Road
Tipton
West Midlands
DY4 0HH

Tel: 0800 096 3080

or its successors and assigns.
 - (b) 'Company Representative' means the Chief Civil Engineer of the said 'Company' defined at 1(a) of this Special Requirement or other duly Authorised Engineer Representative and/or Agent appointed for the time being to act on behalf of the said 'Company'.
 - (c) 'Plant or Equipment' means any plant equipment gear machinery apparatus or appliance or any part thereof as defined in the Construction (General Provisions) Regulations 1961 and the Construction (Lifting Operations) Regulations 1961 owned leased or rented by the said 'Company' defined at 1(a) of this Special Requirement.
 - (d) 'Electricity Cable(s)' means any cabling including but not limited to 'Overhead Electricity Lines' or 'Buried Electricity Cables' owned leased or rented for the purposes of electricity transmission and supply by the said 'Company' as defined at 1(a) of this Special Requirement.
2. Before commencing any work or moving heavy plant or equipment over any portion of the Site the Contractor shall consult the Company Representative as early as possible and in any event not less than fourteen days before it is proposed to commence work to ascertain whether any Electricity Cable(s) or Plant or Equipment will be affected by the Works and to confirm details of any restrictions or requirements that the Company Representative may consider necessary for the safe carrying out of the works. The Company Representative, can be contacted at the following point:-

Address:-	General Network Enquiries	Power Loss and Emergencies
Telephone:-	0800 096 3080	0800 6783 105
3. Where such details show that the Works or the movement of plant or equipment may endanger the equipment of the Company, the Contractor must ensure that the presence of any Electricity Cable(s) Plant or Equipment can be indicated by markers to be supplied by the Company and placed by the Contractor under the supervision of the Company Representative. The Contractor shall ensure that all Company Electricity Cable(s) Plant or Equipment is adequately protected from damage and such protective measures shall be approved by the Engineer.
4. The work shall be carried out in conformity with the Requirements of the Health and Safety Executive Guidance Notes:-
 - (i) No. GS6 'Avoidance of Danger from Overhead Electric Cables'
 - (ii) No. GS33 'Avoiding Danger from Buried Electricity Cables'
5. Except under such restrictions as the Company Representative may impose for the safety of persons and the protection of property WORKS SHALL NOT BE CARRIED OUT or cranes or other plant erected operated and/or dismantled or materials stored WITHIN THE 'PROHIBITED SPACE' WHICH IS THAT SPACE WITHIN A RADIUS OF:-
 - (a) 15.0 M OF LIVE OVERHEAD ELECTRICITY LINES WHERE LINES ARE CARRIED ON

STEEL TOWERS

- (b) 9.0 M OF LIVE OVERHEAD ELECTRICITY LINES WHERE THE LINES ARE CARRIED ON WOOD POLES

TOGETHER WITH ANYWHERE VERTICALLY ABOVE THIS SPACE. These distances shall be maintained at all times between any Overhead Electricity Lines or anything connected to such Overhead Electricity Lines owned leased or rented by the Company.

6. The Contractor and any sub-contractor employed by him should particularly note and bring to the attention of their respective employees the danger of 'Flash-over' where as a result of the very high voltages being transmitted potentially lethal shocks can occur in close proximity to live Overhead Electricity Lines WITHOUT ANY CONTACT BEING MADE.
7. Debris produced when trimming or felling trees and/or from demolition MUST NOT fall or be projected into the 'Prohibited Space'. Similarly excavation spoil must not be dumped or accumulated so as to cause infringement of the 'Prohibited Space'.
8. Special care MUST be taken when using material, which shall include but not be limited to, rope wire and/or measuring tape and the like.
9. The Contractor shall exercise particular care when carrying out work which involves the use of water jets or piped slurry. Liquids when being carried or used for the purposes of the works MUST NOT be allowed to splash fall or otherwise be projected into the 'Prohibited Space'.
10. If a crane or other equipment is used crane stops, fencing and warning notices shall be provided by the Contractor to ensure that there can be no encroachment on the 'Prohibited Space' by crane load or other equipment even if the crane load or equipment slips fails or overturns.
11. Portable ladders used in the vicinity of the live Overhead Electricity Lines shall be of wood or other non-conducting material and shall not be reinforced by metal attachments running along stiles of the ladders. Even ladders without reinforcement can lead to serious electrical shocks if allowed to come close to live overhead equipment and therefore special precautions must be taken to ensure that the ladder cannot slip and encroach on the 'Prohibited Space'.
12. Any disturbance of or attachment to any Plant or Equipment or Electric Cable(s) of the Company shall ONLY be carried out by the staff of the Company or its authorised contractors and/or agents.
13. Long objects, which shall include but not be limited to pipes scaffold poles ladders and/or long handled tools or any object of such length that if carried vertically could infringe on the 'Prohibited Space' MUST BE CARRIED HORIZONTALLY.
14. Where for the purposes of completing the Works in accordance with the Contract the need arises to operate within the 'Prohibited Space' the Contractor shall give the Company Representative not less than fourteen days written notice of the dates upon which it is intended to operate plant or equipment or carry out any work. The permission of the Company Representative MUST be obtained in writing BEFORE any plant or equipment is operated or work of any kind is carried out WITHIN the above distances. Such operations or work shall only be carried out in the presence of the Company Representative unless notice shall have been obtained in writing from the Company Representative that such a presence on Site is not required.
15. In the event of the Company requiring emergency and/or maintenance work to be executed on the Electricity Cable(s) whether Overhead Electricity Lines or Buried Electricity Cables during the period of the Contract the Contractor shall afford all reasonable facilities and access to the staff of the Company or authorised contractors and/or agents.
16. Work should not be carried out in the immediate vicinity of the overhead lines during period of poor visibility. If this it not reasonably practicable additional precautions MUST be taken including but not limited to the erection of appropriate barriers to ensure maintenance of the appropriate safety clearances.
17. The above requirements do not relieve the Contractor of any of his obligations under the

Contract or of the responsibility for taking every precaution to avoid risk to persons and/or damage to property.

IN CASE OF EMERGENCY Tel. 0800 6783 105

SPECIAL REQUIREMENTS IN RELATION TO BT OPENREACH

1. In this Special Requirement the following terms shall have the meanings assigned to them:-
 - (a) 'Company' means British Telecommunications plc.
 - (b) 'Company Representative' means the staff of British Telecommunications plc or its Authorised Representatives and Agents.
 - (c) 'Apparatus' means all surface or sub-surface equipment and plant including any associated cabling and/or ducting owned, leased or rented by British Telecommunications plc.
2. Before commencing any work or moving heavy plant or equipment over any portion of the Site the Contractor shall confirm details of the Apparatus, owned, leased or rented by the Company, within the Site with the Company Representative, who can be contacted at the following point:-

Address:-	Midlands Street Works Act Management Point (SWAMP) BT.PP404B Telecom House Trinity Street Hanley Stoke-on-Trent ST1 5ND (Plans only)	Dial Before You Dig (Plans, mark up on site, protection advice)
Telephone:-	0800 800 865	0800 917 3993
3. Where such details show that the works or the movement of plant or equipment may endanger the Apparatus of the Company, the Contractor must give the Company Representative at least 7 days written notice of the date on which it is intended to commence such works or the movement of plant and equipment in order that the presence of any sub-surface Apparatus can be indicated by markers to be supplied by the Company and placed by the Contractor under the supervision of a Company Representative. The Contractor shall ensure that all Company Apparatus, particularly surface running cabling, is adequately protected from damage and such protective measures shall be approved by the Engineer.
4. In the event of a Company marker being disturbed for any reason it shall not be replaced other than in the exact position and to its former depth unless the repositioning is carried out at the direction and under the supervision of a Company Representative.
8. The Contractor shall take particular care in relation to the protection of Company Apparatus, where such Apparatus includes the presence within the Site of optical fibre and/or co-axial cabling. The Contractor should particularly note that damage to such Apparatus is extremely disruptive to the Company network and costly to reinstate. The Contractor shall make every effort to avoid the disturbance of Company Apparatus more than is absolutely necessary for the completion of the Works in accordance with the Contract.
6. When excavating around, moving or backfilling around Company Apparatus, the Company Representative shall be given adequate notice, which shall not be less than 3 days, of the Contractor's intentions in order that he may supervise the works. The Contractor should note that the normal depth of cover for Company Apparatus and ducts is as follows:-
 - (a) In carriageways 600 mm, which is to be maintained.
 - (b) In footways 450 mm, which is to be maintained.

Where the 600/450 mm depth of cover cannot be maintained the Contractor shall carry out the instructions of the Engineer for the protection of Company Apparatus and such actions that follow from the Engineer's instruction shall be supervised by a Company Representative. Where the required depth of cover cannot be maintained over cabling, such cables as are affected shall be enclosed and protected in UPVC duct to be supplied by the Company as

directed by the Company Representative.

With regard to excavation in the vicinity of Company Apparatus and ducts the Contractor should have particular regard to the possibility of reduced cover and the encountering of such Company Apparatus and ducts at depths of cover less than that given at (a) and (b) above.

7. All excavation adjacent to Company Apparatus is to be carried out by hand until the exact extent and/or location of Company Apparatus is known. Mechanical borers and/or excavators shall not be used within 1.0 m of Company Apparatus without the supervisory presence of a Company Representative. To prevent any movement of Company Apparatus during excavation, complete shuttering shall be used as directed by the Engineer if:-

- (a) Excavation is deeper than the depth of cover of adjacent Company Apparatus.
- (b) Excavation is within 1.0 m of Company Apparatus in stable soil.
- (c) Excavation is within 5.0 m of Company Apparatus in unstable soil.

If for the completion of the Works the Contractor intends using any of the following:-

- (i) Pile driving equipment within 10.0 m of Company Apparatus
- (ii) Explosives within 20.0 m of Company Apparatus
- (iii) Laser equipment within 10.0 m of Company Apparatus
- (iv) the Contractor shall advise the Company Representative, giving at least 7 days written notice, in order that any special protective measures for the Company Apparatus affected may be arranged.

8. All Company manhole, joint box and/or other access points and chambers within the Site shall be kept clear and unobstructed. Access for vehicles, winches, cabledrums and/or any further equipment required by the Company for the maintenance of its Apparatus, must be maintained at all reasonable times. The Contractor should particularly note that footway type jointing chambers are not specified for carriageway loadings and will need to be adequately protected and/or demolished and rebuilt under the supervision of a Company Representative where such chambers are likely to be placed at risk, either temporarily or permanently, from the movement of plant and/or equipment on the Site.

9. The covers to Company chambers and/or Apparatus shall only be lifted by means of appropriate keys obtained from the Company Representative and under the direct supervision of the Company Representative. No employee of the Contractor or of any sub-contractor employed by the Contractor shall enter any chamber and/or Apparatus of the Company unless under the supervision of the Company Representative and in any case not before the mandatory gas check has been carried out in the presence of the Company Representative and such checks have shown it to be safe to enter the Chamber and/or Apparatus of the Company. The Company Representative shall be given reasonable access to all Company Apparatus and chambers when required.

10. In the event of any damage whatsoever to Company Apparatus the Contractor shall immediately inform the Engineer and report the occurrence immediately by contacting the Company as follows:-

Telephone:- Dial Before You Dig 0800 917 3993

11. The above requirements do not relieve the Contractor of any of his obligations under the Contract.

SPECIAL REQUIREMENTS IN RELATION TO WATER AND SEWERAGE COMPANIES

1. For the purposes of this Special Requirement the following terms shall have the meanings assigned to them:-
 - (a) 'Company' means:- Severn Trent Water Ltd (Water Supply Mains and Foul Drains) or its successors and assigns.
 - (b) 'Company Representative' means the Chief Civil Engineer of the said 'Company' defined at 1(a) of this Special Requirement or other duly Authorised Engineer Representative and/or Agent appointed for the time being to act on behalf of the said 'Company'.
 - (c) 'Mains and Sewers' means any surface or sub-surface pipeline or construction together with any associated apparatus appliance access covers manholes shafts and/or chambers thereto owned leased or rented by the said 'Company' defined at 1(a) of this Special Requirement.
2. Before commencing any work or moving heavy plant or equipment over any portion of the Site the Contractor shall confirm the details and location of any Mains and Sewers of the Company with the Company Representative, who can be contacted at the following point:-

Address:- Severn Trent Water Ltd
Asset Data Management
GIS Mapping Team
PO Box 5344
Coventry
CV3 9FT

Telephone: 02477 715862
3. Where such details show that the Works or the movement of plant or equipment may endanger the Mains and Sewers of the Company; the Contractor shall give the Company Representative at least 7 days written notice of the date on which it is intended to commence such works or the movement of plant and equipment in order that the presence of any Mains and Sewers can be indicated by markers to be supplied by the Company and placed by the Contractor under the supervision of the Company Representative. The Contractor shall ensure that all Company Mains and Sewers, are adequately protected from damage and such protective measures shall be approved by the Engineer.
4. In the event of a Company marker being disturbed for any reason it shall not be replaced other than in the exact position and to its former depth unless the repositioning is carried out at the direction and under the supervision of the Company Representative.
5. All excavation adjacent to Company Mains and Sewers, is to be carried out by hand until the exact extent and/or location of Company Mains and Sewers is known.

Mechanical borers and/or excavators shall not be used within 3.0 m of Company Mains and Sewers without the presence of the Company Representative. To prevent any movement of Company Mains and Sewers during excavation, complete shuttering shall be used as directed by the Engineer if:-

 - (a) Excavation is deeper than the depth of cover of adjacent Company Mains and Sewers.
 - (b) Excavation is within 3.0 m of Company Mains and Sewers in stable soil.
 - (c) Excavation is within 6.0 m of Company Mains and Sewers in unstable soil.

If for the completion of the Works the Contractor intends using any of the following:-

- (i) Pile driving equipment within 15.0 m of Company Mains and Sewers
- (ii) Explosives within 200.0 m of Company Mains and Sewers
- (iii) Any hot work such as welding and the like within 6.0 m of any Company Mains and Sewers.

the Contractor shall advise the Company Representative, giving at least 7 days written notice, in order that any special protective measures for the Company Mains and Sewers affected may be arranged.

6. Material of any kind whatsoever comprising part of the Company Mains and Sewers, manholes, shafts or any other construction shall not be cut away without the prior written approval of the Company Representative.
7. Any temporary roads or access routes within 5.0 m of Company Mains and Sewers, shall be provided with a load bearing surface to the satisfaction of the Company Representative.
8. The Contractor or any sub-contractor employed by him shall not stack pile and/or store materials of any kind or erect temporary structures and/or notice boards of any sort within 5.0 m of any Company Mains and Sewers.
9. All Company Mains and Sewers, especially manholes, shafts and access points and/or chambers within the Site shall be kept clear and unobstructed. A minimum 3.0 m access sufficient for heavy vehicles and/or any further plant and equipment required by the Company for the maintenance of its Mains and Sewers, must be maintained to and around the centre of any Company manholes shafts chambers and or other access points and the Company Representative shall be given access to all Company Mains and Sewers when required at all reasonable times.
10. The covers to Company Mains and Sewers, particularly manholes, shafts and access points and/or chambers shall only be lifted under the direct supervision of the Company Representative. Employee's of the Contractor or of any sub-contractor employed by the Contractor shall NOT enter any Company Mains and Sewers manholes shafts access points and/or chambers unless under the supervision of the Company Representative and in any case not before any safety checks required by the Company Representative have been carried out and such checks have shown it to be safe to enter the Company Mains and Sewers.
11. In the event of any damage whatsoever to Company Mains and Sewers the Contractor shall immediately inform the Engineer and report the occurrence immediately by contacting the Company Representative.
12. The Contractor and/or any sub-contractor employed by the Contractor shall take all necessary precautions to ensure that any Company Mains and Sewers are fully protected from any accidental falls or flows of liquids and/or materials, which by themselves or in combination with any existing materials and/or liquids could cause or aggravate pollution create poisonous substances and/or toxic fumes or react with sewer contents to cause toxic substances or fumes and/or could cause harm to persons or property and/or impede any operations of the Company.
13. The Contractor and/or any sub-contractor employed by the Contractor shall not discharge nor cause to be discharged any water or other liquid or tip any condemned or surplus material or waste of any kind whatsoever into Company Mains and Sewers or abstract extract and/or draw water from any Company Mains and Sewers without the written permission of the Company Representative.

14. The Contractor shall particularly note that the Sewer system can be liable to 'surcharge' in certain circumstances and under these conditions is liable to bursting. Stringent safety precautions as directed by the Company Representative shall be applied in such conditions.

EMERGENCY ACTION

15. The following actions shall be taken by the Contractor in the event of a burst to any of the Company Mains and Sewers:-
- (a) Immediately inform the Emergency services (Fire and Police) The Agency and the Engineer in that order
For water services and emergencies (including 'Leakline')
Tel:- 0800 783 4444
 - (b) Secure the area from the approach of traffic and/or the general public.
 - (c) Render every assistance to the Emergency Services and/or The Agency as shall be requested for the purposes of mitigating damage arising from the leak and/or for the purposes of securing public safety.
 - (d) With regard to landslope and any apparent flow direction of any leaking sewerage or water, construct if possible and as necessary dams bunds with earth and/or board to prevent flows inundating any adjacent properties ditches streams drains manholes or other such water courses and ducts.
16. The above requirements do not relieve the Contractor of any of his obligations under the Contract.

SPECIAL REQUIREMENTS IN RELATION TO NATIONAL GRID (GAS)

1. In this Special Requirement the following terms shall have the meanings assigned to them:-
 - (a) 'Company' means National Grid.
 - (b) 'Company Representative' means the staff of National Grid or its Authorised Representatives and Agents.
 - (c) 'Apparatus' means all surface or sub-surface equipment and plant including any associated Gas pipeline(s) owned, leased or rented by National Grid.
2. Before commencing any work or moving heavy plant or equipment over any portion of the Site the Contractor shall confirm details of the Apparatus, within the Site with the Company Representative, who can be contacted at the following point:-

Address: Plant Protection
National Grid
Block 1
Area 1
Brick Kiln Street
Hinckley
Leicestershire
LE10 0NA

Telephone: 0800 688588
3. Where such details show that the work or the movement of plant or equipment on the Site may endanger any Apparatus, the Contractor shall give the Company Representative at least 7 days written notice of the date on which it is intended to commence such Works or the movement of plant and equipment in order that the presence of any sub-surface Apparatus can be indicated by markers to be supplied by the Company and placed by the Contractor under the supervision of the Company Representative. The Contractor shall ensure that all Apparatus, is adequately protected from damage and such protective measures shall be to the satisfaction of the Company Representative.
4. In the event of a Company marker being disturbed for any reason it shall not be replaced other than in the exact position and to its former depth unless the repositioning is carried out at the direction and under the supervision of a Company Representative.
5. The Contractor shall carry out all work in connection with the Contract with reference to the requirements of the following publications:-
 - (i) Institute of Gas Engineers : IGE/SR/18 Edition 2 - 'Safe Working for The integrity of Pipelines, and Installations'.
 - (ii) Health and Safety Executive (HSE) : HS (G) 47 - 'Avoiding danger from underground services'.
 - (iii) National Grid Engineering Standard : SSW2 - Safe Working in The Vicinity of National Grid Transmission Pipelines and Associated Installations Operating at Pressures in Excess of 7 Bar'.
 - (iv) National Grid Cathodic Protection Standard ECP1.
6. The Contractor shall avoid the disturbance of Apparatus more than is absolutely necessary for the completion of the Works in accordance with the Contract. In particular 'Thrust Blocks' and other such supports shall NOT be disturbed without the specific written approval of the Company Representative. The Contractor should particularly note that large diameter Gas pipelines may either be:-
 - (a) Transmission pipelines frequently operating at pressures exceeding 7 bar.
 - (b) low pressure local distribution mains.

For differing reasons either type poses a considerable hazard to safety if damaged. The Contractor shall also note that smaller Gas distribution pipes may be of yellow plastic, cast iron, steel or other such material and that unless specifically known to the contrary any such services encountered during the course of the Works should be assumed to be Gas pipelines and treated as such in accordance with these Special Requirements until positively identified otherwise and the Engineer so notified in writing.

7. No vehicle plant or machinery shall cross stand operate or travel within 3.0 m of any Apparatus particularly Gas pipelines except as approved by the Company Representative. The Contractor shall agree his methods of working near any Apparatus with the Company Representative and ensure that any Apparatus is adequately protected from damage by the use of wooden sleeper tracks or reinforced concrete rafts at crossing points as appropriate. Temporary fencing of adequate strength shall be erected to regulate the movement of vehicles plant and machinery in the vicinity of Apparatus. All such protective measures shall be to the satisfaction of the Company Representative.
8. Where for the purposes of completing the Works in accordance with the Contract it is necessary to lay a new service across an existing Gas pipeline whether above or below a minimum clearance of 0.6 m shall be left between the outside of the Gas pipeline and the new service to be installed. Under no circumstances shall a new service be laid parallel above or below a Gas pipeline. Hydraulic or other form of pressure testing of any new services shall not be permitted within 6.0 m of any Gas pipeline unless precautions have been taken involving the use of pre-installation tested pipeline having a design factor of 0.3 for a distance of 6.0 m either side of the Gas pipeline and/or such additional precautions including but not limited to sleeving barriers and the like as the Company Representative may require in consultation with the Engineer.
9. The Contractor shall particularly note that Gas pipelines and other Apparatus of the Company is usually cathodically protected to Company standard GBE/ECP1. The Company will require to carry out interaction tests to determine whether its own system will be adversely affected by any new service and/or its protective measures. Any work requiring the removal modification and or movement of Apparatus shall only be carried out by the staff of the Company and/or its authorised contractors and Agents. In the event that any cathodic protection posts and/or associated Apparatus require to be removed replaced and/or moved for the purposes of the Works the Contractor shall give not less than seven days written notice of the requirement to the Company.
10. When excavating or backfilling around Apparatus, the Company Representative shall be given not less than 3 days written notice, of the Contractor's intentions in order that he may supervise the works.
11. Backfilling shall be in 150 mm layers, or as may otherwise be directed, consolidated layer by layer to the satisfaction of the Company Representative. Fill shall be free from flints stones and carbonaceous material. Where slabbing reduces such depth clean sand filling shall be used.
12. All excavation adjacent to Apparatus is to be carried out by hand until the exact extent and/or location of Apparatus is known. The Contractor shall note the following:-
 - (1) Mechanical borers shall not be used within 5.0 m of Apparatus.
 - (2) Hand held power assisted tools shall not be used within 1.5 m of Apparatus without the supervisory presence of a Company Representative.

To prevent any movement of Apparatus during excavation, complete shuttering shall be used as directed by the Engineer if:-

- (a) Excavation is deeper than the depth of cover of adjacent Apparatus.
- (b) Excavation is within 3.0 m of Apparatus in stable soil.
- (c) Excavation is within 6.0 m of Apparatus in unstable soil.

Where excavation results in the exposing of Gas pipelines or other Apparatus protective timber cladding shall be applied to the Gas Pipelines or Apparatus to the satisfaction of the Company

Representative and shall be maintained until such excavation is reinstated and backfilled.

13. If for the completion of the Works the Contractor intends using any of the following:-
- (i) Pile driving equipment within 15.0 m of Apparatus (or such greater distance as may be required to ensure that the MAXIMUM peak particle velocity as measured at the Apparatus does NOT exceed 25 mm per second).
 - (ii) Explosives within:-
 - (a) 400.0 m of exposed Apparatus
 - (b) 100.0 m of buried Apparatus
 - (iii) Hot Works welding and the like within 15.0 m of Apparatus
 - (iv) Hydraulic testing within 6.0 m of Apparatus
- the Contractor shall advise the Company Representative, giving at least 7 days written notice, in order that any special protective measures for the Apparatus affected may be arranged. The Contractor SHALL NOT proceed with the use of any of the above without the written consent of the Company Representative.
14. All Apparatus manholes and/or other access points and chambers within the Site shall be kept clear and unobstructed. Access for vehicles, winches and/or any further equipment required by the Company for the maintenance of its Apparatus, shall be maintained at all reasonable times and unless otherwise agreed in writing by the Company representative a clearance of 6.0 m shall be allowed for such access.
15. The covers to Apparatus manholes and/or other access points and chambers shall only be lifted under the direct supervision of the Company Representative. No employee of the Contractor or of any sub-contractor employed by the Contractor shall enter any chamber and/or Apparatus of the Company unless under the supervision of the Company Representative and in any case not before a gas check as specified by the Company Representative has been carried out in the presence of the Company Representative and such checks have shown it to be safe to enter the Chamber and/or Apparatus. The Company Representative shall be given reasonable access to all Apparatus and chambers when required.
16. In the event of any damage whatsoever even of a minor nature to Apparatus particularly to Gas pipeline coatings and/or test leads the Contractor shall immediately inform the Engineer and report the occurrence by contacting the Company Representative. The Company Representative will arrange for repairs to be carried out.

EMERGENCY ACTION

17. The following actions shall be taken by the Contractor in the event of a gas leak in any Apparatus:-
- (a) Evacuate all personnel from the vicinity of the pipeline damage or leak.
 - (b) Remove and/or extinguish all sources of ignition for a distance of at least 200 m in all directions from the location of the leak. This precaution shall include a ban on the use of any electrical equipment falling within this limit.
 - (c) IMMEDIATELY inform The Company the Engineer and (if required) the Emergency services in that order.
- THE EMERGENCY TELEPHONE NUMBER OF THE COMPANY IS:-
- 0800 111 999
- (d) Secure the area from the approach of all employees' traffic and/or the general public.
 - (e) Render every assistance to the Emergency Services and/or the Company as shall be requested for the purposes of mitigating damage arising from the leak and/or for the purposes of securing public safety.

(f) DO NOT ATTEMPT TO SEAL ANY LEAK OF GAS AT THE POINT OF DAMAGE.

18. Compliance with the above requirements do not relieve the Contractor of any of his obligations under the Contract.

APPENDIX E: FORM OF PARENT COMPANY GUARANTEE

Not Used

APPENDIX F: TERMS AND CONDITIONS OF NOVATED CONTRACTS

Not Used

APPENDIX G: COLLATERAL WARRANTY AGREEMENT

Full name: Collateral warranty to be provided by a sub-contractor.

DATED

SUB-CONTRACTOR'S COLLATERAL WARRANTY

relating to the

**SHREWSBURY INTEGRATED TRANSPORT PACKAGE:
TOWN CENTRE PACKAGE 1**

Between

NAME

[sub-contractor]

and

SHROPSHIRE COUNCIL

[*Employer*]

And

NAME

[*Contractor*]

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THIS AGREEMENT is dated [DATE]

PARTIES

[FULL COMPANY NAME] incorporated and registered in England and Wales with company number [NUMBER] whose registered office is at [REGISTERED OFFICE ADDRESS] (**sub-contractor**).

SHROPSHIRE COUNCIL of Shirehall, Abbey Foregate, Shrewsbury, Shropshire SY2 6ND (**Employer**).

[FULL COMPANY NAME] incorporated and registered in England and Wales with company number [NUMBER] whose registered office is at [REGISTERED OFFICE ADDRESS] (**Contractor**).

BACKGROUND

The *Employer*, having engaged the *Contractor* to carry out design and construction work, has an interest in the *works*.

The *Contractor* has engaged the sub-contractor to carry out part of the design [and construction] work in respect of the *works*.

The *Contractor* requires the sub-contractor to enter into a collateral warranty in favour of the *Employer*.

The sub-contractor has agreed to enter into this agreement with the *Contractor* and the *Employer*, for the benefit of the *Employer*.

The *Employer* has paid £1 to the sub-contractor and the *Contractor* as consideration under this agreement.

AGREED TERMS

INTERPRETATION

The definitions and rules of interpretation in this clause apply in this agreement.

Business Day: a day (other than a Saturday, Sunday or public holiday in [England]) when banks in [London] are open for business.

CDM Regulations: the Construction (Design and Management) Regulations 2007 (SI 2007/320) and the related Approved Code of Practice issued by the Health and Safety Commission.

Construction Products Regulations: the Construction Products Regulations 2013 (SI 2013/1387), the Construction Products Regulation (305/2011/EU), the Construction Products Regulations 1991 (SI 1991/1620) and the Construction Products Directive (89/109/EC).

Deleterious: materials, equipment, products or kits that are generally accepted, or generally suspected, in the construction industry at the relevant time as:

posing a threat to the health and safety of any person; or

posing a threat to the structural stability, performance or physical integrity of the Works or any part or component of the Works; or

reducing, or possibly reducing, the normal life expectancy of the Works or any part or component of the Works; or

not being in accordance with any relevant British Standard, relevant code of practice, good building practice or any applicable agrément certificate issued by the British Board of Agrément; or

having been supplied or placed on the market in breach of the Construction Products Regulations.

Material: all designs, drawings, models, plans, specifications, design details, photographs, brochures, reports, notes of meetings, CAD materials, calculations, schedules, programmes, bills of quantities, budgets and any other materials provided in connection with the Works and all updates, amendments, additions and revisions to them and any works, designs, or inventions incorporated or referred to in them for any purpose relating to the Works.

Permitted Uses: the design, construction, completion, reconstruction, modification, refurbishment, development, maintenance, funding, disposal, letting, fitting-out, advertisement, demolition, reinstatement[, extension], building information modelling and repair of the Property and the Works.

Programme: the programme, as defined in the Sub-Contract.

Property: the Site (as defined in the Contract) upon which the Works are to be carried out.

Works: having the same meaning as the *works* in Contract Data Part One, 1.2 (1070997/TC/Doc1)

Required Standard: all the reasonable skill, care and diligence to be expected of a qualified and experienced member of the sub-contractor's profession undertaking the Services on works similar in scope and character to the Works.

Sub-Contract: an agreement in writing dated [DATE] between the *Contractor* and the sub-contractor, which may take the form of a professional appointment, for the appointment of the sub-contractor to provide the Sub-Contract Services.

Sub-Contract Services: the professional services referred to in the Sub-Contract, performed by or on behalf of the sub-contractor under the Sub-Contract for the design of the Works.

Clause headings shall not affect the interpretation of this agreement.

A **person** includes a natural person, corporate or unincorporated body (whether or not having separate legal personality) [and that person's legal and personal representatives, successors or permitted assigns].

A reference to a **company** includes any company, corporation or other body corporate, wherever and however incorporated or established.

Unless the context otherwise requires, words in the singular shall include the plural and in the plural include the singular.

Unless the context otherwise requires, a reference to one gender shall include a reference to the other genders.

A reference to a party shall include that party's legal and personal representatives, successors or permitted assigns.

A reference to a statute, statutory provision or subordinated legislation is a reference to it as it is in force from time to time, taking account of any amendment, extension, or re-enactment and includes any statute, statutory provision or subordinate legislation which it amends or re-enacts.

A reference to a statute or statutory provision shall include any subordinate legislation made from time to time under that statute or statutory provision.

Any obligation in this agreement on a person not to do something includes an obligation not to agree or allow that thing to be done.

A reference to **writing** or **written** includes faxes but not e-mail.

A reference to a document is a reference to that document as varied or novated (in each case, other than in breach of this agreement) at any time.

References to clauses are to the clauses of this agreement.

Where the words **include(s)**, **including** or **in particular** are used in this agreement, they are deemed to have the words "without limitation" following them.

COMPLY WITH THE SUB CONTRACT

The sub-contractor warrants to the *Employer* that:

it has complied, and shall continue to comply, with its obligations under the Sub-Contract, including its obligations to:

carry out and fulfil, in all respects, the duties of a designer under the CDM Regulations;

not, without the *Contractor's* written consent, make any material change to the designs or specifications for the Works after they have been settled or approved in accordance with the Contract; and

it has exercised and shall continue to exercise the Required Standard:

when performing the Works;

not to specify for use anything in the Works, which is Deleterious at the time of specification or use;

to comply with (and ensure the completed Works complies with) any:

Act of Parliament;

instrument, rule or order made under any Act of Parliament; and
regulation or bye-law of any local authority, statutory undertaker or public or private utility or undertaking that has any jurisdiction over the Works or with whose systems or property the Works is or will be connected;

to perform the Services and prepare all Material for those elements of the Works for which the sub-contractor is responsible according to the Programme or, in the absence of a Programme, in sufficient time to facilitate the efficient progress of the Works;

to ensure that the Works complies with all planning agreements, permissions and conditions; and

In proceedings for breach of this clause 0, the sub-contractor may:

rely on any limit of liability or other term of the Sub-Contract; and

raise equivalent rights of defence as it would have had if the *Employer* had been named as a joint *Employer*, with the *Contractor*, under the Sub-Contract [(for this purpose not taking into account any set-off or counterclaim against the actual client under the Sub-Contract)].

The sub-contractor's duties or liabilities under this agreement shall not be negated or diminished by:

any approval or inspection of:

the Property; or

the Works; or

any designs or specifications for the Property or the Works; or

any testing of any work, goods, materials, plant or equipment; or

any omission to approve, inspect or test,

by or on behalf of the *Employer* or the *Contractor*.

This agreement shall not negate or diminish any other liability or otherwise owed to the *Employer* by the sub-contractor.

STEP-IN RIGHTS: SUB-CONTRACTOR MAY NOT TERMINATE OR DISCONTINUE

The sub-contractor shall not exercise, or seek to exercise, any right to:

terminate its employment under the Sub-Contract; or

discontinue performance of the Services,

for any reason (including any breach on the part of the *Contractor*) without giving the *Employer* at least 15 Business Days' written notice of its intention to do so. Any notice

from the sub-contractor shall specify the grounds for the sub-contractor's proposed termination or discontinuance.

If the Sub Contract allows the sub-contractor a shorter notice period for the exercise of a right referred to in clause 0, the notice period in the Sub-Contract shall be extended to take account of the notice period required under clause 0.

The sub-contractor's right to terminate its employment under the Sub-Contract, or to discontinue performance of the Services, shall cease if, within the period referred to in clause 0, the *Employer* gives notice to the sub-contractor, copied to the *Contractor*:

requiring the sub-contractor not to terminate its employment or not to discontinue performance of the Services under the Sub-Contract;

acknowledging that the *Employer* (or its nominee) will assume all the *Contractor's* obligations under the Sub-Contract; and

undertaking that the *Employer* or its nominee will pay to the sub-contractor:

any sums due and payable to the sub-contractor under the Sub-Contract in future; and

any sums then due and payable to the sub-contractor under the Sub-Contract that are unpaid.

If the *Employer* (or its nominee) serves notice on the sub-contractor under clause 0, then, from the date of service of the notice, the Sub-Contract shall continue in full force and effect, as if it had been entered into between the sub-contractor and the *Employer* (to the exclusion of the *Contractor*).

In complying with this clause 0, the sub-contractor:

does not waive any breach of the Sub-Contract or default under the Sub-Contract by the *Contractor*; and

may exercise its right to terminate its employment under the Sub-Contract, or discontinue performance of the Services, after the expiry of the notice period referred to in clause 0, unless the sub-contractor's right to terminate or discontinue has ceased under clause 0.

STEP-IN RIGHTS: EMPLOYER MAY STEP-IN

Without affecting clause 0, if the *Employer* serves a notice on the sub-contractor, copied to the *Contractor*, that:

confirms that the *Employer* wishes to step-in to the Sub-Contract; and

complies with the requirements for a *Employer's* notice under clause 0,

then, from the date of service of the notice, the Sub-Contract shall continue in full force and effect, as if it had been entered into between the sub-contractor and the *Employer* (or its nominee), to the exclusion of the *Contractor*.

The sub-contractor shall assume that, between the *Contractor* and the *Employer*, the *Employer* may give a notice under clause 0. The sub-contractor shall not enquire whether the *Employer* may give that notice.

In complying with this clause 0 the sub-contractor does not waive any breach of the Sub-Contract or default under the Sub-Contract by the *Contractor*.]

STEP-IN RIGHTS: SUB-CONTRACTOR'S POSITION AND *CONTRACTOR'S* CONSENT

The sub-contractor shall not incur any liability to the *Contractor* by acting in accordance with clause 0 or clause 0.

The *Contractor* has entered into this agreement to confirm its consent to the agreement.

STEP-IN RIGHTS: *EMPLOYER'S* GUARANTEE

If an *Employer's* notice under clause 0 or clause 0 refers to the *Employer's* nominee, the *Employer* shall be liable to the sub-contractor, as guarantor, for the payment of any sums due and payable from time to time to the sub-contractor from the *Employer's* nominee.]

NO INSTRUCTIONS TO SUB-CONTRACTOR BY *EMPLOYER*

[Unless the *Employer* has stepped-in under clause 0 or clause 0,] the *Employer* may not give instructions to the sub-contractor under this agreement.

COPYRIGHT

The sub-contractor grants to the *Employer*, with immediate effect, an irrevocable, non-exclusive, non-terminable, royalty-free licence to copy and make full use of any Material prepared by, or on behalf of, the sub-contractor for any purpose relating to the Works and the Property, including any of the Permitted Uses.

This licence carries the right to grant sub-licences and is transferable to third parties without the consent of the sub-contractor.

The sub-contractor shall not be liable for use of the Material for any purpose other than that for which it was prepared and/or provided.

The *Employer* may request a copy (or copies) of some or all of the Material from the sub-contractor. On the *Employer's* payment of the sub-contractor's reasonable charges for providing the copy (or copies), the sub-contractor shall provide the copy (or copies) to the *Employer*.

PROFESSIONAL INDEMNITY INSURANCE

The sub-contractor shall maintain professional indemnity insurance for an amount of at least £10 million for any one occurrence, or series of occurrences, arising out of any one

event for a period beginning on the date of this agreement and ending 12 years after the date of practical completion of the Works, provided that such insurance is available at commercially reasonable rates [and terms]. The sub-contractor shall maintain that professional indemnity insurance:

with reputable insurers lawfully carrying on insurance business in the [UK or EU];

on customary and usual terms and conditions prevailing for the time being in the insurance market; and

on terms that:

do not require the sub-contractor to discharge any liability before being entitled to recover from the insurers; and

would not adversely affect the rights of any person to recover from the insurers under the Third Parties (Rights Against Insurers) Act 1930.

Any increased or additional premium required by insurers because of the sub-contractor's claims record or other acts, omissions, matters or things particular to the sub-contractor shall be deemed to be within commercially reasonable rates.

The sub-contractor shall not, without the *Employer's* written consent:

settle or compromise any claim with the insurers that relates to a claim by the *Employer* against the sub-contractor; or

by any act or omission lose or affect the sub-contractor's right to make, or proceed with, that claim against the insurers.

The sub-contractor shall immediately inform the *Employer* if the sub-contractor's required professional indemnity insurance ceases to be available at commercially reasonable rates [and terms], so that the sub-contractor and the *Employer* can discuss how best to protect the respective positions of the *Employer* and the sub-contractor regarding the Works and the Property, without that insurance.

The sub-contractor shall fully co-operate with any measures reasonably required by the *Employer*, including:

completing any proposals for insurance and associated documents; or

maintaining insurance at rates above commercially reasonable rates, if the *Employer* reimburses the sub-contractor for the net cost of that insurance above commercially reasonable rates.

Whenever the *Employer* reasonably requests, the sub-contractor shall send the *Employer* evidence that the sub-contractor's professional indemnity insurance is in force, including, if required by the *Employer*, an original letter from the sub-contractor's insurers or brokers confirming:

the sub-contractor's then current professional indemnity insurance; and

that the premiums for that insurance have been paid in full at the date of that letter.

LIABILITY PERIOD

The *Employer* may not commence any legal action against the sub-contractor under this agreement after 12 years from the date of all of the Works.

ASSIGNMENT

The *Employer* may assign the benefit of this agreement:

on two occasions to any person [with an interest in the Works]; and

without counting as an assignment under clause 0:

by way of security (including any reassignment on redemption of security); or

to and from subsidiary or other associated companies within the same group of companies as the *Employer* [so long as that assignee company remains within the same group of companies as the *Employer*].

The *Employer* shall notify the sub-contractor [and the *Contractor*] of any assignment. If the *Employer* fails to do this, the assignment shall still be valid.

The sub-contractor shall not contend that any person to whom the benefit of this agreement is assigned under clause 0 may not recover any sum under this agreement because that person is an assignee and not a named party to this agreement.

NOTICES

Any notice required to be given under this agreement shall be in writing and shall be delivered personally, or sent by pre-paid first-class post, or recorded delivery or by commercial courier, to each party required to receive the notice, as set out below:

SUB-CONTRACTOR: [CONTACT]
[ADDRESS]

EMPLOYER:

Shirehall, Abbey Foregate, Shrewsbury, Shropshire, SY2 6ND

[*CONTRACTOR*]: [CONTACT]
[ADDRESS]

or as otherwise specified by the relevant party by notice in writing to each other party.

A notice shall be deemed to have been duly received:

if delivered personally, when left at the address and for the contact referred to in this clause; or

if sent by pre-paid first-class post or recorded delivery, at 9.00 am on the second Business Day after posting; or

if delivered by commercial courier, on the date and at the time that the courier's delivery receipt is signed.

all references to time are to local time in place of deemed receipt; and
if deemed receipt would occur in the place of deemed receipt on a Saturday or Sunday or a public holiday when banks are not open for business, deemed receipt is deemed to take place at 9.00 am on the day when business next starts in the place of receipt

A notice required to be given under this agreement shall not be validly given if sent by e-mail.

This clause shall not apply to the service of any proceedings or other documents in any legal action.

THIRD PARTY RIGHTS

A person who is not a party to this agreement shall not have any rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this agreement.

GOVERNING LAW

This agreement and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) shall be governed by and construed in accordance with the law of England and Wales.

JURISDICTION

Each party irrevocably agrees that the courts of England and Wales shall have [exclusive **OR** non-exclusive] jurisdiction to settle any dispute or claim arising out of or in connection with this agreement or its subject matter or formation (including non-contractual disputes or claims).

This document has been executed as a deed and is delivered and takes effect on the date stated at the beginning of it.

[SIGNATURE PAGE FOLLOWS]

Executed as a deed by [NAME OF SUB-CONTRACTOR] acting by [NAME OF FIRST DIRECTOR], a director and [NAME OF SECOND DIRECTOR OR SECRETARY], [a director **OR** its secretary]

.....
[SIGNATURE OF FIRST DIRECTOR]
Director
.....
[SIGNATURE OF SECOND DIRECTOR OR SECRETARY]
[Director **OR** Secretary]

OR

Executed as a deed by [NAME OF SUB-CONTRACTOR] acting by [NAME OF DIRECTOR], a director, in the presence of:

.....
[SIGNATURE OF DIRECTOR]
Director

.....
[SIGNATURE OF WITNESS]
[NAME, ADDRESS [AND OCCUPATION] OF WITNESS]

Executed as a deed by affixing the COMMON SEAL of SHROPSHIRE COUNCIL in the presence of:

.....

Executed as a deed by [NAME OF CONTRACTOR] acting by [NAME OF FIRST DIRECTOR], a director and [NAME OF SECOND DIRECTOR OR SECRETARY], [a director **OR** its secretary]

.....
[SIGNATURE OF FIRST DIRECTOR]
Director
.....
[SIGNATURE OF SECOND DIRECTOR OR SECRETARY]
[Director **OR** Secretary]

OR

Executed as a deed by [NAME OF CONTRACTOR] acting by [NAME OF DIRECTOR], a director, in the presence of:

.....
[SIGNATURE OF DIRECTOR]
Director

.....
[SIGNATURE OF WITNESS]
[NAME, ADDRESS [AND OCCUPATION] OF WITNESS]

*Shrewsbury Integrated Transport Package:
Town Centre Package 1*

CONTRACT DATA PART TWO
*DATA PROVIDED BY THE CONTRACTOR
in respect of the Institution of Civil Engineers'
Engineering and Construction Contract
(Third Edition April 2013)*

Tenderer's name

PART TWO: DATA PROVIDED BY THE *CONTRACTOR*

1. The *Contractor* is Name:
 Address:

2. The *direct fee percentage* is %
 The *subcontracted fee percentage* is %

3. The *working areas* are the Site and

4. The key people are (CV's to be attached to this document):-

	<u>Clause</u>	<u>Name</u>
Contractor's Site Agent	24.1/ Z14.2	.....
Contractor's Site Safety Officer	24.1/ Z14.3	.....
Contractor's Quality Manager	24.1/ Z14.4	NOT USED
Contractor's General Foreman	24.1/ Z14.5	.....
Contractor's Traffic Safety and Control Officer	24.1/ Z14.6	.....
Contractor's Designer	24.1/ Z14.7	.....
Contractor's Pedestrian Ambassadors	24.1/ Z14.8	.....
Contractor's Public Liaison Office	24.1/ Z14.9	.....

5. The following matters will be included in the Risk Register

6. The Works Information for the *Contractor's* design is in

7. The programme identified in the Contract Data is [see para 4 (a) of the Instructions for Tendering]

8. The *completion date* for the whole of the *works* is

9. The *bill of quantities* reference No. is

10. The tendered total of the Prices is

11. Data for Shorter Schedule of Cost Components

11.1 The percentage for people overheads is %

11.2 The published list of Equipment is the last edition of the list published by

11.3 The percentage for adjustment for listed Equipment is % (state plus or minus)

11.4 The rates of other Equipment are:

<u>Equipment</u>	<u>Size or capacity</u>	<u>Rate</u>
.....
.....
.....
.....

11.5 The hourly rates for Defined Cost of design outside the Working Areas are:

<u>Category of employee</u>	<u>Hourly rate</u>
.....
.....

11.6 The percentage for design overheads is %

11.7 The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are

12. Names of proposed subcontractors, their experience and qualifications, and areas of work envisaged are given in Appendix A. (See clause Z15)

**APPENDIX A
NAMED SUBCONTRACTORS**

Qualifications and experience of proposed Subcontractors (See Clause Z15):

Area of Work	Name of Sub-contractor	Experience and Qualifications



Shrewsbury Integrated Transport Package: Town Centre Package 1

Document Ref. 2

Specification

Specification
Preambles to the Bill of Quantities

PREAMBLE TO THE SPECIFICATION

1. The Specification referred to in the Tender shall be the 'Specification for Highway Works' published by the Stationery Office (formerly HMSO) as Volume 1 of the Manual of Contract Documents for Highway Works, as modified and extended by the following:
 - (i) Appendix 0/1: Contract-specific Additional, Substitute and Cancelled Clauses, Tables and Figures;
 - (ii) Appendix 0/2: Contract-specific minor alterations to existing Clauses, Tables and Figures;
 - (iii) The Numbered Appendices listed in Appendix 0/3;
 - (iv) Appendix 0/5: Special national alterations of the Overseeing Department of Scotland, Wales or Northern Ireland.
 - (v) **For the purpose of this Contract the Appendices are amended by replacing the word “Engineer” wherever it occurs with *Project Manager* and by replacing the word “plant” where it occurs with “equipment”.**

Appendix 0/4 contains a list of the Drawings.
2. The relevant publication dates of each page of the Specification for Highway Works is given in the Schedule of Pages and Relevant Publication Dates.
3. An Additional Clause as indicated by a suffix 'A' in Appendix 0/5 is an alteration originating from the Overseeing Department of Scotland, Wales or Northern Ireland. An Additional Clause as indicated by a suffix 'AR' in Appendix 0/1 is a Contract-specific alteration.
4. A Substitute Clause, as indicated by the suffix 'S' in Appendix 0/5 is an alteration originating from the Overseeing Department of Scotland, Wales or Northern Ireland. A Substitute Clause as indicated by a suffix 'SR' in Appendix 0/1 is a Contract-specific alteration.
5. A Cancelled Clause as indicated by a suffix 'C' in Appendix 0/5 is an alteration originating from the Overseeing Department of Scotland, Wales or Northern Ireland. A Cancelled Clause indicated by a suffix 'CR' in Appendix 0/1 is a Contract-specific alteration.
6. Insofar as any of the Numbered Appendices may conflict or be inconsistent with any provision of the Specification for Highway Works the Numbered Appendices shall always prevail. Additionally, Numbered Appendices 0/1 and 0/2 shall take precedence over Numbered Appendix 0/5.
7. Any reference in the Contract to a Clause number or Appendix shall be deemed to refer to the corresponding Substitute Clause number or Appendix listed in Appendix 0/1, 0/2 or 0/5.
8. Where a Clause is altered any original Table/Figure referred to in the Clause shall apply unless the Table/Figure is also altered. Where a Table/Figure is altered any reference in a Clause to the original Table/Figure shall apply to the altered Table/Figure.
9. Where a Clause in the Specification relates to work goods or materials which are not required for the Works it shall be deemed not to apply.
10. Any Appendix referred to in the Specification which is not used shall be deemed not to apply.
11. Where a Clause in the Specification or Notes for guidance on the specification is prefixed by a # this indicates that this particular Clause has a substitute National Alteration for one or more of the *Project Managers* of Scotland, Wales or Northern Ireland. Substitute or additional National Clauses shall be used within countries to which they specifically apply and they are deemed to replace corresponding Clauses in the main text of the Specification as appropriate. The substitute National Clauses are located at the end of the relevant Series together with the additional National Clauses of the *Project Managers*.
12. Other than where references to the *Project Manager* are made in the context of the *Project Manager* granting statutory or type acceptances, the roles and functions of the *Project Manager* shall be undertaken by the *Project Manager*.

Where the Specification requires the provision of documentation to the *Project Manager* for statutory or type acceptance such documentation shall be provided to the *Project Manager*.

13. (11/06) If the Specification is used in conjunction with a Contract under which the *Contractor* is responsible for the design of any part of the Permanent Works, the delegation of the roles and functions of the *Project Manager* as stated in paragraph 12 above shall be amended as follows:
 - (i) (11/06) If any agreement, consent or acceptance required to be obtained from the *Project Manager* impacts on health and safety of the general public, the environment or any property or equipment not owned or operated by the *Contractor*, such agreement, consent, acceptance shall be obtained from the *Project Manager*.
 - (ii) Where the Specification provides for the *Project Manager* to require a test, waive the requirement for a test or alter testing frequency, the party to whom the *Project Manager's* roles and functions have been ascribed by paragraph 12 above shall exercise such decisions in accordance with the *Employer's* requirements stated in the contract.
14. Where Standards and other documents are incorporated into the Contract by reference the respective edition used shall be that which is current on the Contract Reference Document Date February 2016 unless otherwise stated in the Specification.

Table 0/1 Schedule of Pages And Relevant Publication Dates

Series/Appendix	Page Number	Publication Date
000	1 to 3	
000	4 to 7F	
100	1 to 2, 4 to 9, 12 to 9F, WF1, N2 to N11F	
100	3, 10 to 11, N1	
200	1 to 3F	
300	1	
300	4	
300	2 to 3, 5 to 6F	
400	1 to 6, 8, 10 to 13F	
400	7, 9	
500	23 to 24, 26	
500	28F	
500	3, 22, N1F	
500	2, 5, 27	
500	6, 25	
500	1, 4, 7 to 21	
600	1 to 77F, S1 to S4F, W1 to W4F, N1 to N5F	
700	1 to 36F, N1 to N6F	
800	1 to 31F	
900	2 to 5, 9 to 22, 24 to 26, 28 to 67F	
900	1, 6 to 8, S1F	
900	23, 27	
1000	1 to 45F	
1100	1, 4F	
1100	2, N1F	
1100	3	
1200	5	
1200	2 to 3, W1F	
1200	1, 14 to 16F	
1200	4, 9 to 11, 13	
1200	12	
1200	6 to 7, N1 to N4F	
1200	8	
1300	N2F	
1300	3 to 4	
1300	1, 5 to 10, 12F	
1300	2, 11 and N1	
1400	2, N1F	
1400	1, 3 to 9F	
1500	7	
1500	2	
1500	3 to 4, 8 to 11, 13	
1500	1, 5 to 6, 12, 14 to 17F	
1600	1, 4 to 5, 9, 15, 17 to 18, 24 to 26, 29 to 31, 35, 38, 49F	
1600	2, 6 to 8, 10 to 14, 16, 19, 27 to 28, 32 to 34, 36 to 37, 39 to 42, 44 to 48	
1600	3, 20 to 23, 43	
1700	1 to 27F	
1800	1 to 35F	
1900	1 to 35F, S1 to S2F	
2000	1, 3 to 4F	
2000	2	
2100	1 to 2F	
2300	1	
2300	2 to 3F	
2400	1, 4, 7F	

Series/Appendix	Page Number	Publication Date
2400	2	
2400	3, 5 to 6	
2500	1	
2500	2, 8, 11F	
2500	10	
2500	6 to 7, 9	
2500	5	
2500	3 to 4	
2600	1	
2600	2 to 4	
2600	5	
2600	6	
2600	7F	
3000	1, 4 to 7, 10, 12 to 17, 19, 22 to 27F	
3000	20	
3000	2 to 3	
3000	8 to 9, 11 to 18, 21	
5000	1, 4 to 19F, S1F	
5000	2 to 3	
Appendix A	1 to 4F	
Appendix B	1 to 3F	
Appendix C	1 to 2F	
#Appendix D	1F	
Appendix D (NI)	N1F	
Appendix E	1F	
Appendix F	1 to 52F	
Appendix G	Not Used	
Appendix H	1	
Appendix H	2	
Appendix H	3	
Appendix H	4 to 9F	

APPENDIX 0/1

CONTRACT SPECIFIC ADDITIONAL, SUBSTITUTE AND CANCELLED CLAUSES, TABLES AND FIGURES INCLUDED IN THE CONTRACT

PART A: VOLUME 1 SPECIFICATION

List of Additional Clauses, Tables and Figures

Clause No. (etc.)	Title	Written on Page No. following
171 AR	Precautions against Dust, Mud, Dirt and other Debris	6
173 AR	Limit of Vibration	6
174 AR	Publicity	7
176 AR	Health and Safety/Risk Assessment	8
177 AR	Method Statements	10
178 AR	IT Business support system	10
570 AR	Raising or Lowering Covers and Gratings on Chambers and Gullies	10
571 AR	Rebuilding of British Telecommunications frames and covers	10
670 AR	Requirements for Disposal	10
971 AR	Materials	10
6270 AR	Sign cleansing	13

List of Substitute Clauses, Tables and Figures

Clause No. (etc.)	Title	Written on Page No. following
903.21 SR	Placing and Compaction of Bituminous Mixtures - Joints	15

List of Cancelled Clauses, Tables and Figures

Clause No. (etc.)	Title	Written on Page No. following
	None	-

Additional Clauses Tables and Figures

Clause No	Title and Written Text
171 AR	<p>Precautions against Dust, Mud, Dirt and other Debris</p> <ol style="list-style-type: none">1. The Contractor shall take all reasonable steps to minimise nuisance caused by dust, mud, dirt and other debris during construction of the Works. Such measures shall include:-<ol style="list-style-type: none">(i) Dampening of surfaces of the source of such nuisance to prevent dusting at all times.2. All existing highways used by vehicles of the Contractor or any of his Subcontractors or suppliers of materials or plant and similarly any new or diversion ways which are part of the Works or in the vicinity of the Works shall be kept clean of all dust, mud, dirt and other debris. Any such matter spreading onto these areas shall be immediately cleared by the <i>Contractor</i> by manual sweeping or shovelling or by the use of mechanical sweeping and clearing equipment. Additionally, if so directed by the <i>Project Manager</i> such areas shall be thoroughly cleaned by hosing or watering.3. Access within, and to and from the Site across any public highway, diversion road or any other way used by public traffic shall be strictly limited as accepted by the <i>Project Manager</i>. Vehicles and plant shall enter onto such public traffic ways only after thorough cleaning.4. Where described in the contract the Contractor shall provide vehicle washing plants as part of the temporary accommodation for himself. Such washing plants shall be utilised for thoroughly cleaning all vehicles and plant prior to its entrance onto any public highway, diversion road or any other way used by public traffic.5. Each washing plant shall include hard standings and adequate drainage facilities and an accepted mechanical wheel washer. The wheel washers shall be connected to a mains water supply and discharge into a new or existing drainage system and shall be through traps and filters accepted by the Project Manager to prevent the entry of silt, clay, or any other contaminating material into the drainage system.6. The vehicle washing plants shall be sufficient in number and capacity at all times. Unless otherwise accepted by the <i>Project Manager</i>, they shall be installed immediately on occupation of the Site by the <i>Contractor</i> and utilised at all times.7. The <i>Contractor</i> shall keep the site clean and tidy by removing all rubbish from the site as work proceeds or as necessary and when required to do so by the <i>Project Manager</i>.8. Compliance with the foregoing shall not relieve the <i>Contractor</i> of any responsibility for complying with the requirements of the Highway Authority in respect of keeping roads clean.
173 AR	<p>Limitation of Vibration</p> <ol style="list-style-type: none">1. The <i>Contractor</i> shall take all steps necessary to limit vibration caused by plant and machinery used on the Site.2. No machine will be permitted which uses a system of dropping a heavy weight, whether power-assisted or by gravity, for the purpose of breaking up paving or foundations.

Publicity

1. The *Contractor* shall not give any information concerning the Works for publication in the press or on radio, television or screen or elsewhere without the written acceptance of the *Project Manager*.
2. All advertisements and *Contractors* or Subcontractors name boards to be erected within the Site by the *Contractor* or by any Subcontractor shall first be accepted by the *Project Manager*
3. All advertisements and *Contractors* or Subcontractors name boards within the site shall be removed within 28 days of the road opening to traffic.
4. The *Contractor* shall not take or cause to have taken any photographs of the works without the permission of the *Project Manager*. If such permission is given the *Contractor* shall supply to the *Project Manager*, free of charge, duplicate copies of all photographs taken by him and shall print on the reverse side of such photographs the date of the exposure, the section of the Works shown, any reference number and the place and address where the negative is kept.
5. The *Contractor* shall not use any photograph, whether those specified herein or not, for advertisement nor approve any publication in connection with the Works without the written agreement of the *Project Manager*.
6. Copyright of all photographs shall be vested in the *Employer* and the negatives shall be delivered to the *Project Manager* within one month of the date of the Certificate of Completion.

Clause No**Title and Written Text****176 AR****Health and Safety/Risk Assessment**1. Health and Safety

Safe systems of work and method statements.

- 1.1 The *Contractor* is to submit to the *Employer* a copy of his company's Health and Safety Plan.
- 1.2 The *Contractor* is to appoint to the site a suitably qualified, specifically trained person to act as a safety *Supervisor*. This person is to be present on site:-
- (i) when certain operations are being carried out that can be considered to involve more risk or difficulty than normal (these to be agreed), to ensure that the *Contractor* adheres to the prepared Method Statement (See 3),
 - (ii) at other times as reasonably practised in his capacity as *Supervisor* or
 - (iii) when specifically requested by the *Project Manager*. When the safety *Supervisor* is away from the site a telephone contact number is to be given to the *Project Manager*.
 - (a) Section 2(2) of the HSW Act requires the provision of safe systems of work and the preparation of method statements by the *Contractor* is generally considered to be an important step in complying with that obligation.
 - (b) Additionally under the contract it will be a requirement that Method Statements will be submitted to the *Project Manager* by the *Contractor* to demonstrate his intentions in ensuring health and safety for certain agreed operations.

These operations will be those involving a greater than normal risk or difficulty and will be identified and agreed between the *Project Manager* and *Contractor* as soon as possible after the award of the contract. The *Project Manager* may also request method statements from the *Contractor* for other site operations at any time during the contract.
 - (c) The *Project Manager* may inform the *Contractor* in writing within a reasonable period after receipt of the method statement where it fails to comply with the HSW Act; the *Contractor* shall not unreasonably refuse to amend the method statement accordingly.
 - (d) The *Contractor* shall not subsequently change the method statement without the prior knowledge and consent in writing of the *Project Manager* which shall not be unreasonably withheld.
- 1.4 The *Contractor* is invited to note the requirements stated in the Construction Regulations, General Provisions - C(GP)24 (Prevention of Drowning) and in HSE Guidance Notes GS29/1-4 (Demolition).
- 1.5 At all times, the 'standard' i.e. the *Contractor's* system of work complying with the HSW Act shall be considered to be the minimum to work from, not the standard to come up to.
- 1.6 The *Contractor* should also note the requirements laid out in Appendix 1/17 relating to Traffic Safety and Management.

Clause No**Title and Written Text**

Nothing in this Clause shall relieve the *Contractor* from his general obligations under the contract nor is it intended to relieve the *Contractor* or *Employer* from their obligations under general law.

2. Risk Assessment

2.1 The *Contractor* shall, before commencement of any work forming part of the contract, ensure that all works comprising the contract are assessed for their risks in accordance with the general requirements of the MANAGEMENT OF HEALTH AND SAFETY AT WORK REGULATIONS 1999.

Furthermore the *contractor* shall also ensure the safety of his employees and others who may be affected by his work activity by conducting risk assessment, as required by the following Health and Safety Regulations:-

- a) The Control of Substances Hazardous to Health Regulations 2002.
- b) Manual Handling Operations Regulations 1992.
- c) Health and Safety (Display Screen Equipment) Regulations 1992.
- d) The Provision and Use of Work Equipment Regulations 1998.
- e) Personal Protective Equipment at Work Regulations 1992.
- f) The Control of Noise at Work Regulations 2005
- g) Personal Protective Equipment Regulations 2002
- h) Health and Safety (Miscellaneous Amendment) Regulations 2002

2.2 The *Contractor* shall, before the commencement of any works associated with the contract, provide to the *Project Manager*, copies of all risk assessments prepared in accordance with the requirements of the preceding paragraph of this clause if requested to do so.

2.3 Where throughout the duration of the contract, any of the risk assessments prepared in accordance with the requirements of this clause, are in any way modified or amended, the *Contractor* shall provide a copy of any such amendment or modification to the *Project Manager*.

2.4 The *Contractor* shall ensure that, prior to the commencement of any work on the part of any Subcontractor in relation to the contract, the Subcontractor carries out risk assessments in accordance with requirements of the aforementioned paragraph and submits the risk assessment to the *Contractor*. The *Contractor* shall ensure that any risk assessment submitted by a Subcontractor is sufficient to meet the requirements of the Regulations under which they are made and are in accordance with any assessments made by the *Contractor*.

The *Contractor* shall provide to the *Project Manager* copies of all assessments provided by any Subcontractor.

2.5 The *Contractor* shall ensure that, prior to the commencement of any works associated with the contract, all information contained in the risk assessment is relayed to all workers who may be affected.

Furthermore the *Contractor* shall ensure that all risk assessments carried out by any Subcontractor shall be brought to the attention of workers who may be affected by any such risk assessment.

Clause No**Title and Written Text**

2.6 Where the *Project Manager* is dissatisfied with the suitability or sufficiency of any risk assessment submitted by the *Contractor*, the *Contractor* shall revise the risk assessment and in doing so shall comply with any direction given by the *Project Manager*.

177AR Method Statements

Method Statements shall be provided in accordance with Appendix 1/4

178 AR IT Business Support System

The Contractor will provide a business management support system to help manage the contract change process defined in these documents. The Contract Change management – NEC (CCM) system provided by Management Process Systems Ltd, or similar approved, will be used to fulfil this requirement. The Contractor will arrange and provide a minimum of 5 software licenses for use by the Project Manager from 6 weeks before the first access date until the final account has been agreed. The Project manager will provide his own hardware.

570 AR Raising or Lowering Covers and Gratings on Chambers and Gullies

All existing street furniture comprising manhole covers, gully gratings, and Statutory Authority box covers of any description shall, if necessary, be carefully taken up and re-laid to the appropriate levels to suit the new carriageway or verge surface levels. The method and material for adjustment shall be stated in Appendix 5/1.

571 AR Rebuilding of British Telecommunications Frames and Covers

This specification describes the method that shall be employed whenever there is a change in the level of, or replacement of, British Telecom's carriageway frames and covers to conform with the road surface level. The method and materials for adjustments shall be stated in Appendix 5/1.

670 AR Requirements for Disposal

Surplus materials are to be disposed of at licensed sites. Such waste disposal sites provided by the *Contractor* will require both planning permission and/or a site licence.

The Duty of Care:- The disposal of all surplus materials must comply with the provisions of Section 34 of the Environmental Protection Act 1990. A Code of Practice relating to the Duty of Care is Available from Her Majesty's Stationery Office (ISBN: 011752557X).

971 AR Materials**1. Aggregate**

The coarse aggregate shall be material substantially retained on a 2mm test sieve, conforming to all appropriate requirements of BS EN 13043:2002 and consisting of either crushed rock or crushed gravel of one or more of the following groups: basalt, gabbro, granite, gritstone, hornfels, porphyry or quartzite.

Unless otherwise specified in Appendix 7/1, the coarse aggregate shall have the following properties:

- (i) The flakiness index for the coarse aggregates shall be Fl₂₀;
- (ii) Resistance to Fragmentation – Category LA₃₀;
- (iii) Aggregate abrasion Value – for carriageway material, not more than 12, after reference to HD36/06 Table 3.2;

- (iv) Durability (Water Absorption) – Category WA₂₄ 2;
- (v) Polished Stone Value – the minimum PSV to be specified in Appendix 7/1 for carriageway surface course after reference to Table NG 971AR/1. Minimum PSV for all footway surface course material shall be 45.
- (vi) The fines content category for the coarse aggregate shall be f4;
- (vii) The resistance to surface abrasion for the coarse aggregate shall be AAV12.

The fine aggregate shall substantially pass a 2 mm test sieve and be a crushed material from either crushed rock or crushed gravel of one or more of the following groups: basalt, gabbro, granite, gritstone, hornfels, porphyry or quartzite.

2. Filler

- (i) Added filler shall only be crushed limestone or other approved material in accordance with the requirements of BS EN 13043, 5.2.1.
- (ii) Hydrated lime may be added up to a maximum of 2% by mass of the aggregate.

3. Binder Grades

- (i) The binder shall be 75/130-75 polymer modified binder conforming to BS EN14023:2010. Compliance and test data for the binder proposed shall be included as part of the Type Approval Installation Trial (TAIT), Stage 1 requirements. The *Project Manager's* approval to use alternative materials needs to be sought on a scheme by scheme basis and should not be assumed.

4. Mixture

- (i) The target grading for the mixture shall fall within the limits given in PD 6691 Table D1 for 0/6, 0/10 and 0/14mm nominal aggregate sizes, unless agreed otherwise by the *Project Manager*. The manufacturer shall carry out initial type testing in accordance with EN 13108 – 20 to demonstrate conformity with EN 13108 – 5 and PD 6691, as amended below.

- (ii) Minimum binder contents (by mass of the total mixture) for each nominal aggregate size shall be:

0/14mm	B _{min} 6.3
0/10mm	B _{min} 6.7
0/6mm	B _{min} 7.1

- (iii) The SMA mixtures shall include a minimum fibre content of 0.3% (by mass of the total mixture). The average binder drainage category of a set of specimens tested in accordance with BS EN 12697-18:2004 (Clause 5) Schellenberg method shall be less than 0.3%.

- (iv) Void content of laboratory compacted specimens of the mixture at target composition prepared and tested as detailed in BS EN 13108-20:2006 (Annex C, Table C.1) shall fall within 3 to 4%. When tested in accordance with PD 6691 Table 4 but with the amendment that BS EN 12697-6 procedure C, sealed specimen shall be used to determine specimen bulk density.

- (v) The resistance to permanent deformation of samples at target composition taken in accordance with BS 594987:2007, Annex G, shall be determined in accordance with BS EN12697-22:2003 using the small device and Procedure B in air at a test

temperature of 60 °C. The results shall be recorded in the Producer's quality management system and reported as part of the TAIT procedures.

5. Compaction

- (i) The degree of compaction shall be assessed in accordance with Clause 903
- (ii) The laid thickness shall be within the range permitted in Table 971AR/1.

Mixture description	Thickness range (mm)	Minimum thickness (mm)
SMA 10	25 – 40	20
SMA 14	35 – 50	30

Table 971AR/1 Permitted laid thickness

6. Surface texture

- (i) Texture depth measurement shall be carried out in accordance with Clause 921. It shall be as specified in Appendix 7/1 but shall comply with Table 921AR/1.
- (ii) Grit, to be coated with 40/60 grade bitumen, shall be coarse aggregate mixture conforming sub-Clauses 971AR.2 and 971AR. It shall be machine applied as specified in Appendix 7/1 and/or Table 971AR/2.

Test Sieve	Proportion passing test sieve (% by mass)	
	2/4 particle size	1/2.8 particle size
8	-	-
6.3	100	-
4	90 – 100	100
2.8	-	90 – 100
2	0 – 25	-
1	-	0 – 25
0.63	0 – 2	0 – 2
Target binder content (%)	0.7 (+/- 0.5%)	1 (+/- 0.5%)
Machine application rate (kg/m ²)	1 – 5 (for SMA 14)	1 – 1.25 (for SMA 6 and SMA 10)

Table 971AR/2 Composition of grit mixture

- (i) The grit shall be applied from hoppers attached to a roller after the asphalt has been laid and after the initial compaction by roller. The rolling pattern shall, as far as practicable, provide a single application of grit to the full width with no overlap. When the material has reached ambient temperature, any surplus grit shall be removed

Carefully prior to the application of road markings and before the road is opened to traffic.

7. Nominal thickness layer

(ii) Unless otherwise stated in Appendix 7/1 nominal compacted thickness shall be:

14mm 40mm

10mm 40mm

6mm 25mm when used as footway surface course and 15 - 35mm when used as regulating layer.

8. Reclaimed Asphalt

(iii) Unless otherwise permitted by the *Project Manager*, reclaimed asphalt shall not be permitted for use in Stone Mastic Asphalt surfacing course.

6270 AR

Sign Cleaning

Sign Cleaning Specification

1. Signs shall be cleaned of all dirt, grime, grease tar, oil, diesel, smut, pollen, lipstick, crayon, ink, paint, algae growth and graffiti in accordance with following methods.
2. All cleaning agents, solutions and detergents for normal cleaning shall be used strictly in accordance with the manufacturer's recommendations and:-
 - (i) be wet, non-abrasive, and non-toxic;
 - (ii) be effective against surface deposits;
 - (iii) cause no harmful effects to the range of materials and surfaces to be cleaned;
 - (iv) be of the type suitable for high quality painted surfaces;
 - (v) be neither highly acid or highly alkaline, having a pH value within the range 6 to 8;
 - (vi) be free of strong aromatic or alcoholic solvents;
 - (vii) be fast acting;
 - (viii) be suitable for use if cold or hot solution;
 - (ix) be suitable for use in hard or soft water.
3. Where water jets are used and aimed directly at the sign face, i.e. without brushes, the pressure at the nozzle must preserve the existing condition of the sign.

The *Contractor* shall NOT:-

- (i) use stiff bristle brushes or abrasive tools or cleaners on reflectorized signs.
 - (ii) use steam cleaning equipment in the undertaking of the works;
5. The *Contractor* shall provide the type, product trade name and active ingredients of all detergents and cleaning agents he proposes to use for the

Project Manager's approval and submit Health and Safety Data Sheets before commencing work.

6. The surface of the sign shall first be flushed with clean water to remove loose dirt, then washed using a soft brush with a suitable mild detergent or cleaning agent, as listed in Appendix 62/70AR. The sign shall be washed thoroughly from the top downwards and the abrading of the surface by unnecessary scrubbing shall be avoided. Once suds have been applied, a steady stream of clean water shall be kept flowing on the sign face or bollard to wash away dirt particles. The entire sign face shall be rinsed with clean water from the top down and allowed to dry.

Substitute Clauses, Tables and Figures

Clause No. Title and Written Text

903.21SR Placing and Compaction of Bituminous Mixtures

For new pavement construction, all longitudinal joints in all layers shall be situated outside wheel-track zones. Where an existing road pavement is resurfaced, joints in the surface course shall coincide with either the lane edge, the lane marking, or the middle of a traffic lane, whichever is appropriate. Joints shall not coincide with the wheel path. For the purposes of this Clause, the wheel-track zones shall be taken to be between 0.5 m and 1.1 m and between 2.55 m and 3.15 m from the centre of the nearside lane markings for each traffic lane (or, in the absence of lane markings, lane edges). All joints shall be offset at least 300 mm from parallel joints in the layer beneath.

PART B: VOLUME 2 NOTES FOR GUIDANCE ON THE SPECIFICATION FOR HIGHWAY WORKS

List of Additional Clauses, Tables and Figures

Clause No.	Title	Written on Page No. following
None	-	-

List of Substitute Clauses, Tables and Figures

Clause No.	Title	Written on Page No. following
None	-	-

List of Cancelled Clauses, Tables and Figures

Clause No.	Title
None	-

Additional Clauses, Tables and Figures

Clause No.	Title
None	-

Substitute Clauses, Tables and Figures

Clause No.	Title
None	-

APPENDIX 0/2

Contract-specific minor alterations to existing clauses and tables and figures included in the contract

Part A: Volume 1 Specification

Clause No. (etc.)	Alterations to be made
507.16	<p>Add to paragraph 16–</p> <p>Frames for chamber covers and gully gratings in the carriageway PCC Risers and PCC cover slabs shall be set upon material that has the following properties:</p> <ul style="list-style-type: none">• The material should be a BBA/HAPAS approved polyester resin system.• The material should have a set time of 15 minutes• The compressive strength of the material should exceed 60N/mm² in 1 hour.• The tensile strength of the material should exceed 8N/mm² in 1 hour.• Notwithstanding the above requirements, the use of proprietary bedding components to different specifications may be accepted subject to appropriate certification and acceptance from the <i>Project Manager</i>.
901	Bituminous Base, Binder Course and Surfacing Materials
901.3	<p>Aggregates for Bituminous Mixtures</p> <p>After BS EN 13043, add</p> <p>The coarse aggregate shall be crushed rock or slag – flint gravel is not acceptable. If more than one type of stone or slag is used in any mixture, then acceptance must be obtained for each of the types proposed and the proportions to be used. In carriageway Surface Course materials, limestone will not be permitted as the coarse aggregate in any material nor the fine aggregate in any 6mm Dense Surface Course, Stone Mastic Asphalt or Thin Surface Course materials.</p>
901.15	<p>This sub-clause to be numbered (i)</p> <p>Add the following sub clauses:</p> <ul style="list-style-type: none">(ii) No fluxing or volatile oils shall be used in the manufacture of any permanent bituminous material unless specified by the <i>Project Manager</i> in writing,(iii) For all Surface Course materials except Hot Rolled Asphalt where the coarse aggregate is quartzite, basalt, or any other igneous rock, the binder shall include an adhesion agent, cement preferred.
903	Placing and Compacting of Bituminous Mixtures
903.27	<p>In sub clause (i) delete reference to PSV50 and replace with PSV55.</p> <p>Add the following sub-clauses after 903.28., 903.29</p> <ul style="list-style-type: none">(i) At the end of the carpet and across side roads, transverse joints shall be made by letting into the surface. The change in gradient in the finished transition length shall not exceed 1 in 50 unless by so doing a smoother transition can be achieved.

- (ii) The *Contractor* shall make provision for making safe in suitable material, the run-on and run-off and any raised longitudinal joint or projecting ironwork at the end of each day's work and shall remove such material prior to continuing the surface operations unless otherwise agreed by the *Project Manager*. Signing shall be in accordance with the requirements of Appendix 1/17.

Where trafficking of the binder course is anticipated to extend beyond 3 weeks, a suitable HSC asphalt, as detailed in Appendix 7/1, shall be substituted. Any variation in thickness will be compensated by additional thickness of the base material. A temporary speed limit of 30 mph or less shall apply if necessary.

920 Bond Coats, Tack Coats and Other Bituminous Sprays

920.2 Delete paragraph 2 and insert –

Bond coats shall be applied to all surfaces to be overlaid with SMA surface course and between base and binder course layers. The bond coat shall be premium grade and have proven low tack properties, so as to not adhere to the tyres of the paver, delivery vehicles, etc.. Bond coats shall have a British Board of Agrément HAPAS Roads and Bridges Certificate. In the event that no such certificates have been issued, they shall not be used without the acceptance of the *Project Manager*.

1000 Road Pavements – Concrete and cement bound materials.

Where clauses 1000-1048 relates to 7/ 1, substitute for 11/1.

Part B: Volume 2 Notes for Guidance on the specification for highway works

Clause No. (etc.)	Alterations to be made
	None

APPENDIX 0/3

List of numbered appendices referred to in the Specification and included in the contract

Appendix 0/3 is comprised of two lists, A and B, of Numbered Appendices as follows:

List 'A' is a complete list of the Numbered Appendices referred to in the Specification for Highway Works with those not adopted marked 'Not Used'. Those identified by the letters T or C shall be completed by the Tenderer or *Contractor* respectively.

List 'B' gives the list of Contract-specific Numbered Appendices devised for the Contract.

List 'A': Contract Specific Numbered Appendices Referred to in the Specification for Highway Works and Included in the Contract

Guide to types of Numbered Appendices - who compiles/completes

Symbol

- (Co) Compiler compiles: Identified in the Notes for Guidance examples by the term 'Sample' included in their title
- (Co/C) Compiler partially compiles and *Contractor* completes and returns to *Project Manager*
- (Co/T) Compiler partially compiles and Tenderer completes and returns with Tender
- (C) *Contractor* completes and returns to *Project Manager*
- (P) This indicates the Appendix is a national proforma and format must not be altered

Completed by	Appendix No.	Title
(Co)	0/1	INTRODUCTION Contract-specific Additional, Substitute and Cancelled Clauses and Tables and Figures Included in the Contract
(Co)	0/2	Contract-specific Minor Alterations to Existing Clauses and Tables and Figures Included in the Contract
(Co)	0/3	List of Numbered Appendices Referred to in the Specification and Included in the Contract
(Co)	0/4	List of Drawings Included in the Contract
Not used	0/5	Special National Alterations of the Overseeing Department of Scotland, Wales or Northern Ireland
(Co)	1/1	PRELIMINARIES Temporary Accommodation and Equipment for the <i>Project Manager</i>
Not used	1/2	Vehicles for the <i>Project Manager</i>
Not used	1/3	Radio Communication System for the <i>Project Manager</i>
(Co)	1/4	Working and Fabrication Drawings
(Co)	1/5	Testing to be Carried out by the <i>Contractor</i>
Not used	1/6	Supply and Delivery of Samples to the <i>Project Manager</i>
(Co)	1/7	Site Extent and Limitations on Use
Not used	1/8	Operatives for the <i>Project Manager</i>
(Co)	1/9	Control of Noise and Vibration
(Co)	1/10	Permanent Works to be Designed by the <i>Contractor</i>
Not used	1/11	Temporary Works Design
(Co)	1/12	Setting Out and Existing Ground Levels

Completed by	Appendix No.	Title
(Co)	1/13	Programme of Works
(Co)	1/14	Payment Applications
(Co)	1/15	Accommodation Works
(Co)	1/16	Privately and Publicly Owned Services and Supplies
(Co)	1/17	Traffic Safety and Management
Not used	1/18	Temporary Highways for Traffic
(Co)	1/19	Routeing of Vehicles
Not used	1/20	Recovery Vehicles and Operation for Breakdowns
(Co)	1/21	Information Boards
(Co)	1/22	Progress Photographs
(Co)	1/23	Risks to Health and Safety
Not used	1/24	Quality Management System
Not used	1/25	Temporary Closed Circuit Television (CCTV) System for the Monitoring of Traffic
Not used	1/27	Temporary Automatic Speed Camera System for the Enforcement of Mandatory Speed Limits at Road Works (TASCAR)
		SITE CLEARANCE
Not used	2/1	List of Buildings, etc. to be Demolished or Partially Demolished
(Co)	2/2	Filling of Trenches and Pipes
(Co)	2/3	Retention of Material Arising from Site Clearance
Not Used	2/4	Explosives and Blasting
(Co)	2/5	Hazardous Materials
Not used	2/6	Site clearance environmental requirements
		FENCING
Not used	3/1	Fencing, Gates and Stiles
		ROAD RESTRAINT SYSTEMS (VEHICLE AND PEDESTRIAN)
		DRAINAGE AND SERVICE DUCTS
(Co)	5/1	Drainage Requirements
Not Used	5/2	Service Duct Requirements
Not used	5/3	Surface Water Channels and Drainage Channel Blocks
Not used	5/4	Fin Drains and Narrow Filter Drains
Not used	5/5	Combined Drainage and Kerb Systems
(Co)	5/6	Linear Drainage Channel Systems
(Co)	5/7	Thermoplastics Structural Wall Pipes and Fittings
		EARTHWORKS
(Co)	6/1	Requirements for Acceptability and Testing etc. of Earthworks Materials
(Co)	6/2	Requirements for Dealing with Class U1B and Class U2 Unacceptable Materials
Not used	6/3	Requirements for Excavation, Deposition, Compaction (Other than Dynamic Compaction)
Not used	6/4	Requirements for Class 3 Material
Not Used	6/5	Geotextiles Used to Separate Earthworks Materials
Not used	6/6	Fill to Structures and Fill Above Structural Foundations

Completed by	Appendix No.	Title
Not used	6/7	Sub-formation and Capping and Preparation and Surface Treatment of Formation
Not used	6/8	Top soiling
Not used	6/9	Earthwork Environmental Bunds, Landscape Areas, Strengthened Embankments
Not used	6/10	Ground Anchorages, Crib Walling and Gabions
Not used	6/11	Swallow Holes and Other Naturally Occurring Cavities and Disused Mine Workings
Not used	6/12	Instrumentation and Monitoring
Not used	6/13	Ground Improvement
Not used	6/14	Limiting Values for Pollution of Controlled Waters (11/06)
Not used	6/15	Limiting Values for Harm to Human Health and the Environment (11/04)
		ROAD PAVEMENTS - GENERAL
(Co)	7/1	Permitted Pavement Options
(Co)	7/2	Excavation, Trimming and Reinstatement of Existing Surfaces
Not used	7/3	Surface Dressing – Performance Specification (Sheets 1, 2 and 3)
(Co)	7/4	Bond Coats, Tack Coats and Other Bituminous Sprays (Sheets 1, 2 and Binder Data Sheet)
Not used	7/5	In Situ Recycling: The Remix and Repave Process
Not used	7/6	Breaking Up or Perforation of Existing Pavement
Not used	7/7	Slurry Surfacing Incorporating Micro surfacing (Sheets 1, 2 and 3)
Not used	7/8	Not Used
(Co)	7/9	Cold-Milling (Planing) of Bituminous Bound Flexible Pavement
Not used	7/10	Not Used
Not Used	7/11	Overband and Inlaid Crack Sealing Systems
Not used	7/12	Arrester Beds
Not used	7/13	Saw-Cut Crack and Seal Bituminous Overlays on Existing Jointed Concrete Pavements
Not used	7/14	Preparation of Jointed Concrete Pavements Prior to Overlaying and Saw-Cutting and Seal of Bituminous Overlay
Not used	7/15	Saw-Cut, Crack and Seat Existing Jointed Reinforced Concrete Pavements
Not used	7/16	Cracking and Seating of Existing Jointed Unreinforced Concrete Pavements and CBM Bases
Not used	7/17	Cracking Plant and Equipment Progress Record
Not used	7/18	Site Specific Details and Requirements for Cold Recycled Bitumen Bound Material
Not used	7/19	Site Specific Details and Requirements for Recycled Cement Bound Material
Not used	7/20	Not Used
Not used	7/21	Surface Dressing – Recipe Specification (Sheets 1 & 2 and Binder Data Sheet)
Not used	7/22	Repairs to Potholes
		ROAD PAVEMENTS – CONCRETE AND CEMENT BOUND MATERIALS
(Co)	10/1	Plant and equipment for the construction of exposed aggregate concrete surface.
		KERBS, FOOTWAYS AND PAVED AREAS
(Co)	11/1	Kerbs, Footways and Paved Areas
Not used	11/2	Access Steps

Completed by	Appendix No.	Title
(Co) Not Used (Co) Not used Not used Not used	12/1 12/2 12/3 12/4 12/5 12/6	TRAFFIC SIGNS Traffic Signs: General Traffic Signs: Marker Posts Traffic Signs: Road Markings and Studs Traffic Signs: Cones, Cylinders, FTD's and Other Traffic Delineators Traffic Signs: Traffic Signals Traffic Signs: Special Sign Requirements on Gantries
(Co) (Co) (Co) Not used Not used Not used Not used Not used Not used	13/1 13/2 13/3 13/4 13/5 13/6 13/7 13/8 13/9	ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS Information to be Provided When Specifying Lighting Columns and Brackets (Specification for Highway Works) Typical Lighting Column and Bracket Data Sheets 1 and 2 Instructions for Completion of Lighting Column and Bracket Data Sheets Information to be Provided When Specifying CCTV Masts (Specification for Highway Works) Typical CCTV Mast Data Sheet Instructions for Completion of CCTV Mast Sheets Information to be Provided When Specifying Cantilever Masts (Specification for Highway Works) Typical Cantilever Masts Data Sheets 1 and 2 Instructions for Completion of Cantilever Masts Data Sheets
(Co) (Co) (Co) (Co) (Co)	14/1 14/2 14/3 14/4 14/5	ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS Site records Location of lighting units and feeder pillars Temporary lighting Electrical equipment for road lighting Electrical equipment for traffic signs
Not used	15	MOTORWAY COMMUNICATIONS
Not used	16	PILING AND EMBEDDED RETAINING WALLS
(Co) Not Used (Co) Not used Not Used Not Used Not Used	17/1 17/2 17/3 17/4 17/5 17/6 17/7	STRUCTURAL CONCRETE Schedule for the Specification of Designed Concrete Not Used Concrete – Surface Finishes Concrete – General Buried Concrete Grouting and Duct Systems for Post-tensioned Tendons Precast Concrete Elements
Not used	18	STRUCTURAL STEELWORK
(Co)	19/1	PROTECTION OF STEELWORK AGAINST CORROSION (Specification for highway works) Sheet 1 form HA/P1 (NEW WORKS) Paint system sheet

Completed by	Appendix No.	Title
Not Used	20/1	WATERPROOFING FOR STRUCTURES Waterproofing for concrete Structures
Not used	21	BRIDGE BEARINGS
Not Used Not Used	23/1 23/2	BRIDGE EXPANSION JOINTS AND SEALING OF GAPS Bridge Deck Expansion Joint Schedule Sealing of Gaps Schedule (Other than Bridge Deck Expansion Joints)
Not used	24/1	BRICKWORK, BLOCKWORK AND STONEMWORK Brickwork, Blockwork and Stonework
Not used	25	SPECIAL STRUCTURES
Not used	26	MISCELLANEOUS
Not used Not used Not used Not used Not used Not used	30/1 30/2 30/3 30/4 30/5 30/6	LANDSCAPE AND ECOLOGY General: Sheets 1, 2 and 3 Weed Control Control of Rabbits and Deer Ground Preparation Grass Seeding, Wildflower Seeding and Turfing Planting, sheets 1 and 2
Not used Not used Not used (Co) Not used Not used	30/7 30/8 30/9 30/10 30/11 30/12	Grass, bulbs and Wildflower Maintenance Watering Establishment Maintenance for Planting Maintenance of Established Trees and Shrubs Management of Waterbodies Special Ecological Measures
Not used	50	MAINTENANCE PAINTING OF STEELWORK

List 'B' : List of Numbered Appendices Devised for the Contract

Appendix No.	Title
62/70AR 11/3AR	Sign cleaning Street Furniture

APPENDIX 0/4 A

List of drawings included in the contract

1. Contract-specific Drawings Supplied to Each Tenderer

Drawing No.	Title
Claremont Bank	
1070997-T-08-101	Location Plan
1070997-T-08-102	General Arrangement
1070997-T-08-103	Constraints Plan
1070997-T-08-104	Land Boundary Plan
1070997-T-08-105	Signing Constraints Plan 1 of 2
1070997-T-08-106	Signing Constraints Plan 2 of 2
1070997-T-08-201	Sign Site Clearance Town Walls 1 of 2
1070997-T-08-202	Sign Site Clearance Town Walls 2 of 2
1070997-T-08-203	Site Clearance
1070997-T-08-501	Drainage Plan
1070997-T-08-502	Chamber Details
1070997-T-08-503	Ironworks
1070997-T-08-701	Carriageway Resurfacing
1070997-T-08-702	Typical Cross Sections 1 of 8
1070997-T-08-703	Typical Cross Sections 2 of 8
1070997-T-08-704	Typical Cross Sections 3 of 8
1070997-T-08-705	Typical Cross Sections 4 of 8
1070997-T-08-706	Typical Cross Sections 5 of 8
1070997-T-08-707	Typical Cross Sections 6 of 8
1070997-T-08-708	Typical Cross Sections 7 of 8
1070997-T-08-709	Typical Cross Sections 8 of 8
1070997-T-08-710	Proposed Alignment and Contours
1070997-T-08-711	Proposed String Lines
1070997-T-08-1101	Kerbs, Footways & Paved Areas
1070997-T-08-1102	Construction Details
1070997-T-08-1201	Traffic Signs 1 of 2
1070997-T-08-1202	Traffic Signs 2 of 2
1070997-T-08-1203	Sign Schedule 1 of 4
1070997-T-08-1204	Sign Schedule 2 of 4
1070997-T-08-1205	Sign Schedule 3 of 4
1070997-T-08-1206	Sign Schedule 4 of 4
1070997-T-08-1207	Road Markings 1 of 2

1070997-T-08-1208	Road Markings 2 of 2
1070997-T-08-1301	Existing & Proposed Street Lighting
1070997-T-08-1401	Street Lighting Electrical Details
1070997-T-08-3001	Trees
1070997-T-08-3002	Street Furniture
TEL-B657-10 - 002 Rev A	Secondary Totem Foundation
10700997-T-08-HDC-F13	Precast and In-Situ Cast Gullies Standard Detail
TFX MC1248 001	Road Closure & One Way System Reversal
TFX MC1248 002	Proposed Road Closure & Diversion
Murivance, Swan Hill and St John's Hill	
1070997-T-10-101	Location Plan
1070997-T-10-102	General Arrangement
1070997-T-10-103	Constraints Plan
1070997-T-10-104	Land Boundary Plan
1070997-T-10-201	Site Clearance
1070997-T-10-501	Drainage Plan
1070997-T-10-502	Bio-Retention Area
1070997-T-10-503	Ironworks
1070997-T-10-701	Carriageway Resurfacing
1070997-T-10-702	Carriageway Cross Sections 1 of 3
1070997-T-10-703	Carriageway Cross Sections 2 of 3
1070997-T-10-704	Carriageway Cross Sections 3 of 3
1070997-T-10-705	Proposed Contours
1070997-T-10-706	Proposed String Lines
1070997-T-10-1101	Kerbs, Footways & Paved Areas
1070997-T-10-1301	Existing & Proposed Street Lighting
1070997-T-10-1401	Street Lighting Electrical Details
1070997-T-10-3001	Landscaping
TFX MC1248 003	Proposed Road Closure & Diversion 1
TFX MC1248 004A	Proposed Road Closure & Diversion 2A
TFX MC1248 004B	Proposed Road Closure & Diversion 2B
Town Walls and Belmont	
1070997-T-11-101	Location Plan
1070997-T-11-102	General Arrangement
1070997-T-11-103	Constraints Plan
1070997-T-11-201	Site Clearance
1070997-T-11-501	Drainage Plan
1070997-T-11-502	Drainage Section Detail

1070997-T-11-503	Drainage Alignment and Long Section
1070997-T-11-504	Ironwork
1070997-T-10-701	Carriageway Resurfacing
1070997-T-11-702	Carriageway Cross Sections 1 of 2
1070997-T-11-703	Carriageway Cross Sections 2 of 2
1070997-T-11-704	Proposed String Lines
1070997-T-11-705	Proposed Contours
1070997-T-11-1101	Kerbs, Footways & Paved Areas
1070997-T-11-1301	Existing & Proposed Street Lighting
1070997-T-11-1401	Street Lighting Electrical Details
TFX MC1248 005	Road Closure & One Way System Reversal
TFX MC1248 006	Road Closure & Diversion

Utility Drawings

All known utility apparatus details are indicated on the constraints plans for the respective sites; refer to the above list of drawings.

APPENDIX 1/1

Temporary Accommodation and Equipment for the *Project Manager*

- 1 The *Contractor* shall make his own arrangements for the location of the site compound, stores and offices.
- 2 **All Sanitary facilities and storage compounds for the Principal Contractor and Supervisory staff shall be in place and ready for use by the Access Date for each site.**
- 3 The *Contractor* shall provide an office for the *Project Manager* from the Access Date and for the duration of the contract. This may be a separate building or a separate room within the *Contractor's* office. The following is required for the *Project Manager*:-
 - a Furnishings
 - 2No. Desk or table
 - 2No. Office chairs
 - 1No. First Aid Cabinet to Statutory requirements (Contents to be replaced as necessary by the *Contractor*)
 - 1No. Coat hooks for three persons
 - b Kitchen Area
 - 240V Electricity Supply
 - Adequate heating and lighting
 - Sink with hot and cold running water
 - Potable water supply
 - Microwave Oven
 - 240V Kettle
 - Washing up requirements i.e. tea towels and washing up liquid
 - Continuing supply of tea, coffee, milk, sugar and biscuits for contract meetings
 - 1No. Cutlery Canteen containing six full settings
 - 6No. Mugs, plates, cups and saucers
 - c Washroom Facilities

Both ladies and gents toilets are to be provided. All sanitary fittings are to be installed complete with services, taps, flushing cisterns, sparge pipes, wastes, overflows etc as required and the *Contractor* is to make all arrangements for and provide a hot and cold running water supply
 - d Communication
 - 1No. smart phone for the sole use of the *Project Manager*. It shall be Supplied from 1 week prior to the Access Date to one week following the Completion Date. Additional credit to be provided by the Principal Contractor as required. The phone shall have the capacity to take photographs with a storage capacity by SD or micro SD memory card of 4GB. The phone should have access to the internet via 3G/4G signal. **The provider should provide the best signal for the site.**
 - e IT Business Support System
 - In accordance with clause 178 AR
 - 1No. A3 colour printer
- 4 The *Contractor* shall permit anyone employed by the *Employer* in connection with this contract to share his welfare facilities and accommodation.

APPENDIX 1/4

Working and Fabrication Drawings

1.4.1 The following drawings shall be supplied by the *Contractor* in accordance with sub-Clause 104.25

Series	Description of Work	Minimum Period for Submission of Drawings
100	Traffic and pedestrian management	2 weeks before access date

1.4.2 Any drawings, calculations or other information required elsewhere in the Contract documents shall also be supplied by the *Contractor* at their own expense.

1.4.3 The following method statements shall be supplied by the *Contractor*.

Description of Work	Minimum Period for Submission of Method Statement
Site establishment, site safety and site security	2 weeks prior to access date
Traffic management	2 weeks prior to access date
Access and routeing of vehicles	2 weeks prior to access date
Excavation and temporary works	2 weeks prior to proposed activity start

1.4.4 One copy of each method statement shall be provided to the *Project Manager* for their comment within the timescale stated. Provision of these method statements does not relieve the *contractor* of any of their obligations under the contract or the CDM Regulations.

1.4.5 The above lists are not necessarily exhaustive.

APPENDIX 1/5

Testing to be carried out by the Contractor

1. The *Contractor* is to carry out all testing as required under the Specification, as specified in the following table, unless included within Appendix 1/6.
2. All costs for samples, sampling, testing and supplying the test results to the *Project Manager* shall be included in the rates and prices entered in the Bill of Quantities.
3. Notes:
 - a. Tests comparable to those specified in this Appendix will be necessary for any equivalent work, goods or material proposed by the *Contractor*.
 - b. (N) indicates that a UKAS test report or certificate is required.
 - c. Unless otherwise shown in this Appendix tests for works, goods or materials as scheduled under any one Clause for all such work, goods or materials for the works.
 - d. Cube strength tests are not required for concrete complying with Clause 2602.
 - e. All test results shall be presented in accordance with the relevant testing standard and shall incorporate the following information:
 - i. Specimen reference;
 - ii. Material brief description;
 - iii. Manufacturer's supplier names or origin as appropriate;
 - iv. Batch reference number (proprietary material only);
 - v. Quality of material;
 - vi. Location of material in works;
 - vii. Date sampled, by whom and method used;
 - viii. Date(s) tested;
 - ix. Results of all tests
 - f. When appropriate, samples shall be taken in sufficient time to allow testing to be completed and the *Project Manager's* acceptance obtained before the material is used in the works.
 - g. The *Contractor* shall provide at his own cost all samples required for testing;
 - h. Test results where tests to be carried out by the *Contractor* or his suppliers shall be passed to the *Project Manager* with 24 hours of the completion of each test.
 - i. Nothing in this Appendix shall relieve the *Contractor* of his responsibilities for the works under the Contract.

Clause	Work, Goods or Material	Test	Frequency of Testing	Test Certificate	Comments
Series 500					
501	Pipes for drainage and service ducts				Product certification scheme applies
	Vitrified clay	[See note 1]			
	Concrete -PC/SRC	not exceeding 900 mm dia	[See note 1]	[See Note 2]	
	Concrete - Pre-stressed				
	Iron- cast				
	Iron-ductile			[See Note 2]	
	PVC-U				
	GRP				
	Plastics. See Table 5/1				
	Corrugated steel	(Manufacturer's tests)		Required (AASHTO)	
	Corrugated steel Bitumen protection	Not exceeding 900m m dia			
Other materials			required	BBA certification (or equivalent) applies	
503	Pipe bedding	Grading and fines content	1 per week (min of 3)	Required	
		Water-soluble sulphate (WS) content (N)	5 per source		
		Oxidisable sulphides (OS) content and total potent 1 sulphate (TPS) content (N)	5 per source		
		Resistance to fragmentation (N)	1 per source		
508	Gullies and pipe junction				Product certification scheme applies
		Precast concrete			
		Clay			
		Cast iron and steel			
509	Watertightness of joints	Air test	All pipelines with watertight joints	Required	
Series 600					

Clause	Work, Goods or Material	Test	Frequency of Testing	Test Certificate	Comments
		Permeability			
		Pore Size			
612	Compaction of granular fill	Field intact dry density & moisture content		Required	Test in Accordance with BS 1377-9
631	PAK testing of road planings and arisings	Polycyclic Aromatic Hydrocarbons (PAH or Coal Tar) containing materials	Test per load of excavated material to be removed from site.	Required	Test in accordance with PAK marker paint manufacturer's instructions. Material yielding a positive test for PAH shall be isolated, retained on site and reported to the Project Manager.
Series 700					
702.5 to 702.9	Surface Regularity	Rolling Straight Edge		Required	
Series 900					
903	Compaction Control	Air Void Content	BS 594987 Cl 9.5.1.2	Required	Refer to 970 AR
906	Bituminous Mixtures	Grading (N) Binder Content	1 per 100 tonnes or part thereof Surface Course 1 per 150 tonnes or part thereof Base and Binder Course/Regulating	Required	<i>Contractor</i> to sample materials on site to ensure conformity with Specification
921	Surface Macrotexture	Volumetric Patch Technique (N)	BS EN 13036-1 BS 594987 Cl 8	Required	<i>Contractor</i> to measure texture depths within 24 hours of laying surface course, to ensure conformity with specification
Series 1200					

Clause	Work, Goods or Material	Test	Frequency of Testing	Test Certificate	Comments
1202	Permanent traffic signs			Required <i>(Where considered appropriate)</i>	Quality management scheme applies. Certification that the traffic sign is capable of passing the tests in BS873: Part 1 is required.
1212	Road marking				National Quality management sector scheme applies. procedures are given in BSEN
Series 1300					
1306	Anchorage in drilled holes to <i>wall brackets</i> , columns and masts with flange plates	Loading test on site	<i>Upon completion of installation</i>	Required	
1310	Welded joints	Destructive Testing	<i>To be agreed with the Overseeing Organisation</i>	Required	<i>The Overseeing Organisation shall not be required to oversee the tests</i>
Series 1400					
1424	Lighting units, lit signs, bollard, feeder pillars and all associated interconnected wiring.	Tests specified in clause 1424	Each unit	Required	Product certification scheme applies. Certification that the installation complies with BS7671 is required.
Series 1700					
1702 1704	Cement types as stated in sub-Clause 1702.1			Required	Certificate to be provided monthly for each type of cement. Quality management and product certification schemes apply.
	Cement (all types)	Chloride content	Monthly		Tests to be carried out by the manufacturer and results included on the test certificates required above
	Pulverised-fuel ash	Sulphate content	Monthly		
	Ground granulated blast furnace slag	Acid-soluble alkali content	Daily (PC) Weekly (Pfa ggbs)		

Clause	Work, Goods or Material	Test	Frequency of Testing	Test Certificate	Comments
	Aggregates	Grading and fines content	1 per week (per source)		Results of routine control tests from the factory production control system operated by the producer to be Provided – see Annex H of BS EN 12620. Product certification scheme applies
		Shell content (N)	Monthly		
		Flakiness index (N)	Monthly*		
		Resistance to fragmentation (N)	Every 6 months		
		Drying shrinkage (N)	1 per 5 years		
		Chloride content (N)	1 per week or as otherwise agreed		
		Sulphate content (N)	Yearly		
	Blast furnace slag	Bulk density (N)	Every 6 months		
		Stability (N)	Every 6 months		
		Sulphur content (N)	Every 6 months		
	Water	Tests specified in BS EN 1008 Chloride content Sulphate content Acid soluble alkali content	As required		
			Monthly		
			Monthly		
	Admixtures	Chloride content Sulphate content Acid soluble alkali content	1 per consignment		Required (BS 934-2)
1 per consignment			Required		
1 per consignment					
1707	Concrete	Cube strength (N)	Prestressed concrete - two cubes from 12 m ³ or 2 batches whichever represents the lesser volume.	Required	<i>Contractor</i> to cast and test sufficient additional cubes to demonstrate cube strength before transfer.
			Reinforced concrete - 4 cubes from 6 m ³ or 2 batches whichever represents the lesser volume		
			Mass concrete - two cubes from 50 m ³ or 50 batches whichever represents the lesser volume.		
			Additional cubes for special purposes.		

Clause	Work, Goods or Material	Test	Frequency of Testing	Test Certificate	Comments
		Cube strength-identity testing as described in Appendix 17/4 (N)	2 cubes from each of two samples of each batch.		
		Density	As required		
		Modules of elasticity			
	Fresh concrete	Consistence (slump or compacting factor or Vebe) (N)	Each batch	Required	
		Air content	Each batch		
		Cement content	As required		
Water/cement ratio					
1709	Silane			Required for each delivery	Certification that the silane complies with Clause 1709 is required
		Refractive Index	Three samples		
		Trial panels, where required in the Contract			
1710	Concrete packing Mortar packing Epoxy resin bonding agent				(appropriate tests/samples should be scheduled)
	Precast concrete manufactured off site	Cube strength (Manufacturer's tests)			<i>Contractor</i> to make available records of tests by the manufacturer
1711	Grouting and Duct Systems for Post-tensioned tendons				CARES scheme for Supply and Installation of Post-tensioned Systems in Concrete Structures or an equivalent scheme is required. Quality management and product certification schemes for cement apply.
		Full scale trials, where required in the Contract			See sub-Clause 1711.1 and Appendix 17/6
		Air pressure tests			See sub-Clause 1711.1 and Appendix 17/6

Clause	Work, Goods or Material	Test	Frequency of Testing	Test Certificate	Comments	
		Duct assembly verification tests			See sub-Clause 1711.3 and Appendix 17/6	
		Wall thickness of ducts after tensioning			See sub-Clause 1711.3 and Appendix 17/6. <i>Contractor</i> should provide evidence of testing.	
		Fluidity	See Table 17/14		See sub-Clause 1711.8 and sub-Clause 1711.9 and Table 17/15	
		Bleeding				
		Volume change				
		Cube strength				
		Sieve				
		Sedimentation				Required	Quality management and product certification schemes apply. Data on their suitability, including previous experience should be made available. See Sub-Clause 1711.10
1712	Reinforcement				Product certification scheme applies	
	Steel Bars					Required (BS 4449)
	Steel wire					Required (BS 4482)
	Steel fabric					Required (BS 4483)
	Stainless steel					Required (BS 6744)
Series 1900						
1903	Abrasives	Grading	To be agreed with the <i>Project Manager</i>			
		Hardness				
1911	Paints					
	A and B Samples	Specific Gravity	Refer to clause 1911	Required	Samples will be selected in accordance with 1911 and 1911SE	
		Colour Match				
		Composition				
		Application characteristics				

APPENDIX 1/7

Site Extent and Limitation on use

1. Extent of the Sites

- a) The locations of the Scheme site and indicative compound area are indicated on the works information drawing listed within Appendix 0/4.

The indicated compound area sited at the St Julian's Friars car park, Shrewsbury has an approximate area of 640m² and has previously been used in other recent town centre projects.

The indicated compound area is situated within Shrewsbury's flood plain extents and is expected to flood when the Welsh Bridge gauge exceeds 3.5m river depth. There have been 12 flood events above 3.5m since 2011.

The carpark is owned by Shropshire Council and has an indicative weekly cost of around £250.00.

It is recommended the successful *Contractor* should contact Shropshire Council at their earliest possibility if the above site is best suited for the purpose the scheme.

- b) The Site boundaries are identified on the drawings listed within Appendix 0/4. The site also includes those areas of highway necessary for all temporary signs and cones which may be outside the area of the permanent works.

2. Limitations on the Use of the Site

- 1) The *Contractor* will not be permitted to locate his compound and offices within the site boundary unless otherwise accepted by the *Project Manager*.
- 2) Security fencing shall be provided around any element of the works that could present a hazard to trespassers.
- 3) Access to be maintained to properties at all times in accordance with Appendix 1/17 and Appendix 1/19.
- 4) The *Contractor* will not be permitted to stand or store materials and plant/equipment outside the areas of the site which he is to possess as his working area.
- 5) No storage shall be permitted outside the *Contractors* working area, accept at the site compound or otherwise accepted by the *Project Manager*.
- 6) The *Contractor* shall be limited to a working area. The *Contractor* shall not possess any area of the site greater than 100m in length at any one time.
- 7) No plant shall work above any suspected underground structures within the site.
- 8) All cutting tools used on site shall incorporate the use of a water suppression unit.
- 9) The routing of all vehicles should be in accordance with Appendix 1/19.

3. Working Hours

- a) The *Contractor* shall work between hours that suit the Traffic Management restrictions shown in appendix 1/17

APPENDIX 1/9

Control of Noise and vibration

- 1) The *Contractor's* attention is drawn to the Control of Pollution Act 1974 and in particular to Sections 60 and 61 which relate to noise on building and construction sites. It will be the *Contractor's* responsibility to carry out the contract in such a way as to satisfy the Local Authority's interpretation of this Act, which may impose restrictions upon the type of plant, method of working and working hours adopted on the contract and the *Contractor* is to allow for any additional costs which may arise out of compliance with the Act.
- 2) In furtherance of the above the *Contractor* may wish to seek a Consent Notice under Section 61 of the Control of Pollution Act 1974 from the Environmental Health Officer of Shropshire Council.
- 3) Without prejudice to the generality of the *Contractor's* obligations the *Contractor* shall comply in particular with the following requirements:-
 - (i) all vehicles and mechanical plant used for the purpose of the Works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order;
 - (ii) all compressors shall be "sound reduced" models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use, and all ancillary pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers;
 - (iii) machines in intermittent use shall be shut down in the intervening periods between work or throttled down to a minimum.
 - (iv) All static plant, e.g. mixers, compressors and vehicle compound/material stores etc., shall be positioned as far from residential property as is reasonably practical.
 - (v) Where it is unavoidable that plant shall be situated close to residential property the *Contractor* shall give consideration to the provision of temporary acoustic screening.
- 4) The *Contractor* shall furnish such information as may be required by the Environmental Health Officers of Shropshire Council in relation to noise levels emitted by plant or equipment used or installed on the site or which the *Contractor* intends to use or install on the site.
- 5) The *Contractor* shall afford all reasonable facilities to enable the authorised officers of the Environmental Health Officer of Shropshire Council to carry out such site noise monitoring as may be necessary.
- 6) The *Contractor* shall submit and agree a satisfactory Method Statement for the control of noise during all night-time works. The Method Statement shall be submitted and agreed by the Environmental Health Officers of Shropshire Council a minimum of 2 weeks in advance of the commencement of any night-time works.

Vibration

- 7) The use of explosives is not permitted.
- 8) Limits on vibration levels arising from the site activities is to be limited to avoid any damage to structures retaining walls, property and services adjacent or nearby
- 9) The *Contractor's* attention is drawn to the specific requirements of clause 173AR.

APPENDIX 1/10

Permanent Works to be designed by the Contractor

Work Item or Element	Location	Design Specification
Foundation design for planted lighting columns	All planted lighting columns shown on the contract drawings.	See Appendix 13/1

Designs should be submitted to the *Project Manager* 4 weeks before the installation date for approval. Approval will take 2 weeks.

APPENDIX 1/12

Setting Out and Existing Ground Levels

- (i) Prior to commencement of excavation the *Contractor* shall set out, mark and maintain (at 10m longitudinal intervals) until they are no longer required, all reference lines, templates, bench marks and markers, ground stations and the like (permanent or temporary), necessary for setting out and for checking of the Works (including the existing road). The *Contractor* shall keep up to date schedules and drawings of such information, which shall be supplied to the *Project Manager* as the setting out proceeds.

The levels of the proposed works must be related to the Bench Marks shown on the contract drawings or advised by the *Project Manager*.
- (ii) The *Contractor* shall ensure that the level control is checked regularly to ensure they have not been disturbed.
- (iii) The *Contractor* shall refrain from permanently marking chainages on kerbs.
- (iv) The level control should be used to record the laying depths of each layer including the final surface course.
- (v) Footways, shared surfaces and resurfaced carriageways and footways shall be laid to the lines and levels provided and shall comply with the relevant tolerances as set out in these Appendices and Series 700 of the Specification for Highway Works.
- (vi) The *Contractor* shall be fully responsible for the accurate setting out of the Works and shall establish all necessary control lines to ensure that the Works are constructed to the required line and level of the design. The *Contractor* shall ensure that they check all station coordinates as listed in the Setting out Information.
- (vii) The position of all plant, including underground ducts chambers etc., shall be marked by the *Contractor*, with agreement of the *Project Manager*, on the site in such a way that the markings will not be obliterated before work is started.

APPENDIX 1/13

Contractor's programme

1. The constraints to be accommodated within the proposed programme are:
 - (i) See Appendix 1/17 for Traffic Safety and Management, the requirements for which shall be accommodated for the site.
 - (ii) Refer to Appendix 1/7
 - (iii) See Appendix 1/12 regarding setting out requirements which shall be met in the programme. The *Contractor* must allow the *Supervisor* time to check the *Contractor's* setting out at each stage of the works.
 - (iv) The *Contractor* must liaise with Public Utilities as stated in Appendix 1/16 and all their works shall be accommodated within the programme.
 - (v) No planed areas shall be trafficked by public vehicles for more than 48 hours.

1. The *Contractor* shall provide the Programme of Works in the form of a Bar Chart produced as a result of a Critical Path Analysis and must abide by the constraints above. It shall show the full level of detail appropriate to the site. Details of resources for all activities should be provided together with earliest/latest start/end dates.

2. The *Contractors* float shall also be indicated

3. The *Contractor* shall comply with the approval and submission timescales as detailed in Appendix 1/4.

4. Allowance for progress meetings at fortnightly intervals.

5. Level of Detail
Level 1:
The following details are required, where appropriate
 - (i) Phasing of the works
 - (ii) Approval of construction and paving materials
 - (iii) Setting Out
 - (iv) Site Clearance
 - (v) Excavation
 - (vi) Formation testing
 - (vii) Drainage
 - (viii) Kerbing
 - (ix) Paving foundations
 - (x) Paving works
 - (xi) Planing
 - (xii) Carriageway Surfacing
 - (xiii) Carriageway Marking
 - (xiv) Traffic Management
 - (xv) Signing
 - (xvi) Road Closure periods

(xvii) Works taking place on private land

Programme of Works

- i) Examination of work or consent for which the *Contractor* shall be required to give adequate notice in writing to the *Project Manager*. Where no period is stated elsewhere in the Contract, such notice shall not be less than 24 hours of normal working time before the work is ready for final inspection. No further work shall commence until the *Project Manager's* written consent has been given. The *Project Manager* will require reasonable time during normal working hours to carry out his inspection.

Level 2 Programme

To be submitted to the *Project Manager* every 2 weeks for the duration of the Contract. It shall detail works broken down on a daily basis programmed for the following two weeks. The programme shall include the details as for Level 1, but with each distinct operation detailed.

APPENDIX 1/14

Monthly Statements

1. The payment applications submitted to the *Project Manager* in accordance with the Conditions of Contract by the *Contractor* shall, whenever dealing with matters covered by the Bills of Quantities, be set out under Part and Section headings similar to those in the Bills of Quantities and shall separately identify each item and specify quantity, unit, rate and value.
2. Items not described in Bills of Quantities but appropriate for inclusion, as measured work shall be shown at the end of the relevant section or under new section headings as appropriate indicating quantity, unit rate and value. In respect of all other matters the *Contractor* shall separately show in the statement quantities, units and rates of goods and/or materials and also details of any other matters to which he considers himself entitled. The *Contractor* shall allow the *Project Manager* to inspect invoices for goods or materials included in the statement as may be required.

APPENDIX 1/15

Accommodation Works

1. No work shall take place on any private land without the written instruction of the *Project Manager*.
2. The area of all necessary accommodation works is defined on the following drawings:
1070997-T-08-104 (Land Boundary Plan) and 1070997-T-10-104 (Land Boundary Plan).

APPENDIX 1/16

Privately and Publicly Owned Services and Supplies

1. This Appendix contains details of services and supplies affected by the Works, details of preliminary arrangements that have been made with Statutory Undertakers, utility companies and others for the alteration of services and supplies affected by the Works, and details of any orders already placed.
2. The *Contractor* shall make arrangements with the Statutory Undertakers, utility companies and others concerned, for the co-ordination of his work with all work which needs to be done by them or their *Contractors* concurrently with the Works. Compliance with the periods of notice given in this Appendix does not relieve the *Contractor* of his obligations.
3. Private services to individual properties have not generally been listed or shown on the Drawings. The *Contractor* shall make arrangements with the Statutory Undertakers and others concerned for the phasing of all necessary disconnections and diversion of private services affected by the Works.
4. Disconnected apparatus shall be removed by the *Contractor* only with the prior consent of the Authority concerned.
5. The names, addresses and contact details of the Statutory Undertakers, utility companies and authorities serving in the locality are listed below.

Name	Address Tel No.	Contact
BT Openreach	Repayments (Alterations) PP215S Shrewsbury ATE Town Walls Shrewsbury SY1 1TY	[REDACTED]
Severn Trent Water (Water Mains)	Severn Trent Water Limited Accounts Receivable PO Box 5311 Coventry CV3 9FL	[REDACTED]
Severn Trent Water (Sewers)	Severn Trent Water Limited Regis Road Tettenhall Wolverhampton WV6 8RU	[REDACTED]
Western Power Distribution	Western Power Distribution Epic Park Halesfield 6 Telford TF7 4BF	[REDACTED]
National Grid Gas	Design Engineer Balfour Beatty Utility Solutions National Grid – GDSP West Midlands Stafford Road Wolverhampton WV10 6HZ	[REDACTED]
Shropshire Council Highways	Shropshire Council Environmental Maintenance Longden Road Shrewsbury SY3 9EL	[REDACTED]

6. Services and Supplies Affected by the Works

Location	Description	Group	Drawing No.	Notice required to commence	Time for completion
DL11, DL12, DL13, DL14, DL15, DS7, DS8, DL16, DL17, DS11, DS12, DL18, DL20, DS13, DS14, DS15, DL21, DS16, DL23, DS18, DL24	Disconnection or transfer of DNO service to new asset	C	1070997-T-08-1301	8 weeks	1 day
L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L31, L32, L33, Z1, Z2	Connection or transfer of DNO service from redundant asset	C	1070997-T-08-1301	8 weeks	1 day
DL10, DL9, DL8, DL7, DS6	Disconnection or transfer of DNO service to new asset	C	1070997-T-10-1301	8 weeks	1 day
L17, L18, L19, L20	Connection or transfer of DNO service from redundant asset	C	1070997-T-10-1301	8 weeks	1 day
DL6, DL5, DL4, DL3, DL2, DL1, DS3, DS2, DS1	Disconnection or transfer of DNO service to new asset	C	1070997-T-11-1301	8 weeks	1 day
L11, L12, L13, L14, L15, L16	Connection or transfer of DNO service from redundant asset	C	1070997-T-11-1301	8 weeks	1 day

Group	Action
A	Work expected to be completed before the commencement of the Works.
B	Work required after commencement of the Works which does not require prior work by the <i>Contractor</i> , but does require the <i>Contractor</i> to undertake liaison and coordination.
C	Work required after commencement of the Works which does require prior work by the <i>Contractor</i> .
D	Work expected to be in progress at the commencement of the Works.
E	Work to be wholly undertaken by the <i>Contractor</i> .

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7. The *Contractor* shall undertake all necessary investigations prior to excavations to ensure that the services on site remain unaffected by the works including unexpected or uncharted services.

APPENDIX 1/17

Traffic Safety and Management

1 General

- 1.1 The *Contractors* traffic safety and management proposal shall comply with Chapters 1 to 14 of the Traffic Signs Manual published by the Stationary Office (or any amendments thereto or other conditions stated within this Contract), and with 'Guidance for Safer Temporary Traffic Management' and 'Safety at Street Works and Road Works a Code of Practice'.
- 1.2 Appropriate signing shall be provided by the *Contractor* to the current edition of Chapter 8 of The Traffic Signs Manual, Parts 1, 2 and 3. (or any amendments thereto or other conditions stated within this Contract)
- 1.3 The location of signs, cones and barriers shall not reduce footpath widths to less than 2.0m wide.
- 1.4 Where the circumstances of any particular case are not covered by the recommendations of Chapter 8, the *Contractor* shall submit his proposals for dealing with such situations in writing to the *Project Manager* for his acceptance.
- 1.5 On commencement of lane closures existing traffic signs (or parts of) shall be covered by the *Contractor* that conflict with the temporary traffic management signs.

2 Traffic Safety and Management Requirements

- 2.1 The *Contractor* shall be responsible for traffic safety and management and all associated work as described in Clause 117 and shall provide the following information:
 - (i) Phasing of Works.
 - (ii) Drawings showing traffic management layout including as appropriate: -
 - (a) Position of traffic signs and traffic signals.
 - (b) Pedestrian routes.
 - (b) Width of lanes.
 - (c) Working area.
 - (d) Safety zone.
 - (e) Cross over.
 - (f) Provision of access for emergency service vehicles
 - (g) The location of temporary vehicular access
 - (iii) Timing of operations.
 - (iv) Road Lighting requirements.
 - (v) A safety zone, delineated by traffic cones, must be maintained between any live traffic lane and all site staff/workmen.
 - (vi) 24 hour cover for traffic management.
- 2.2 In providing the details listed above the following constraints shall apply:
 - (i) Maintaining a minimum footpath/footway widths
 - (ii) The *Contractor* shall inspect the existing road lighting and shall if necessary shall provide additional lighting to protect and aid the workforce and pedestrians during working hours and outside of working hours if applicable.

- (iii) The *Contractor* shall provide a protected and well defined pedestrian route where required.
 - (iv) Emergency traffic shall be permitted through the site at all times.
 - (v) No work shall be permitted outside the traffic management areas.
 - (vi) When planning the traffic safety and management measures the *Contractor* shall include for covering existing permanent traffic signs, within or outside the area of the Works, which conflict with the traffic safety and management proposals. These measures shall be carried out in accordance with Clause 1209.
- 2.3 The *Contractor's* attention is drawn to the need to assess the risk and develop and operate safe working practices when vehicles and Equipment are reversing on site, whether or not they are on part of the highway. Rule 129 of The Highway Code 1993 is relevant but the *Contractor's* practices and procedures should take account of the different conditions, which will prevail on site.

3 Traffic Safety and Control Officer, Pedestrian Ambassadors

- 3.1 The *Contractor* is to provide the following to help protect, guide and inform members of the public during the works

3.1.1 Traffic Safety and Control Officer

Traffic Safety and Control Officer who shall be responsible for maintaining all traffic safety and management systems while work is in progress.

The responsibilities of the Traffic Safety and Control Officer and of his nominated deputy shall also include the following matters:

- (i) Monitoring, with the assistance of sufficient mobile personnel and of sufficient other suitable and appropriate aids, the flow of traffic, pedestrian and vehicular, within the area;
- (iii) 24 hour every day availability in emergencies (achieved through a nominated deputy if necessary). The Officer shall be equipped with a mobile cellular phone and the phone number shall be supplied to the *Project Manager*, the Traffic Manager and the Police.
- (iv) Ensuring that the traffic management control requirements as agreed in the approved permit are carried out.
- (v) Undertake daily patrols to ensure that all equipment is inspected and maintained (and keeping site records of inspections).
- (vi) Ensuring that there are adequate replacement signs or barriers in the event of loss, damage or equipment failure. Any defect in the temporary traffic management reported by the *Project Manager*, *Employer* or the Police shall be rectified within 1.5 hours
- (vii) Arranging and agreeing all lane and carriageway closures, dimensions, working areas and safety zones with the *Project Manager*
- (viii) Arranging duties for watchmen so that the site is patrolled and inspected and equipment attended to and maintained at all times.
- (ix) The provision of an experienced person responsible for maintaining the smooth running of traffic during critical periods.

- (x) Liaison with businesses and private individuals to ensure that the work does not prevent people entering / leaving their workplaces and residences.
- (xi) Liaison with bus operators, Police, Emergency services etc.

3.1.2 Pedestrian Ambassadors

- (i) The *Contractor* will supply 2 *Pedestrian Ambassadors* who shall be responsible for ensuring the smooth and safe movement of pedestrians around the site including access to premises and for providing a point of contact to those who require help.
- (ii) The identified *Pedestrian Ambassadors* shall wear reflective long sleeved vests with badges that shall identify them as pedestrian assistants.

4 Contact Details

1. Traffic Manager contact details –

██████████
Traffic Manager
Highways & Transport Team
Shropshire Council
107 Longden Road
Shrewsbury
Shropshire
SY3 9EL

Tel: 01743 258786

Email: ██████████

2. Out of hours contact regarding emergency Traffic Management requirements

Central – 07990 085809

5 Public liaison officer

- (i) The *Contractor* will provide a *Public Liaison Officer* who will be present during all site working hours. The officer will assist with all queries, complaints and general public questions.
- (ii) Any queries arising which would be inappropriate for the *Public Liaison Officer* to answer, such as a formal complaint, should be re-directed to the appropriate persons.

6 Highway Maintenance Functions

- 3.1 Until the completion of all works the *Contractor* shall be responsible for ensuring that within the site boundary:

- (i) The highway is swept clear of debris (including dirt and mud) from any source to the satisfaction of the *Project Manager*.
- (ii) Drains will be cleaned of any material arising from the works.
- (iii) The *Contractor* will be responsible for rectifying any damage to the road surface due to the siting of construction plant and materials within the highway and temporary diversions of traffic. This shall be undertaken at the *Contractors* own expense.

- 3.2 The limits of the works shall be the Site Boundary

If the accepted traffic management measures require a temporary traffic order or statutory acceptance the *Contractor* shall allow the following additional period of time to elapse between receiving acceptance and the commencement of works:

7 Specific limitations

- 7.1 The following list of anticipated events have been raised by the Traffic Manager as requiring special attention by the *Contractor* during the works:
- Saturday 23rd and Sun 24th June Shrewsbury Food Festival, Quarry Park, very high footfall, approximately 30k visitors over the event.
 - Sunday 1st July Race for Life, Quarry Park, high footfall.
 - Sunday 8th July Dragon Boat Festival, Quarry Park, high footfall.
 - Saturday 14th July Let's Rock Shrewsbury, Quarry Park, high footfall.
 - Friday 10th and Saturday 11th August Shrewsbury Flower Festival, Quarry Park, one-week lane closure embargo commencing Mon 7th Aug, very high footfall, approximately 35k visitors over the event. The proposed loading bays and adjacent footways on Claremont Bank are required to be made available for use by buses and coaches (including pedestrian access to these vehicles).
 - Saturday 8th Sept, Recovery Walk, Quarry Park, high footfall anticipated.
 - Saturday 5th and Saturday 6th October, Oktoberfest, Quarry Park, high footfall.
- 7.2 None of the road closures detailed on the drawing series TFX-MC1248-001 to TFX-MC1248-006 shall occur concurrently, in order to maintain access to the adjacent town centre roads.
- 7.3 Due to closures previously booked for the SITP Pride Hill contract DMNH 015, no road closures for sites 08, 10 and 11 will be permitted for works between the following dates: 28th August to 7th September inclusive and 10th September to 11th September inclusive.

8 Notice Requirements

- i) The *Employer* operates a permit scheme which supersedes the noticing function detailed in the New Roads and Streetworks Act 1991. The permit scheme in operation by the *Employer* is the regional scheme called the West and Shires permit scheme and was introduced under the powers given to the authority in the Traffic Management Act 2004 and came into force via Statutory instrument on the 1st April 2014. The primary aim of the scheme is to reduce network disruption
- ii) The application process for all permit schemes is by an electronic system and must be made by the *Project Manager* on behalf of the *Contractor* via the application types below –

Permit Type	Application Minimum Periods	Responsibility/ Action
Provisional Advance Authorisation (PAA)	Minimum 12 weeks prior to works starting	Responsibility: <i>Contractor</i> , Action by <i>Project Manager</i> *
Temporary Traffic regulation (Road Closure) Application (Legal notice)	Minimum 12 weeks before works starting	Responsibility: <i>Contractor</i> , Action by <i>Project Manager</i> *
Traffic Signal Licence Application (Legal notice)	Minimum 10 day prior to works starting	Responsibility: <i>Contractor</i> , Action by <i>Project Manager</i> *
Permit Application (PA)	Minimum 10 day prior to works starting and must include a PAA application as detailed above	Responsibility: <i>Contractor</i> , Action by <i>Project Manager</i> * in line with the approved programme
Permit Variation (PV)	As soon as a change to the agreed permit is known	Responsibility: <i>Contractor</i> , Action by <i>Project Manager</i> *

Duration Variation Application (DVA)	2 days or 20% of duration (whichever is longest) before Estimated End Date	Responsibility: <i>Contractor</i> , Action by <i>Project Manager</i> *
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*In all cases the *Contractor* must submit the required information for the respective permit applications to the *Project Manager* with a minimum of 5 working days' notice to comply with the timescales referred to in the above table.

9 Scheme Definition and associated additional Permit Requirements

Any traffic management requirements over and above those subject to the Permit Application outlined above will be subject to the WaSP permitting scheme and shall be arranged by the *Employer*, via the *Project Manager* on behalf of the *Contractor*.

Additional traffic management requirements shall be limited to – None

These shall be subject to the following application times –

Major Works

- Works that have been identified in an undertakers' annual operating programme or, are normally planned or known about at least six months in advance of the proposed start date;
- Works requiring a temporary traffic order (not a temporary traffic notice) under the Road Traffic Regulation Act 1984 for any works other than immediate works;
- Works over 10 day duration.

Standard Works

- Works other than major works with a planned duration of 4 to 10 days inclusive.

Minor Works

- Works other than Major works with a planned duration of three days or less.

These shall be subject to the following application times –

Activity	Minimum Period for processing by the <i>Project Manager</i>	Response time from receipt of application
Major Activity – PAA	2 days	1 month
Major Activity – PA	2 days	5 days
Standard Activity – PA	2 days	5 days
Minor Activity - PA	2 days	2 days

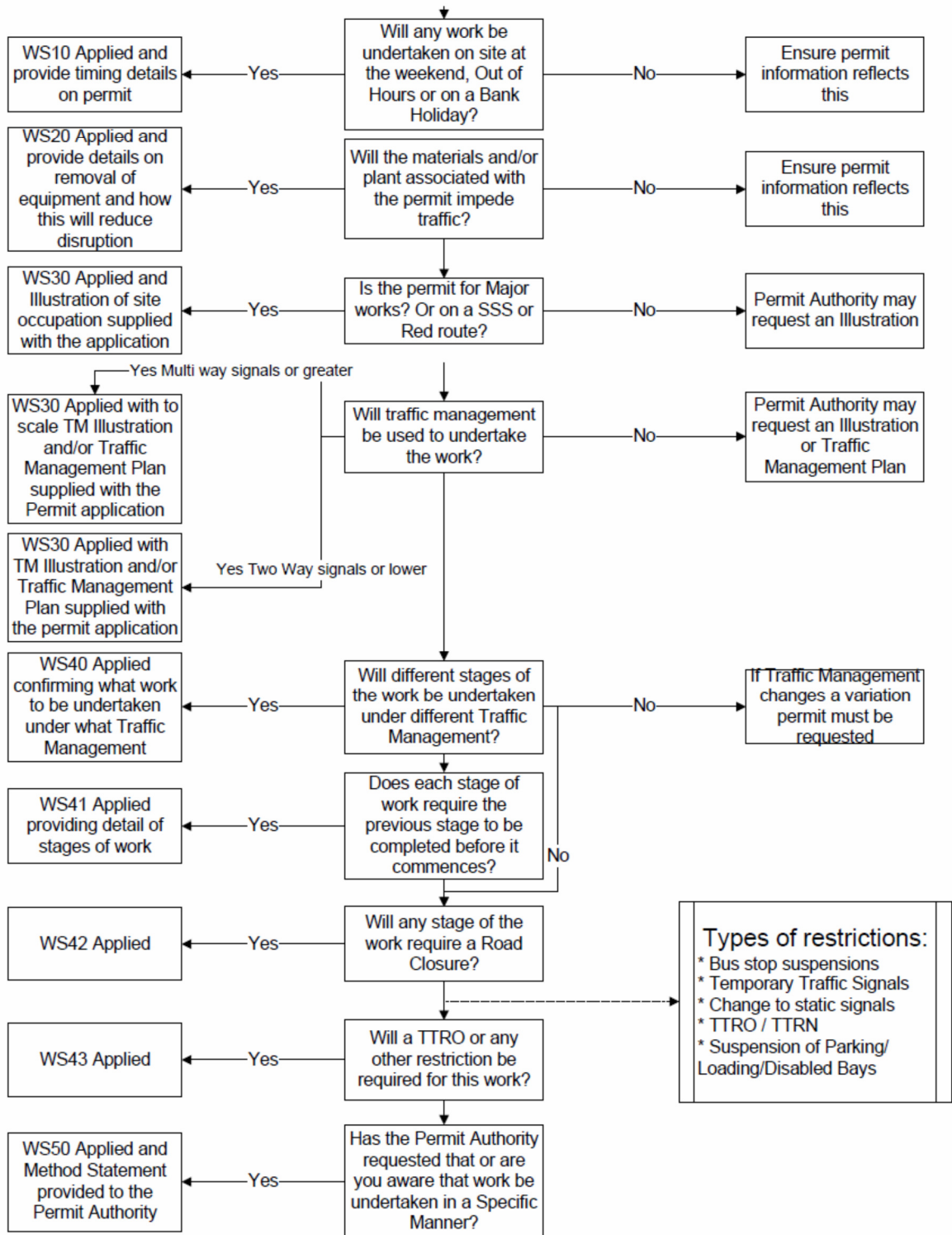
The WaSP permitting scheme is subject to conditions that must be adhered to. The conditions are imposed following the Flow Chart and Standard conditions shown on the pages following.

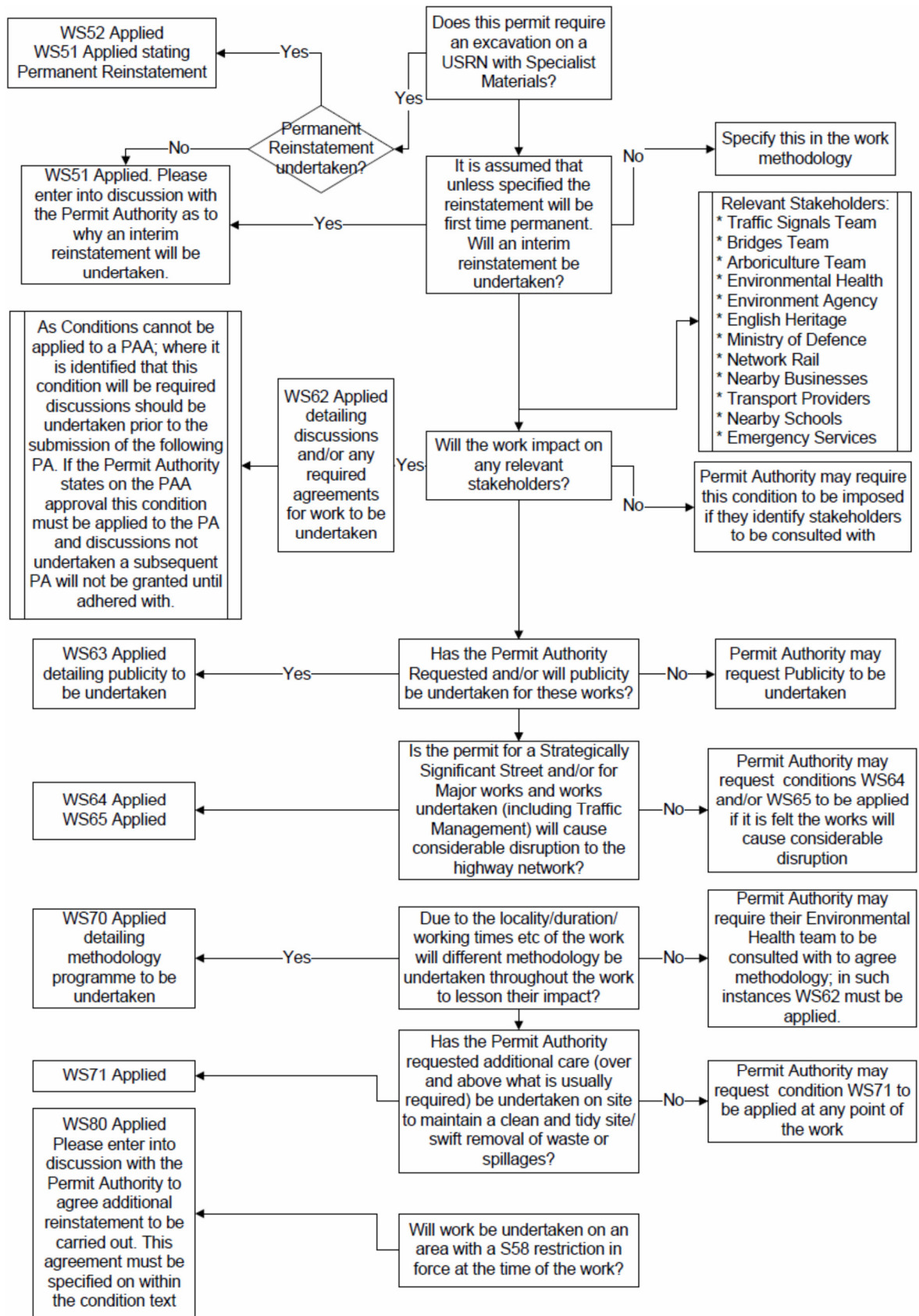
Any variation to the agreed permit requires the submission of a Permit Variation (PV) for any of the following –

- Early start
- Late completion
- Changes to permit conditions.

The following conditions Flow Chart is taken from the West and Shire Permitting scheme and is used to decide which conditions are imposed on a permit.

WaSP Utility Conditions Flow Chart





The following conditions are taken from the West and Shire Permitting scheme and show the wording and variables that may be applied to a permit, the variables that will be used for this scheme are indicated in Appendix 1/17 3) iv)

West and Shires Permit Scheme

v.1.2

17.6 APPENDIX F – Model Conditions

17.6.1.1 Refer also the WaSP scheme Operational Guidance for more details on how and when these should be applied.

Model condition number	Type of condition	Scheme reference	Condition text
EToN 1 : Date constraints			
WS1	Duration (Strategically Significant Streets)	5.4.5 (standard)	The activities hereby permitted shall not commence before the Proposed Start Date or in the case of Immediate Works the Actual Start Date contained in the application for immediate works and must end by the Estimated End Date provided on this permit. The Proposed Start Date, Actual Start Date and Estimated End Date are as defined in the current EToN specification.
WS2	Duration (Category 3 and 4 Street)	5.4.5 (standard)	The activities hereby permitted shall not commence before the Proposed Start Date and must commence within the valid starting window period or in the case of Immediate Works by the Actual Start Date contained in the application for immediate works and once the activities have commenced the activities must take no more than [x number of] days in total to be completed. The Proposed Start Date, Actual Start Date and Estimated End Date are as defined in the current EToN specification.
EToN 2 : Time constraints / EToN 3 : Out of hours works			
WS10	Specifying the days and times of day that works may take place	6.3.3	The activities hereby permitted shall only take place between [start time] and [end time] on weekdays and [start time] and [end time] on Saturdays and [start time] and [end time] on Sundays or Bank Holidays.
EToN 4 : Materials and Plant Storage			
WS20	Removal of equipment, traffic management and materials	6.3.4	It is a condition of this permit that [traffic management provisions, equipment/plant, surplus material excavated as a consequence of the activities etc.] must be removed from the public highway (within [x hours] of being excavated/by [time]each working day)
EToN 5 : Road occupation dimensions			
WS30	Area of highway occupation permitted	6.3.4 and 6.3.5	The activities hereby permitted shall occur only within the area [insert description of area or provide traffic management plan reference] including the relevant and required signing, lighting and guarding.
EToN 9 : Traffic Management Changes			

WS40	Traffic Management Arrangements	6.3.5	The works comprised in [specified part A/B] of the activities hereby permitted shall be subject to and shall occur only when the following traffic management measures are in place [or as attached in schedule..]
WS41	Works stages agreement	6.3.5	The works comprised in [specified part B] of the activities hereby permitted shall not be commenced before the works comprised in [specified part A] are completed.
WS42	Maintaining diversion signage	6.3.5 and 13.8	When the diversion route as specified and agreed as part of the illustration for this permitted activity is in operation the diversion route signage must be visible at all times and during periods when the diversion is not required, the sign faces should be covered, or removed as soon as the diversion ceases to be operational.
WS43	Temporary Traffic Restrictions and other approvals	6.3.5	The activities hereby permitted shall not commence until approval for [temporary traffic restrictions etc] has been given for the duration of the works or relevant works phase
EToN 10 : Work methodology			
WS50	Methodology for carrying out activities	6.3.6	For the activities hereby permitted on this site, as agreed, the works methodology employed will be [specified] throughout the duration of the works activity.
WS51	Interim or permanent reinstatement Work	6.3.6	For the activity hereby permitted, a [permanent /interim] reinstatement should be completed within the permit duration as discussed and agreed with the permit authority.
WS52	Specialist Materials	6.3.6 and 13.10	The activities hereby permitted may only commence once specialist materials and suitably qualified operatives [as agreed with the local authority] are available for a permanent reinstatement within the duration of this permit.
EToN 11 : Consultation and publicity			
WS60	Site board display	6.2.1 (standard)	It is a condition of this permit that the activities hereby permitted shall not be carried out unless a site information board(s) is displayed on the site at all times for the duration of the works. This must be displayed in a prominent place at all times so that it may be read easily by the public, clearly displaying the correct Permit/Linked permit or remedial permit reference number. For Immediate Works the display of the correct Permit reference number is required by 10.00am on the next working day after the works have started on site.
WS61	Emergency Traffic Management	6.2.1 and 13.9 (standard)	It is a condition of this permit for Immediate activities, that where it is identified that temporary traffic signals or a temporary traffic restriction order or notice is required, the local authority must be contacted immediately and the promoter should act upon directions provided from the authority.
WS62	Consult with specific bodies	6.3.7	The activities hereby permitted shall not commence without prior consultation and agreement with [organisation(s)] and confirmation of the agreement for works to go ahead has been supplied to the Permit Authority.

WS63	Publicity for proposed works	6.3.7	The activities hereby permitted shall not commence unless the works promoter has undertaken the following consultation or publicity [as described] .] With [as provided] as agreed with the permit authority.
WS64	Delay in starting works	6.3.7 and 5.4.5	On strategically significant streets, or a Major activity, where there is a delay in starting the activity hereby permitted the works promoter must inform the authority by 10:00am on the morning the activity is due to begin, and by 10:00am on subsequent mornings should the delay continue.
WS65	End of highway occupation	6.3.3	On a strategically significant street following completion of the permitted activities and once the highway occupation has ended, as discussed and agreed with the Permit Authority, the works promoter should inform the authority that the site is clear within 2 hours or by 10.00am the next working day in the case of an activity ending outside the normal working day.
EToN 12 : Environmental conditions			
WS70	Methodology at different times	6.3.8	For the activities hereby permitted, the following working methodology [insert method of working] shall only take place between [start time] and [end time] on weekdays and/or [start time] and [end time] on Saturdays and/or [start time] and [end time] on Sundays or Bank Holidays and must not continue beyond these times.
WS71	Site environmental requirements	6.3.8	It is a condition of this permit that the activity hereby permitted must be maintained in a clean and tidy condition and that [any spillage, material, temporary markings, waste etc] must not be left on site and must be removed from the public highway as required by the permit authority within [x hours]/ by [time] each working day.
EToN 13 : Local Conditions			
WS80	Extended reinstatement on a street subject to Section 58	Shropshire 18.2.8	The activities hereby permitted will be undertaken on a road section subject to S58 restrictions and as these works are not exempt as described in the Code of Practice for Permits, the reinstatement of these works will be permanent and require an additional reinstatement area as agreed with the Permit Authority.

10 Legal procedures

In addition the use of temporary traffic signals or a further road closure is subject to the following legal procedures -

- **Licence to use temporary traffic signals on the public highway**

The *Contractor* shall provide all of the information required to allow the *Project Manager* to submit the licence application on their behalf. Failure to do so within the timescales outlined below may result in a failure to obtain a licence. An example application form is available at - <http://shropshire.gov.uk/street-works/street-works-application-forms/apply-for-temporary-traffic-signals-on-the-highway/>

Activity	Minimum Period for processing by the <i>Project Manager</i>	Minimum period for application	Response time from receipt of application
Traffic Signal Licence Application	2 working days	10 working days	None

- **Temporary Traffic Regulation Application**

The *Contractor* shall provide notification to the *Project Manager* to allow them to undertake the Temporary Traffic Regulation application on the *Contractor's* behalf. Failure to do so within the timescales outlined below may result in a failure to obtain a road closure. An example application form is available at - <http://shropshire.gov.uk/street-works/street-works-application-forms/apply-for-a-road-closure-to-carry-out-roadworks/>

Activity	Minimum Period for processing by the <i>Project Manager</i>	Minimum period for application	Response time from receipt of application
Temporary Traffic Regulation Application	2 working days	12 weeks	None

Reference	Condition			Contractor Requirements
WS10 Time Constraints (traffic sensitive times)	Weekdays	Start Time End Time	07.30am 20.00pm	No work is permitted on weekends or Bank holidays unless agreed with the <i>Project Manager</i> .
	Sat/SUN/BH	Start Time End Time	N/A	
WS20 Materials and Plant Storage				.
WS30 Road occupation dimensions	Traffic management activities restricted to areas identified in Appendix 1/7.			<i>Contractor</i> to provide a traffic management plan including signing, lighting, guarding, pedestrian routes, extent of highway occupied, extent and position of excavation in accordance with Appendix 1/4.
WS40 Traffic Management Arrangements	Traffic and pedestrian management details to be provided for all activities			<i>Contractor</i> to provide details for managing the traffic management for the duration of the works, including arrangements and contact details for out of hours issues
WS60 Site board display	fixed and VMS signage to be erected as detailed in Appendix 1/21			<i>Contractor</i> to display required site information board for the duration of the works
WS64 Delay in starting works	Road is strategically important, any delays to be informed to permit authority. The <i>Contractor</i> is advised that due to the strategic importance of the road there is no automatic extension of the end date in the event of a late start.			<i>Contractor</i> to advise delays to permit authority by 10am on the morning the traffic management is due to commence.
WS65 End of highway occupation	Road is strategically important, completion of traffic management operations to be informed to permit authority. Delays to completion of traffic management operations to be subject to a permit variation			<i>Contractor</i> to advise completion of traffic management operations to the <i>Project Manager</i> by 10am on the morning following removal of the traffic management.
WS71 Site environmental requirements	Spillages to be removed as soon as possible after the <i>Contractor</i> becomes aware. Temporary markings to be removed before the road is opened to the public. Generators used to power temporary traffic signals will only be accepted if they are at least 200m away from a residential property or unless otherwise agreed by the <i>Project Manager</i> .			

APPENDIX 1/19

ROUTING OF VEHICLES

1 Permitted Access Routes To and From the Site

- (i) Deliveries and plant movements will need to be arranged with full regard to the local residents and businesses.
- (ii) Belmont Bank, Belmont, Crescent Lane, Quarry Place, Swan Hill, Kingsland, Claremont Hill, Priory Road and St Austin's Friars will **NOT** be used by any construction traffic.
- (iii) Access to the works shall be directly off the public highway into the area within the site boundary. No other means of access will be permitted.
- (iv) The movement of plant and machinery must be achieved in a manner that will not adversely interfere with the flow of traffic.
- (v) Incomplete works shall not be traversed by construction traffic.

2 The Use of the Permanent Works by Construction Traffic

- (i) The structures and finished pavement forming part of the Permanent Works shall only be used to carry construction traffic when measures approved by the *Project Manager* have been taken to protect them from damage.
- (ii) The *Contractor* shall submit information and supporting calculations at least 2 weeks before it is proposed to use any of the structures or finished pavement forming part of the Permanent Works to carry construction traffic outside the current Motor Vehicle (Construction and Use) Regulations. The proposals shall not be implemented by the *Contractor* without the written approval of the *Project Manager*.
- (iii) The approval of the *Project Manager* to use the Permanent Works for construction traffic shall not relieve the *Contractor* of his responsibilities under the Contract.

3 Movement of Machinery and Plant Across Public Roads

- (i) The movement of plant and machinery must be achieved in a manner that will not adversely interfere with the flow of traffic. All damage to the public highway from construction plant is to be reinstated at the *Contractor's* own expense.

4 Temporary Structures for Construction Traffic Spanning Areas Used by the Public

- (i) None

5 Opening of Permanent Works to Traffic

- (i) The concrete foundations shall have reached a minimum strength of 15N/mm² compressive strength before the completed permanent works can be used by public traffic.

APPENDIX 1/21

INFORMATION BOARDS

STATIC INFORMATION SIGNS – FOR ROAD CLOSURES

1. Static Information signs shall be erected **2 weeks** before the access date.
2. Static Information signs shall be provided as shown on Standard detail SD-100-01 reference sign ST1. 'x' height to suit 30mph single carriageway.
3. The signs shall be removed immediately on completion of all works.
4. Each sign shall be positioned in locations which will be confirmed by the *Project Manager*

VARIABLE MESSAGE SIGNS (VMS) – FOR ROAD CLOSURES

1. VMS signs shall be used to provide information and will be in place and working at least **2 weeks** before any road closure.
2. VMS shall be sited at the locations to be agreed with the *Project Manager*
3. All signs should be fully compliant with BS EN 12966-1:2005+A1:2009 and comply with DfT Traffic Advisory Leaflet 01/15, January 2015
4. The following wording (or similar) will be displayed 2 weeks before the works commence:

Road closed at
(Location)
from
(Date) to (Date)
(Time) to (Time)

Requests for additional messaging must be submitted to the *Project Manager* 2 days before its intended day of use

All messages must be displayed on a single sign aspect. It is unlawful to display messages that require the use of multiple displays (“paging”) or scrolling text.

PUBLIC INFORMATION SIGNS

1. Public information notice board style signs shall be used to provide information and will be in place through the duration of the works. The signs shall convey useful information and informative about the scheme including scheme drawings, architectural images, details of programme and works phasing, and contact details for the Public Liaison Officer and the Employer's customer service centre.
2. Public information signs shall be sited at the locations to be agreed with the *Project Manager*
3. The signs shall be removed immediately on completion of all works.

APPENDIX 1/22

PROGRESS PHOTOGRAPHS

1. The photographer is to be accompanied by the Site *Supervisor* whilst taking the following progress photographs.

Location	Type	no	Aerial/ Ground	Frequency	Remarks
Before and After photographs	Colour digital on CD	As required	Aerial	Before works access date and upon completion.	Delivered to <i>Project Manager</i> within 1 week.
Pre Start Dilapidation Survey <ul style="list-style-type: none"> • Land outside the site boundary • Land within the site boundary • Land within the highway boundary • Land that the <i>Contractor</i> has made arrangements to use as a site compound • Land used for the storage of materials, including those set aside for re-use • Permitted haul roads on the public highway including highway features and highway boundary features such as hedgerows and fences 	Colour digital on CD	As required	ground	On the Access Date	Delivered to <i>Project Manager</i> within 1 week
Progress Photographs The <i>Contractor</i> shall take regular photographic evidence throughout the week of all construction activities and in response to any complaints from the public, landowners, local authority and the police	Colour digital on CD	As required	ground	Weekly	Delivered to <i>Project Manager</i> within 1 week
As Built Photographs <ul style="list-style-type: none"> • Land outside the site boundary • Land within the site boundary • Land within the highway boundary • Land that the <i>Contractor</i> has made arrangements to use as a site compound • Land used for the storage of materials, including those set aside for re-use 	Colour digital on CD	As required	ground	Completion	Delivered to <i>Project Manager</i> within 1 week

APPENDIX 1/23

RISKS TO HEALTH AND SAFETY

General Risks

1. The *Contractor* shall comply with the requirements of the following Pollution Prevention Guidelines (PPG) published by the Environment Agency:
 - PPG No. 2 'Above Ground Oil Storage Tanks'
 - PPG No. 5 'Works and maintenance in or near water'
 - PPG No. 6 'Working at Construction and Demolition Sites'
2. The *Contractor* must check whether any substance used is hazardous and if it is he must comply with all the recommended safety procedures for dealing with that substance.
3. The *Contractor* shall undertake noise and vibration monitoring in accordance with Appendix 1/9.

APPENDIX 2/2

Filling in of trenches and pipes

- (i) Disused soil and surface water drains, sewers, cables and ducts together with any bed or haunch or surround within 0.5m of formation level shall be removed and over 0.5m below formation shall be left unless otherwise described. The ends of existing drains and sewers no longer required because of alterations to the drainage layout shall be sealed in accordance with Clause 506.
- (ii) The *Contractor*, subject to any instructions or contrary directions in accordance with the contract, shall take all measures required by any Statutory Undertaker, the management of other publicly owned services, or owners of privately owned services or supplies, for disconnection and proper sealing off of all redundant drains, services and supplies.
- (iii) All materials arising from site clearance which are not required, or unacceptable for use in the permanent works and not included in contract specific Appendix 2/3, shall become the property of the *Contractor* and shall be disposed of by him. Materials included in contract specific Appendix 2/3 shall be carefully dismantled, taken up or taken down, cleaned and retained for re-use, stacked, labelled and protected or loaded, and transported to store as described in contract specific Appendix 2/3 and items damaged in this operation shall be replaced. All replacements shall be of equivalent quality to the original materials. When required in contract specific Appendix 2/3, voids left by items that have been removed shall be backfilled immediately in accordance with the appropriate Clauses in Series 600.

APPENDIX 2/3

Retention of Material Arising from Site Clearance

- (i) Shropshire Council’s “Environmental Charter” stresses the importance of re-cycling materials wherever possible. Therefore, they encourage disposal/reuse to be undertaken in an environmentally sensitive manner. The *Project Manager* will require written confirmation that the recipients of all road planings have the appropriate certificates to receive the material.

Take up or down and remove to tip off site

- (i) All material shall be taken to an appropriately Permitted Waste Facility off site (Clause 670 AR)
- (ii) The *Contractor* will be required to instigate a transfer note system to monitor the disposal off site of all classes of surplus material to the approval of the *Project Manager*. The transfer note system shall comply with the Environmental Protection (Duty of Care) Regulations 1991 and the Waste Management Licensing Regulations 1994 as amended. For the avoidance of doubt, the transfer note system shall include a ticket for each individual load of material removed from the site. The *Contractor* must maintain this system throughout the duration of the Works. The *Contractor* shall allow 14 days for the *Project Manager* to approve the system proposed. Full supporting documentation should also be provided to demonstrate that the *Contractor* has the necessary approval and consent to dispose of surplus material which will include planning permission and licenses from the relevant local authority and Waste Regulation Authority. The *Project Manager* may request further information to satisfy himself that such approval has been granted. 14 days shall be allowed for the *Project Manager* to review this documentation and no disposal from the site shall take place until written confirmation is provided by the *Project Manager*.

Take up and remove to store off site.

The *Employer’s* store is:-
 Shropshire Council Depot
 Nobold Lane
 Shrewsbury
 SY5 8NP

The store is approximately 3 miles from the site.

Take to store and re-use.

The offsite site compound.

Table 2/3/1: Retention of Materials Arising From Site Clearance

Item	Description	Location	Dispose, Store or Re-Use	Requirements
Pedestrian guardrail	Steel pedestrian guardrail	Murivance	Dispose	Take up and remove for disposal at licenced tip.
Gully grating and frame	D400	All 3 sites	Dispose	Take up and remove for disposal at licenced tip.
Gully grating and frame	D400	All 3 sites	Re-use	Clear off old mortar/bonding material and set aside for reuse.
Drainage pipe	75Ø pipe	Murivance	Dispose	Take up and remove for disposal at licenced tip.

Chamber cover and frame	Not exceeding 0.5m ²	All 3 sites	Re-use	Take up and store in site compound until required.
Chamber cover and frame	Exceeding 0.5m ²	Town Walls & Belmont. Claremont bank.	Re-use	Take up and store in site compound until required.
Kerbs and Channels	Concrete kerb	Claremont Bank	Dispose	Take up and remove for disposal at licenced tip.
Kerbs and Channels	Dish Channel & Drainage Channel.	All 3 sites	Dispose	Take up and remove for disposal at licenced tip.
Kerbs and Channels	Yorkstone kerb and Channels	All 3 sites	Store	Take up, clean off redundant bonding / laying course material, palletise and wrap stacked units in a suitable plastic protective material.
Kerbs and Channels	Kerb Inlet	Town Walls & Belmont	Dispose	Take up and remove for disposal at licenced tip.
Yorkstone paving flags	Pavings flag units, various sizes	All 3 sites	Store	Take up, clean off redundant bonding / laying course material, palletise and wrap stacked paving in a suitable plastic protective material.
Yorkstone paving flags	Pavings flag units, various sizes	Claremont Bank	Re-use	Note and catalogue existing laying pattern, take up, clean off redundant bonding / laying course material and store in compound until required for reuse.
Yorkstone sett paving	150mm wide setts	Murivance.	Store	Take up, clean off redundant bonding / laying course material, palletise and wrap stacked paving in a suitable plastic protective material.
Concrete block paving		Murivance. Claremont Bank.	Dispose	Take up and remove for disposal at licenced tip.
Tactile Paving, concrete, clay	Various Sizes	Murivance. Claremont Bank.	Dispose	Take up and remove for disposal at licenced tip.
Bin	Steel litter Bin	Murivance	Re-use	Remove redundant fasteners/fixings and store in site compound until required.
Steel/iron Bollard	Decorative bollard	Murivance	Re-use	Take up, clean off redundant foundation material and store in site compound until

				required.
Steel/iron Bollard	Decorative bollard	Murivance, Claremont Bank	Store	Take up, clean off redundant foundation material. palletise and wrap stacked paving in a suitable plastic protective material.
Traffic Sign and post	Various sizes	All 3 sites	Dispose	Take up or down and remove for disposal at licenced tip. Illuminated signs to be disconnected and made safe prior to removal.
Traffic sign	Various size	All 3 sites	Re-use	Take down and store in site compound until required, to be cleaned prior to re-erection at new location.
Tourist direction sign	Cast iron sign	All 3 sites	Store	Clean off redundant foundation material, palletise and wrap in suitable plastic protective material.
Recycled rubber speed cushion	Surface-mounted speed cushion, 2m x 1.65m 170kg	Belmont	Re-use	Remove anchor bolts, clean off any redundant bonding material and store in site compound until required.

Redundant Lighting Columns

- (i) Where carriageways or footpaths remain open as public highways, no lighting may be disconnected without provision of an equivalent system of lighting. This may be achieved by the commissioning of the new lighting scheme or provision of a temporary lighting scheme, see Appendix 14/3.
- (ii) Care must be taken in disposing of old lighting equipment, older lanterns could contain a small amount of asbestos. Lamps used in street lighting do contain small amounts of potentially hazardous substances such as metallic sodium and mercury. Danger can be avoided effectively by careful handling to prevent breakage and by following well established safety procedures for the disposal of used lamps. Where significant quantities may be involved, the local Waste Disposal Officer should be consulted.
- (iii) Lighting columns to be taken down are as detailed on the contract drawings and scheduled in this Appendix. The Contractor shall liaise with the Distribution Network Operator and the Overseeing Organisation regarding programming the disconnection of feeder pillars or columns which are to be removed. Orders for disconnection shall be the responsibility of the Contractor. The Contractor shall be aware of overhead power lines and comply with working clearances in G39/1 during the removal of lighting columns.

Redundant Cables

- (iv) Existing underground cables for the circuits to existing columns listed below shall be safely disconnected, cut out and removed from Site and disposed of. Existing ground shall be reinstated after removal of cables.

Removal Or Alterations To Existing Signs

- (v) Where applicable and as detailed in sign schedule in Appendix 12/1 together with any associated redundant cabling. Existing ground shall be reinstated after removal of signs and cables.

Table 2/1/1: List of Apparatus to be Removed

Description	Location	Requirements
Existing lighting columns, lit signs and road lighting power cable as detailed for removal on the contract drawings	Refer to the contract drawings	Reinstate upon completion

APPENDIX 2/5

HAZARDOUS MATERIALS

1. The *Contractor* must refer to COSHH statements regarding any hazardous substances that he proposes to use. The use of chemicals should be limited to the need for a base seal to the feeder pillars.
2. Health risk from dust generated in slot cutting works and burns from hot substances used
The *Contractor* is to ensure that:
 - (i) Risk Assessments, Method Statements, training and PPE are in place
 - (ii) The Manufacturer's instructions and the COSHH regulations are followed
 - (iii) Suitably competent personnel, CSCS certified, are employed to carry out works.
3. It is unclear from currently available information of any risks associated with (chambers and ducts) material containing Asbestos. When encountered, it is generally in the form of Asbestos-Cement. The risk of inhaling fibres is low unless the material is damaged or disturbed.
If the *Contractor* suspects Asbestos containing material, competent advice must be sought immediately and dealt with accordingly.
4. Care must be taken in disposing of old lighting equipment, older lanterns could contain a small amount of asbestos. Lamps used in street lighting do contain small amounts of potentially hazardous substances such as metallic sodium and mercury. Danger can be avoided effectively by careful handling to prevent breakage and by following well established safety procedures for the disposal of used lamps. Where significant quantities may be involved, the local Waste Disposal Officer should be consulted.

APPENDIX 5/1

Drainage requirements

1. General

- (i) The existing drainage at Claremont Bank currently consists of a limited surface water drainage system which is linear to the carriageway alignment.
- (ii) The surface water system outfalls via an existing STW combined sewer.
- (iii) In order to develop the drainage system to suit the proposed carriageway at Claremont Bank, the drainage system shall be repositioned utilizing as much of the existing drainage system as possible.
- (iv) In the area of footway widening, linear and horizontal drainage systems shall be used to intercept the surface water runoff off from the footway. Please refer to the drawings as specified in Appendix 0/4 for full details of the construction of the proposed drainage system at Claremont Bank.
- (v) The drainage at the Murivance site will mainly utilise the existing drainage system with the addition of new gullies and a bio retention area.
- (vi) The Town Walls site will be drained using existing gullies together with additional new gullies and York stone drainage channels in the footway.

2. Bedding Combinations: Permitted Alternatives

- (i) The pipes for drainage are to be selected from the alternatives in Table 5/1 of MCHW1.
- (ii) Sampling and testing is to be carried out in accordance with the frequencies and requirements of Appendix 1/5.
- (iii) All carrier pipes to have Type Z concrete bed and surround as detailed in HCD-F1.

3. Backfill Combinations: Permitted Alternatives

- (i) All trenches to be backfilled using foam concrete to formation level or proposed surfacing/paving reinstatement.

4. Pipe Characteristics for Solid Wall Thermoplastic Pipes

- (i) Plastic pipes shall have a minimum ring stiffness of 6 kN/m² when tested in accordance with BS EN 9969.
- (ii) Creep Ratio shall be less than 4 for Polypropylene or Polyethylene and less than 2.5 for UPVC when tested in accordance with BS EN 9967.
- (iii) Impact Resistance
- (iv) Plastic pipes shall have a resistance to impact complying with tests to EN1411.

5. Structured Wall Thermoplastic Pipes

- (i) To comply with MCHW1 Cl 518.
- (ii) Contractor shall complete App 5/7 for the range of pipes and fittings prior to commencement of the Works.

6. Jointing of Pipes

- (i) Joints in surface water drains shall be watertight.
- (ii) Watertight joints shall comply with the appropriate British Standards, the manufacturer's instructions and the following:
- (iii) Rigid joints shall be used only where permitted in Appendix 5/1. Spigots and sockets of rigid joints may be caulked with tarred rope yarn or equivalent and the socket completely filled with mortar designation (i)
- (iv) Complying with Clause 2404, excluding lime; a fillet of mortar being worked around the socket extending for a length of not less than 50 mm from the face of the socket. Iron pipes with open sockets shall have rigid joints caulked with lead wool or equivalent.
- (v) Joints in PVC-U pipes shall not be made with plastic solvent.
- (vi) Flexible mechanical joints may be used with surface water pipes complying with BS 65.
- (vii) Joints for cast iron pipes to BS 437 shall comply with BS EN 877.
- (viii) Joints in thermoplastics structured wall pipe shall comply with Clause 518.
- (ix) Sections of pipework required to have watertight joints shall be tested for satisfactory performance.

7. Connecting to existing drains, chambers and channels.

- (i) Where described in Appendix 5/1, existing drains shall be extended, connected and jointed to new drains, chambers or channels. All such connections shall be made during the construction of the new drain or other work and their positions recorded by the Contractor who shall hand to the Project Manager, a copy of the record of the connections made the previous day.
Where pipe connections are made to existing brick, concrete or stone drains, chambers or channels, the pipes shall be well and tightly built into the concrete, brick or masonry work and be so placed as to discharge at an angle not greater than 60° to the direction of flow of the drain or channel. The end of the pipe to be carefully cut to the necessary angle.
Where the connections are between pipe drains, special connecting pipes shall be laid and jointed as described in Appendix 5/1.
- (ii) Before entering or breaking into an existing sewer or drain, the Contractor shall give notice of his intention to do so, to the authority responsible for the pipeline to which the connection is to be made.
- (iii) Existing drains no longer required shall be sealed with ST2 concrete, in compliance with Clause 2602, or removed and replaced with general fill material complying with Clause 601 and Table 6/1 and compacted in compliance with Clause 612, or grouted with a 1:10, cement: pfa mix.

8. Pipe Junctions

- (i) Saddles may only be used to form junctions for gully connections to existing drains, and shall be fitted to mechanically sawn circular holes in the existing pipe.
- (ii) Pipes onto which pipes are to be saddled should be cut by a method to provide a clean profile without splitting or fracturing the pipe wall. Saddle connections are to be headed in quick setting mortar designation (i) to Clause 2404 and a mortar fillet to give a cover of at least 50mm to the base of the saddle. The complete saddle and connection to be surrounded in ST1 concrete.

- (iii) Connections to Severn Trent Sewers and chambers to comply with STW requirements.
- (iv) All saddled junctions onto existing pipe runs to be inspected internally with CCTV.

9. Sealing of existing drains

- (i) Existing gully connections are to be removed as far as is reasonably practicable. Where it is not possible to remove, they are to be decommissioned and plugged with ST2 concrete and left in place. Records of the location of the pipe and plug to be recorded on the as-built drawings.

10. Covers and gratings on Chambers and Gullies

- (i) Proposed chambers shall be as detailed on drawing 1070997-T-08-502 (Chamber details).
- (ii) All gully gratings and frames, together with chamber covers shall be Ductile D400 BS EN 124 (Parts 1 to 6 inclusive as appropriate) sizes as referred to in the contract drawings listed in Appendix 1/4 and have a minimum depth of 150mm for gratings, covers and frames. **All frames are to be suitable to allow full depth of adjacent paving to continue up to the main opening (grating).**
- (iii) Covers shall have three point suspension non-rock stability and shall be rigid within the frame so as not to rattle and produce excessive noise pollution.

11. Raising or Lowering Covers and Gratings on chambers and Gullies

- (i) Bedding materials will comply with clause 507.16 (Ref Appendix 0/2)
- (ii) Bedding materials should be laid strictly in accordance with manufacturer's recommendations. Materials selected for use in in different temperature conditions must be selected as appropriate to suit the conditions at the time of mixing and application. Thickness must be within the range stipulated by the manufacturer.
- (iii) A period of at least 2 hours must lapse between completion of resin bedding and the commencement of reinstatement or final surfacing works.
- (iv) All ironworks within the carriageway, shall be adjusted to their final level after laying the regulating or binder course but before the final surface layer. The contractor must allow adequate time is allowed in their programme for this operation.
- (v) Packing materials may be incorporated within the bedding material provided that this is in accordance with recommendations of the mortar manufacturer and the requirements of the MCDHW 1 AND 2.
- (vi) The use of materials such as quarry tiles and slates is strictly prohibited.

12. Drainage Channel Block

To be ACO Multi Drain M100D Channel Footpath Drainage block including kerb outlet or similar approved laid strictly in accordance with the manufacturer's instructions.

13. Bio retention area

- (i) Bio retention area to be excavated and formed and lined as detailed on drawing number 1070997-T-10-502 and under drained by PVC Perforated pipe as HCD – F1 outfalling to new gully within the retention area.
- (ii) All kerbs as per drawing 1070997-T-10-1101
- (iii) The infill above the pipe bedding and surround shall be multi-purpose topsoil of a sandy loam textured classification approximately 0.5m metres deep. Topsoil Infill to include slow release plant nutrients as per BS3882.
- (iv) Planting of the area to be as detailed on drawing 1070997- T-10.

14. Geo-membrane

- (i) The Geo-membrane referred to within the design is Charcon Geomembrane provided by Aggregate industries. Any proposal for a different propriety system must be shown to be equivalent in every aspect
- (ii) The Geo-membrane material to the Bio retention area shall be laid across the entire inside of the bio retention basin to the underside of the formation level and sealed. No water will be able to percolate through to the existing ground.
- (iii) The Geomembrane material must be laid strictly in accordance to the manufacturer's specification

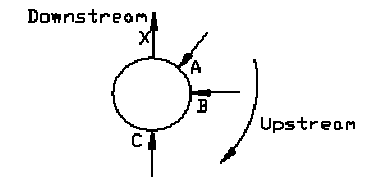
15. Cleansing of drainage features and CCTV

- (i) On completion of the works each and every gully, inspection chamber and manhole within the site is to be cleansed and emptied with a lorry mounted mechanical gully emptier, as specified in Clause 520.
- (ii) The connecting pipework from each gully to the carrier drain is to be jetted and fully cleaned. Water must be able to flow freely from the gully pot into the carrier drain.
- (iii) The entire slot drain system length is to be jetted and fully cleaned. Water must be able to flow freely from the first inspection chamber to the specified outfall.
- (iv) All drainage channel blocks are to be emptied and cleaned up to the outfall.
- (v) Any debris deposited on the carriageway is to be cleaned away immediately on completion of the gully cleaning operations.

5/2 Schedule of surface water carrier drains

Table 5.2 – Schedule of surface water carrier drains

Drainage Schedule – Claremont Bank													Comments
Chamber Ref	Cover Type /Rating / Size	Chamber Diameter (mm)	Proposed Cover Level (m)	Invert Level (m)	Depth (m) to lowest IL	Pipe Connections						Co-ordinates eastings and northings	
						Ref	Upstream MH Ref	Downstream MH Ref	Pipe Dia. mm	IL	Gradient		Trench Type
G1	Grating / D400 / 450mm x 450mm X 150MM	500	53.750	52.450	1.300	X	G1	G1A	150-	53.000	1:20	Z	Proposed Gully in carriageway. See drawing 1070997-T-06-501 (Drainage Plan).
						C	N/A	G1	N/A	N/A	N/A		
G1A	Grating / D400 / 450mm x 450mm x 150mm	500	53.750	52.450	1.300	X	G1A	C1	150	52.800	1:20	Z	Proposed gully in carriageway to be connected to existing catch pit 'C1' via 150dia PVC drain.
						C	G1	G1A	150-	52.900	1:20	Z	
C1	Solid / D400 / 450mm x 450mm x 150mm	500	Unknown	Depth exceeds 3 metres.	Unknown	A	G1A	C1	150-	52.700	1:26	Z	Existing catch pit.'C1' incorporating proposed inlet from proposed gully 'G' in carriageway and existing inlet from catch pit C2. Outfall to remain as existing. Please note that chamber C1 is buried and there is no evidence of this at surface level. Refer to CCTV and survey for approximate location.
						C	C2	C1	100-	Unconfirmed (Chamber depth greater than 3M)	N/A		
C2	Solid/ D400 / 450mm x 450mm X 150mm	500	55.000	53.800	1.200	X	C2	C1	100	54.450	N/A		Existing chamber C2 to remain as existing with the replacement of cover and frame only. New connection from proposed gully 'G4' via 150mm dia PVC drain.
						C	G4	C2	150	54.500	1:18		



G4	Grating / D400 / 450mm x 450mm x 150mm	500	55.400	54.100	1.300	X	G4	C2	150-	54.550	1:18	Z	Proposed gully in carriageway.
						C	G2	G4	150-	54.600	1:20		
G2	Grating / D400 / 450mm x 450mm x 150mm	500	55.200	53.900	1.300	X	C2	G4	150	54.700	1:20		Proposed gully in carriageway to connect to proposed gully G4. Connect to be made via 150mm dia PVC drain.
						C	N/A	N/A	-N/A	N/A	N/A-		
C4	Solid/ D400/ 450mm x 450mm x 150mm	500	59.450	58.550	0.900	X	C4	STW	100	58.900	N/A		Proposed catch pit 'C4' to replace existing gully. C4 to include new Inlet from proposed slot drain and inlet from proposed gully 'G3'. Existing outfall to remain as existing which outfall to existing combined Severn Trent Water sewer. .
						C	C	C4	150	59.100	1:129		
						B	G3	C4	150	59.100	1:161		
G3	Grating / D400 / 450mm x 450mm x 150mm	500	61.250	59.950	1.300	X	G3	C4	150	60.500	1:161		Proposed gully 'G3' in carriageway to connect into chamber 'C4'.
						C	N/A	N/A	N/A	N/A	N/A		
C	Solid / D400 / 450mm x 450mm x 150mm	500	61.250	60.650	0.600	X	C	C4	150	60.900	1:129		Proposed chamber to intercept proposed gully in carriageway.
						B	G7	C	150-	60.950	1:250		
						C	IC1	C	150	60.900	1:95		
G7	Grating / D400 / 450mm x 450mm x 150mm	500	61.300	60.000	1.300	X	G7	C	150	60.550	1:27		Proposed gully to outfall via chamber 'C'.

IC1	Solid / D400 / 450mm x 450mm x 150mm	150	62.500	61.150	0.600	X	IC1	C	150	62.200	1:95			Proposed chamber linking proposed storm water and slot drain. Non-return valve to be incorporated on inlet from storm water drain.
						C	G8	IC1	150	61.750				Slot drain to proposed chamber in footway which will link back onto the storm water system.
G8	Grating / D400 / 450mm x 450mm x 150mm	150	63.500	62.150	1.350	X	G8	IC1	150	62.750				Proposed gully to take flows at the back of the proposed layby.

5/6 Linear Drainage Channel Requirements

- (i) The location of the linear drainage channel is shown on the following drawings:-
 - 1070997-T-08-501
 - 1070997-T-11-501
- (ii) The details of the proposed form of linear drainage system is shown on drawing:
 - 1070997-T-08-502
- (iii) The linear drainage system is located within a pedestrianised area. The surfacing proposals have, on the whole, the same loading. Any proposal for a different propriety system to the system shown on the drawings must be shown to be equivalent in every aspect. The system indicated on the drawings is Gatic 'Cast Slot with Treadsafe' as supplied by Gatic (www.gatic.com).
- (iv) The proposed linear drainage system will be in accordance with BS EN 1433: 2002 and have a load class of C250 to EN1433.
- (v) Gratings shall have a minimum water inlet aperture area of 25,731 mm²/m.
- (vi) The drainage units shall be set on a concrete bed and backfilled as specified by the manufacturer to achieve a loading category of C250.
- (vii) Fittings which are required to provide access for cleaning purposes are located at the beginning of the linear drainage system. See drawing 1070997-T-08-501 (Drainage plan) for the proposed inspection chamber location. The location indicated may be adjusted to suit paving layout and/or length of channel units as required.

5/7 Thermoplastics structural wall pipes and fittings

1. Information to be provided by the contractor

- (i) The Contractor shall provide the following information, in accordance with sub-Clause 518.2, for the range of pipes and fittings (to be verified by the Certification body - see sub-Clause 518.15):
- (ii) Technical drawings showing dimensions and tolerances including sealing rings and weight per metre, together with properties, as specified in sub-Clauses 518.3 and 518.5.
- (iii) Material specification, as required in sub-clause 518.2:

Table 5/7.1: Unplasticised polyvinyl-chloride (PVC-U)

Property	Test Method Reference	Specification
Tensile Properties	BS EN ISO 6259 BS EN ISO 527-1	
Vicat	BS EN 727	
Longitudinal Reversion	BS EN 743	
K-value	BS EN 922	
PVC content	BS EN 1905	
Density	BS EN ISO 1183-3 ISO 4451	
Melt Flow Rate	ISO 4440	
Heat Reversion	ISO 12091	
Effects of heating (injection moulded fittings only)	BS EN 763	

Table 5/7.2: Polyethylene (PE)

Property	Test Method Reference	Specification
Tensile Properties	BS EN ISO 6259 BS EN ISO 527-1	
Oxygen induction time	BS EN 728	
Melt flow rate	BS EN ISO 1133	
Density	BS EN ISO 1183-3 ISO 4451	
Heat Reversion	ISO 12091	
Effects of heating (injection moulded fittings only)	BS EN 763	

Table 5/7.3: Polypropylene (PP)

Property	Test Method Reference	Specification
Tensile Properties	BS EN ISO 6259 BS EN ISO 527-1	
Oxygen induction time	BS EN 728	
Melt flow rate	BS EN ISO 1133	
Density	BS EN ISO 1183-3 ISO 4451	
Heat Reversion	ISO 12091	

Effects of heating (injection moulded fittings only)	BS EN 763	
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APPENDIX 6/1

REQUIREMENTS FOR ACCEPTABILITY AND TESTING ETC. OF EARTHWORKS MATERIALS

1. Acceptable limits for the fills in Table 6/1 appropriate to the Contract in accordance with clauses 602.1 and 608.1.

APPENDIX 6/2

REQUIREMENTS FOR DEALING WITH CLASS U1B AND CLASS U2 UNACCEPTABLE MATERIALS

1. Pre-agreed requirements of the environmental authority for disposal including specific sites. [602.18]:
 - (i) The *Contractor* is to identify a suitable facility for disposal of road-tar planings and provide documentation of such to the Overseeing Organisation.
2. List of known hazardous materials likely to be encountered. [602.5 and 602.18]:
3. Methods of excavation, precautions and requirements for handling. [602.5 and 602.18]:
 - (i) Cold Milling (Planing) operations are to be planned and executed in a manner that separates road-tar contaminated planings from 'clean' planings.
 - (ii) Contaminated planings are to be disposed of to a tip licensed for the purpose.
 - (iii) Copies of Hazardous Waste Consignment Notes for the disposal of road-tar contaminated planings are to be provided to the *Project Manager*.
 - (iv) Tar contaminated material can be used on site, if the *Contractor* complies with the requirements of the Environment Agency's Regulatory position statement 075, 'The movement and use of treated waste containing coal tar'
 - (v) If doubt exists PAK marker shall be used to identify if tar may be present. If further analysis is required, laboratory testing should be carried out in line with the ADEPT Guidance Note 'Managing Reclaimed Asphalt – Highways and Pavements' 2016.

APPENDIX 7/1

Schedule 1: Permitted Pavement Options			
Drawing Ref.	Area	General Requirements	Permitted Pavement Option
1070997-T-08-701	Carriageway	Schedule 2	A1
1070997-T-08-701	Raised Table	Schedule 2	A2
1070997-T-08-701	Ramp	Schedule 2	A3
1070997-T-08-1101/ 1070997-T-10-1101	PCD B/D	Schedule 2	A4
1070997-T-10-701/ 1070997-T-11-701	Carriageway	Schedule 2	A5
1070997-T-10-701/ 1070997-T-11-701	CWay (Coloured)	Schedule 2	A6

Schedule 2: General Requirements		
Grid for checking surface levels of pavement courses [702.4]:	Longitudinal dimension:	5 m
	Transverse dimension:	2 m
All asphalt materials conforming to BS EN 13108 shall be transported, laid, compacted and tested in accordance with BS 594987: 2015.		
The materials selected in Schedule 3 shall comply with the material Depths & Specifications in Schedules 5.		

Schedule 3: Permitted Construction Materials			
Pavement Option	Pavement Layer		
	Surface Course	Binder Course	Total Thickness
A1:			
Material Ref.	SURF1	-	
Thickness	40mm	-	40mm
A2:			
Material Ref.	SURF1 + CA1	-	
Thickness	60mm	-	60mm
A3:			
Material Ref.	SURF1	-	
Thickness	60mm	-	60mm
A4:			
Material Ref.	-	BIN1	
Thickness	-	120mm	120mm
A5:			
Material Ref.	SURF1	BIN1	
Thickness	40mm	60mm	100mm
A6:			
Material Ref.	SURF1 + CA1	BIN1	
Thickness	40mm	60mm	100mm

Schedule 4: General Requirements for Construction Materials	
Clause	Requirement
801.7	All sub-base material shall comply with sub-Clause 801.7
802.4	Material of compacted thickness greater than 100mm shall be laid in two or more layers.
903.27	A minimum PSV_{50} is required for a temporary running surface.

Schedule 5: Specifications for Construction Materials			
Material Ref.	CI No.	Description	Requirement
SURF 1	971AR	SMA Surface Course 10mm	See details below
CA1	924	High Friction Surfacing	See details below
BIN 1	906	Dense asphalt concrete binder course. (Recipe Mixture)	<p>Mixture Designation: AC 20 dense bin 40/60 rec</p> <p>Nominal Layer Thickness: 60mm or 90mm or 200mm as stated in Schedule 3</p> <p>BS EN 13108-1 and PD 6691:2015</p> <p>Void content at refusal shall be monitored in the permanent works, see Clause 971AR</p> <p>Resistance to permanent deformation classification: 1</p> <p>Coarse aggregate: Types (a), (c) or (d) to Annex B.2.4.1.1 of PD 6691:2015</p> <p>Fine aggregate: Crushed coarse aggregate material as permitted above or type (b) or a mixture of both to Annex B.2.4.2.1 of PD 6691:2015</p> <p>Limestone aggregate shall not be used.</p>

SURF 1. Clause 971AR Stone Mastic Asphalt Surface Course 10mm

Coarse Aggregate:	Nominal size: 0/10mm
	Minimum PSV 60
	Maximum AAV: See Cl 971AR.
Surface texture required (921):	No requirements
Wheel-tracking test temperature:	See Cl 971AR

Wheel-tracking test temperature, rate and rut depth (to BS EN 12697)

Wheel-tracking levels (see Note 2)

Level

Wheel tracking requirements

	Test Temperature C	Rate (mm/hr) Mean/[max]	Rut depth (mm) Mean / [max]
3	60	5.0/[7.5]	7.0 / [10.5]

‘Mean’ is the mean result of 6 consecutive results and ‘max’ is the maximum value measured on a single core.

Surfacing:	Surface Course
Clause:	971AR
Material:	Stone Mastic Asphalt Surface Course 10 mm
Binder:	PMB
Thickness:	40mm
Special Requirements:	
Minimum target binder content:	See CI 971AR
Binder volume:	See CI 971AR
Binder drainage composition:	See CI 971AR
Laboratory air voids content:	See CI 971AR
Noise Level:	No requirement
Surface texture	No requirement

Notes:

1. CE Type Test Data shall be forwarded to the *Project Manager* for approval, at least 10 days before laying is due to commence, clearly stating the proposed source of supply. This should be taken into account when programming works.

CA1. Clause 924 Type 1 High Friction Surfacing System

Function: The Prepared substrate shall be coated with a liquid resin binder system dressed with abrasion resistant aggregate to provide a high friction finish. The system shall have good resistance to wear and shall be capable of being maintained in the long-term future without removal of the existing layers. The system shall be resistant to spillages of petrol, de-icing salts, engine oil, battery acid and anti-freeze.

The abrasion resistant aggregate used shall be:

- **Type: ...Calcined Bauxite.....**
- **Size:1mm to 3mm..... aggregate required**
- **Colour:Buff.....**
- **PSV (Polished Stone Value):65.....**

Only graded clean aggregate that has been washed and dried shall be used. For contracts conducted under the HAPAS HFS Approval Scheme, only aggregates approved by the BBA under the scheme may be used.

Technical Abrasion Resistance/Wheel Tracking Test (BSDD184)

Performance: no rutting, fretting or polishing after 60,000 passes.

Tensile Adhesion (BS EN 24624:1993)

Concrete substrate > 1.5MPa

Steel substrate > 2.0MPa

Asphalt substrate > 0.5MPa

Substrate Preparation of the substrate should be in accordance with the manufacturer's instructions. Voids

Preparation: within asphalt substrates should be filled using a rapid cure filler material which is compatible with the resin surfacing system and suitable for application to a feathered edge. Both materials shall be produced by the same manufacturer.

Application: The system shall contain no isocyanates or sensitising materials and should present no risk to the general public who may be in close proximity to the works.

The system shall be confirmed by the manufacturer as suitable for application onto new asphalt and macadam surfaces that are 28 days old or new concrete that is 14 days old.

All components/layers of the system shall have an application temperature range of 0°C to 30°C to allow winter working/maintenance.

All components of the system shall be unaffected by rain 20 minutes after application at 0°C.

Minimum theoretical binder coverage rates is 1.3 kg/m² on a flat, closed substrate.

Uneven substrates or those with a large percentage of surface voids will require more material, typically 1.8 kg/m². Alternatively, the substrate may be pre-treated with a compatible void filler/levelling coat.

Aggregate should be broadcast to refusal. When the resin has cured any excess aggregate should be removed. Contaminated aggregate should not be re-used.

After application of the completed system or following any repairs the system shall be able to receive vehicular traffic after 1 hour (at 15°C).

Practical In order to substantiate durability the system shall have similar

Performance: applications in the UK that are available for inspection by the client's representative.

Quality All components of the system shall be supplied by a company that operates a quality system

Assurance: registered to ISO 9001:2008

All materials must be supplied to site in unopened packaging, with batch numbers marked and corresponding manufacturer's certificates of conformity, and must be used within the products' shelf life or 'use by date'.

Only contractors that are trained and authorised by the manufacturer may apply the system.

For contracts being carried out under the HAPAS HFS Approval Scheme only Contractors who have been approved under the HAPAS / BBA Assessment Scheme For Installers of High-Friction Surfacing for Highways may apply the system.

Site conditions should be regularly monitored to ensure the substrate is above the dew point during application.

The adhesion of the system to the substrate must be assessed prior to application by random spot testing to BS EN 24624:1993. At least one test should be carried out per 50m² subject to a minimum of six tests per installation. The sampling must include all variations in substrate finish.

Tensile adhesion values should be as shown in the above Technical Performance section, with all results, including the mode of failure, recorded for inspection by the *Project Manager*.

Coverage rates and applied coating thickness must be monitored and recorded for each day's production together with material batch numbers, ready for inspection by the *Project Manager* if requested.

APPENDIX 7/2

Excavation, trimming and reinstatement of existing surfaces.

General Requirements

1. All joints in the surface, binder and base layers shall be prepared and treated as directed in paragraph 6.8 of BS 594987:2015.
2. The vertical faces of access chamber covers, gully tops, kerbs, channels and similar projections shall be prepared and treated as directed in paragraph 6.9 of BS 594987:2015.
3. All ironwork within the carriageway and paved areas shall be adjusted to their final level before laying the surface course. (See Appendix 5/1)
4. Tolerance in levels not in accordance with Clause 702 are to be adjusted by the *Contractor* at his own expense in a manner accepted by the *Project Manager*.

TABLE 7/1: Tolerances in Surface Levels of Pavement Courses

• Road surfaces	
○ General	± 6 mm
○ adjacent to a surface water channel	+10 - 0 mm
○ Binder course	± 6 mm
○ Base	± 15 mm
○ Sub-base under concrete pavement surface	
slabs laid full thickness in one operation by	
machines with surface compaction	± 10 mm
○ Sub-bases other than above	+10-30 mm

APPENDIX 7/4

Bond coats, tack coats and other bituminous sprays

SHEET 1: Information to be provided by the compiler:

1. In accordance with SHW Clause 903.4, and BS 594987:2015 all surfaces shall be treated with a bond coat prior to overlay. Refer to drawing 1070997-T-06-1101 for surfacing information.
2. Bond coats shall have a British Board of Agrément HAPAS Roads and Bridges Certificate. In the event that no such certificates have been issued, they shall have the acceptance of the *Project Manager*.
3. All surfaces should be mechanically suction swept before application of bond coats.
4. The *Contractor* shall submit evidence of the suitability of the bond coat intended.
5. Existing ironwork, kerbs and street furniture shall be masked (SHW CI 920.6).
6. Before spraying is commenced, the surface shall be free of all loose material and standing water. Surface preparation shall be carried out in accordance with BS 594987:2015 or for certified products, in accordance with the BBS/HAPAS Certificate. The commencement of the bond coat application shall not proceed prior to the *Project Manager's* agreement on the suitability of the preparation.
7. Rate of spread: in accordance with BS 594987:2015 Chapter 5.5 and Clause 920.8
8. Accuracy of application in accordance with SHW Clause 920.9.

SHEET 2: Information to be provided by the Contractor:

1. The *Contractor* shall provide the following information prior to commencement of the work as required by the table on the following page.
2. The product or products he proposes to use, together with their data sheets, product identification data, cohesivity data as specified.
3. For each product, a copy of the BS EN ISO 9001 certificate showing the name of the manufacturer, the name of the certification body and the reference number and date of the certificate.
4. The spraying equipment proposed, and a test certificate.
5. The source or sources of blinding material proposed.
6. Contingency plans in the event of any breakdown.
7. The results of any other tests or other data the *Contractor* considers would assist the *Project Manager* in assessing the technical merit of the treatment such as:
 - i) Tackiness test and/or trafficability time and methods of test.
 - ii) Breaking time test results for different weather conditions and substrates.
 - iii) Test results for bond to newly laid concrete. The data supplied should not be more than six months old.

Binder Data Sheet – Appendix 7/4		Bond Coats, Tack Coats and Other Bituminous Sprays				
Manufacturer of Binder :			Product name:			
Binder type:			Batch no (if known):			
Binder Grade (highlight as required)		Conventional	Intermediate	Premium	Non-tack	Other
Binder	Source	→		Recovered Binder	Recovered Binder after Ageing Test	
	Test	↓		Recovered in accordance with Clause 955	Ageing BBA/HAPAS HiPAT or extended Recovery Test (Clause 955)	
Penetration at 25°C dmm (100g and 5 secs)						
Penetration at 5°C dmm (200g and 60 secs)						
Vialit pendulum cohesion see Clause 957 maximum peak value J/cm ²			The Contractor shall attach a Report and graphical output to this schedule as specified in Clause 957	The Contractor shall attach a Report and graphical output to this schedule as specified in Clause 957		
Product identification test. The provision of data for identification and ageing is optional for unmodified bituminous emulsions to BS 434 and for bitumen and cut back bitumen to BS 3690. Complex shear (stiffness) modulus (G*) and phase angle (δ) data. See Clause 956.			The Contractor shall attach a Report and graphical output to this schedule as specified in Clause 956	The Contractor shall attach a Report and graphical output to this schedule as specified in Clause 956		
Other properties the Contractor considers useful: Minimum Binder Content Binder temperature range for spray application Emulsion Properties and Viscosity Break time Breaking Agent type Weather limits – information from binder manufacturer: road or air temperatures; humidity; wind chill adjustment; tolerance of surface dampness; etc, Temperature max: Temperature min: Other:						

APPENDIX 7/9

Cold Milling (Planing) of Bituminous Bound Flexible Pavement

1. Locations and depth of cold milling is detailed on the drawings listed in Appendix 0/4
2. Prior to any cold milling works, the *Contractor* shall sweep the area to locate any buried metalwork. The *Contractor* shall also locate and suitably mark any other obstructions, including overhead cables. These works shall be undertaken 48 hours prior to any cold milling works commencing.
3. **The *Employer* is committed through their Environmental Charter to utilise and recycle material wherever possible.**

The Principal *Contractor* is encouraged to forward arising's from the planing operations to a Quarry for re-mixing if not used on the sites. In the event of this not being possible the material should be disposed of in an environmentally sensitive manner off site.

4. **All recipients shall hold a licence or have an Exemption Certificate off the Environment Agency.** (See Appendix 2/3 for Retention of Material).
5. No planed areas shall be trafficked by public vehicles for more than 48 hours

APPENDIX 10/1

Plant and equipment for the construction of exposed aggregate concrete surface.

1. With reference to clause 1007, the proposed separation membrane locations are as identified on drawing 1070997-T-08-1102 (Construction details). The separation membrane shall be used between jointed reinforced concrete slabs or unreinforced concrete surface slabs and the sub-base.
2. Separation membranes shall be impermeable plastic sheeting 125 microns thick laid flat without creases. Where an overlap of the plastic sheets is necessary, this shall be at least 300mm. There shall be no standing water on or under the membrane when the concrete is placed upon it.

APPENDIX 11/1

Kerbs, Footways and Paved Areas

Kerbs

Natural Stone Kerb

1. Refer to Drawing No. 1070997-08-T-1101, 1070997-08-T-1102, 1070997-10-T-1101, 1070997-11-T-1101 for material specification and carrying dimensions.

The Contractor must allow for mitring the kerbs on site in rates in the bill of quantities.

Footways and Paved Areas

Footway Surfacing

1. Surfacing for footways shall be constructed using the materials and layer thicknesses Specified below and described on Series 1100 drawings listed in Appendix 0/4.

Bituminous mixtures used in footway surfacing shall be made in accordance with BS EN 13108, the detailed requirements from the example specifications in BS PD6691 and Clause 901.

Shall be laid and compacted in accordance with BS 594987.

Specifications for Footway Construction Materials			
Material Reference	Clause Number	Nominal Layer Thickness	Requirement
HFS1	924	High Friction Surfacing	Grey colour
SURF2	909	20mm	6mm Dense Surface Course AC6 dense surf 100/150.

Footway pavers and setts

1. Footway and paved area locations and details are shown on the drawings as listed Appendix 0 /4.

Construction Detail A			
Pavement layer	Clause	Nominal layer thickness (mm)	Requirement
Flags	1101	75	<p>Yorkstone (Scoutmoor) flags - Various sizes x 75mm thick. (design joint width 8 - 12mm)</p> <p>Jointing material minimum compressive strength – 40N/mm²</p> <p>Colour and exact sizes refer to drawing 1070997-T-08-1102.</p> <p>Slip Resistance (dry)- 84 dry test on Flame Textured finish to EN 13755 and BS EN 1341</p> <p>Slip Resistance (wet)- 60 wet test on Flame Textured finish to EN 13755 and BS EN 1341</p> <p>Abrasion Resistance- 16mm Mean (Expected Highest 17mm) to EN 14157 and BSEN1341</p>
Laying course (Bedding mortar)	-	35	Type B – Plastic mix. Minimum compressive strength as per BS 7533-7, table C.4 -35 N/mm ²
Concrete base	1000	150	<p>ST4 Concrete – Cl.1030</p> <p>Must achieve 15N/mm² prior to placing laying course and flags. For surface finish refer to 17/3.</p> <p>Longitudinal joints – Cl.1010.</p> <p>Dowel Bars- Cl.1011,1012 & 1019</p> <p>Expansion joints- Cl.1009</p> <p>Joint filler board – Cl. 1015</p>
Total construction depth			260mm

Construction Detail B			
Pavement layer	Clause	Nominal layer thickness (mm)	Requirement
Setts	1101	75	<p>Yorkstone (Scoutmoor) setts - Various sizes x 75mm thick. (design joint width 10 - 15mm)</p> <p>Colour and exact sizes refer to drawing 1070997-T-08-1102.</p> <p>Jointing material dried free-flowing silica aggregate as per BS 7533-7:2010 Annex C, C.1 with a proprietary pre-polymer urethane (SPPU) jointing sand sealant for paving systems as Resiblock 22A/F or similar approved system.</p> <p>Slip Resistance (dry)- 84 dry test on Flame Textured finish to EN 13755 and BS EN 1341</p> <p>Slip Resistance (wet)- 60 wet test on Flame Textured finish to EN 13755 and BS EN 1341</p> <p>Abrasion Resistance- 16mm Mean (Expected Highest 17mm) to EN 14157 and BS EN1341</p>
Laying course (Sand)	-	35	Sands as per BS 7533-7 Annex C, C.1.1
BIN1	-	120	Refer to Appendix 7/1
Total construction depth			230mm

Construction Detail C			
Pavement layer	Clause	Nominal layer thickness (mm)	Requirement
Flags	1101	50	Conservation Textured Granite Aggregate Concrete Flags - Various sizes x 50mm thick. (design joint width 8 - 12mm) Jointing material minimum compressive strength – 40N/mm² Colours and exact sizes refer to drawing 1070997-T-08-1102.
Laying course (Bedding mortar)	-	35	Type B – Plastic mix. Minimum compressive strength as per BS 7533-7, table C.4 -35 N/mm ²
Concrete base	1000	150	ST4 Concrete – Cl.1030 Must achieve 15N/mm ² prior to placing laying course and flags. For surface finish refer to 17/3. Longitudinal joints – Cl.1010. Dowel Bars- Cl.1011,1012 & 1019 Expansion joints- Cl.1009 Joint filler board – Cl. 1015
Total construction depth			235mm

Construction Detail D			
Pavement layer	Clause	Nominal layer thickness (mm)	Requirement
Setts	1101	80	Textured Granite Aggregate Concrete Setts - Various sizes x 80mm thick. (design joint width 10 - 15mm) Colour and exact sizes refer to drawing 1070997-T-08-1102. Jointing material dried free-flowing silica aggregate as per BS 7533-7:2010 Annex C, C.1, with a proprietary pre-polymer urethane (SPPU) jointing sand sealant for paving systems as Resiblock 22 or similar approved system.
Laying course (Sand)	-	35	Sands as per BS 7533-7 Annex C, C.1.1
BIN1	-	120	Refer to Appendix 7/1
Total construction depth			235mm

Tree Surround Detail	
Pavement layer	Requirement
Tree surround, outer detail	Granite Kerb - Charcoal Refer to drawing 1070997-T-08-1102 for construction detail
Tree surround, inner detail	30mm thick flexible polyurethane resin-bound gravel with 3mm-6mm size aggregate with 50% aggregate to 50% recycled rubber content, aggregate colour to be agreed with the Project Manager in advance of works commencing. Surface course to be laid on a porous pea-gravel blinding layer above the existing tree growing medium.

3. Tactile Blister Paving

As detailed on drawing 1070997-T-08-1102 and manufactured in accordance with BS EN 1339: 2003 (see scope) and guidelines from the Department for Transport.

Controlled crossing places shall be Blister Pink Granite Tactile Paving 400mm x 400mm x 75mm constructed as PCD A.

Uncontrolled crossings shall be Blister Yorkstone (Scoutmoor) Tactile Paving 400mm x 400mm x 75mm constructed as PCD A.

Uncontrolled crossings shall be PCC Conservation Textured Buff Tactile Paving 400mm x 400mm x 75mm constructed as PCD C.

4. Cutting Around Obstacles

A 5 to 10 mm joint must be achieved at all obstacles. Undercutting of paving may be required to achieve this, with a minimum unit size of one third of the surface area for the stated size for the unit type. Localised changes to the paving laying pattern may be removed to achieve the minimum unit sizes. Areas must be agreed with the *Project Manager* prior to a change in the stated laying pattern.

5. Infill Mortar around Ironwork

Infill mortar will only be allowed where cutting of pavers is totally impractical. Areas must be agreed with the *Project Manager* prior to infill mortar being used. Mortar must be Designation 3, pigmented to match the surrounding paving.

6. Bedding Mortar / Laying Course

Type B – Plastic mix. Minimum compressive strength as per BS 7533-7 and Table C.4 -35 N/mm².

7. Primer Slurry

A polymer modified cementitious primer shall be required in compliance with BS 7533 to provide a bond between all stone types used on site and the chosen bedding mortar. The primer should promote an adhesion factor of 2N/ mm² or greater.

8. Grout

Pre-mixed grout to fill joints ranging 5mm – 50mm wide with a target depth of 20mm, up to 200mm in one application, applied using a slurry mix into joints using a squeegee. Required final compressive strength of 40N/ mm². Must be compliant with BS 7533.

9. Paved areas

All paving and natural stone kerbs shall comply with the requirements of the Code of Practice documents BS 7533-4:2006, BS 7533-6:1999 and BS 7533-7:2010.

10. Approval of materials

The *Contractor* shall provide samples of all natural stone materials for approval by the Project Manager prior to the commitment of orders for the respective materials and shall allow 5 working days for approval. The samples provided shall be from the same source quarry and be of a true likeness with respect to colour and texture as the *Contractors* proposed material.

APPENDIX 12/1

TRAFFIC SIGNS GENERAL

1. The approximate location of permanent traffic signs, details of sign faces, mounting heights, sign posts and foundations etc. are shown on drawings listed in Appendix 0/4. All sign faces to be offset a minimum of 500mm from the carriageway edge.
2. The *Contractor* shall agree with the *Project Manager* the exact location of all traffic signs prior to erection and road markings prior to laying.
3. All posts shall be fitted with base plates. Open-ended posts shall be fitted with matching plastic caps.
4. Traffic signs shall conform to BS EN 12899-1 and will require CE marking and a Declaration of Performance (DoP) from the manufacturer. Class SP1 corrosion resistance to posts. Posts to be hot dipped galvanised, with a black coloured powder coat or similar finish.
6. The backs of traffic signs shall not have identifying marks. Temporary traffic signs require a remove by date to be placed on the back of the sign.
7. Any additional excavation carried out beyond that specified shall be filled with concrete Class ST2.
8. The *Contractor* shall ensure that posts and foundations do not interfere with existing drains or services and that the concrete backfill does not encase or adhere to drains and services. Where drains or services have been exposed in the post hole excavation, a separation membrane, as accepted by the *Project Manager*, shall be used to ensure compliance with this requirement.
9. All excavations in the vicinity of trees shall be by hand excavation, ensuring that the tree roots remain undamaged and undisturbed. Excavation in the proximity of trees shall comply with NJUG 10 regulations.

APPENDIX 12/3

TRAFFIC SIGNS: ROAD MARKING

1.0 General

- 1.1 The permanent road marking requirements are shown on drawings listed in Appendix 0/4. They shall comply with the specifications in paragraphs 2 & 3 below.

2.0 Permanent Road Markings

- 2.1 The material of permanent road markings shall be thermoplastic screed to Clause 1212.2(i).
- 2.2 Performance of the road markings shall have the following minimum standards for a period of 2 years from the date of application.

3.0 Performance Standards of Road Markings

- 3.1 White Road Markings – REFLECTORISED

Property	BSEN 1436 Reference	Requirement	Value
Colour	Table 6	White	As shown on drawings listed in Appendix 0/4
Luminance Factor β	Table 2	Class B2	$\beta \geq 0.3$
Skid Resistance SRT	Table 7	Class S3	55
Retro-reflectivity R_L	Table 3 Classes of R_L for dry road markings	Class R2	$R_L \geq 100$
Retro-reflectivity (wet night) R_L	Table 4 Classes of R_L for road markings during wetness	No requirement	

- 3.2 Yellow road markings reflectorised or non-reflectorised, where shown on the above drawing(s), shall comply with the requirements below:

Property	BSEN 1436 Reference	Requirement	Value
Colour	Table 6	Yellow Class Y1	As shown on drawings listed in Appendix 0/4
Luminance Factor	Table 2	Class B1	0.2
Skid Resistance	Table 7	Class S1	45
Retro-reflectivity	Table 3 Classes of R_L for dry road markings	Class RO	No requirement
Retro-reflectivity (wet night)	Table 4 Classes of R_L for road markings during wetness	No requirement	

TRAFFIC CALMING

Speed Cushions

1. Speed cushions shall be pre-formed as a single unit in recycled rubber and when installed shall comply with the Road Hump Regulations 1999. Cushion units shall be surface mounted in accordance with the manufacturer's installation instructions. Speed cushions specified are to be supplied by Rosehill Highways or a similar approved product.
2. Speed cushions shall be supplied pre-marked with the warning triangle to diagram number 1062 of the Traffic Signs Regulations and General Directions.

STREET FURNITURE

Cycle Stands

1. Cycle stands shall be the 'Sheffield' style 'U' section formed circular hollow section steel tubing, 50mm in diameter with a minimum wall thickness of 2.5mm and hot dip galvanised in accordance with BS EN ISO 1461:2009.

APPENDIX 12/5 TRAFFIC SIGNALS

ZEBRA CROSSING

1. The zebra crossing requirements are shown on drawings listed in Appendix 0/4. They shall comply with the specifications in paragraphs 2 & 3 below.

2. Road markings for zebra crossings shall comply with the requirements of Appendix 12/3.

3. Beacons.

- (a) The beacon gallery shall be a robust, vandal resistant unit of die-cast aluminium construction which shall permit easy access to the lamp and control gear for maintenance. It shall incorporate facilities for the fixing of a photocell.
- (b) Where the globe is to be mounted as a post top fitting it shall be constructed from a one piece 300mm diameter polyethylene moulding which shall be available in yellow and opal. It shall be securely fixed to the gallery unit and have a protection rating of IP54 to BS EN 60529. The fitting shall include an anti-light spill shroud as standard
- (c) When a beacon is specified by the *Project Manager* for mid-mounting on a lighting column the unit shall be of a clam-shell construction where the beacon wraps around the lighting column shaft. The beacons shall meet the following requirements:-
 - i). be fused separately in the lighting column base;
 - ii). be driven at 24v ac via a transformer mounted in the lighting column base;
 - iii). have a minimum rating of IP 56; and
 - iv). be fitted with an anti-light spill shroud.
- (d) When specified by the *Project Manager* the mounting column shaft have an integral LED illuminated stem and facilities for a non-illuminated post extension which will permit an addition lantern to be mounted on it up to maximum of 6 metres from the ground level. It shall be driven at 24v ac via a transformer mounted in the lighting column base.
- (e) Pedestrian crossing beacon lamps and Centre Island beacon lamps shall comprise a minimum of 12 LED's providing a minimum of 12 watts output.
- (f) Columns shall be numbered with details supplied by the *Project Manager* as per scheme specific drawings or via direct contact on a site specific basis.
- (g) Where additional supplementary street lighting is required to meet the requirements of the British Standard in respect of "Conflict Areas" this shall be done on a site specific basis and will be covered as part of Appendix 14/4
- (h) The electrical supply for beacons shall comply with the requirements of Appendix 14/1 and Appendix 14/4.

APPENDIX 13\1: LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS

1. Clause 1301 - General

- (i) The Contractor shall design foundations for the planted lighting columns detailed on the Contract drawings. The design calculations and supporting information shall be submitted to the Overseeing Organisation not less than seven days' before he intends to install any lighting columns. [1301.2]
- (ii) The Contractor shall design anchorage and attachment systems for the flange plate lighting columns fixed to foundations or bridge decks as detailed on the Contract drawings.[1301.2]
- (iii) The design calculations and supporting information shall be submitted to the Overseeing Organisation not less than seven days' before he intends to install any lighting columns. [1301.2]
- (iv) The Contractor shall provide permanently fixed warning notices to all lighting columns in the vicinity of overhead lines. [1301.6]

2. Clause 1302 – Design of Lighting Columns, Brackets, CCTV Masts, Cantilever Masts, Foundations, Anchorages and Attachment Systems

- (i) The Contractor shall establish the soil types on site and submit the information to the Overseeing Organisation with the lighting column design calculations.[1302.3]

3. Clause 1303 - Data Sheets

- (i) Within eight weeks of the commencement of the works and prior to placement of any orders for materials the Contractor shall supply triplicate copies of completed Appendix 13\2 Data sheets for each type lighting column to the Overseeing Organisation. [1303.1]

4. Clause 1304 - Identification and Location Markings

- (i) Location and inspection markings shall be applied to each lighting column as detailed in the contract drawings. [1304.5]

5. Clause 1305 - Installation of Foundations, Anchorages and Attachment Systems

- (i) Cable duct shall be provided through the foundations \ bridge components detailed on the Contract drawings. [1305.8]
- (ii) Where anchorage's in drilled holes are to be used, the Contractor, shall comply fully with the requirements of Clause 1305.6 to 1305.15. As appropriate, the same requirements apply to wall mounted equipment. [1305.10]

6. Clause 1308 - Handling, Transport and Erection

- (i) Where practical all lighting columns shall be installed such that the location of the door is facing away from oncoming traffic. [1308.4]
- (ii) Wall mounted brackets and fixtures shall be fixed as detailed on the Contract drawings. [1308.5]

7. Clause 1309 - Amendments and Additions to BS5649: 1978 (AMD 3136, 1979)

- (i) All lighting columns shall have a cable entry slot width 'X' of 50mm. [1309]

8. Column embellishment kits

- (i) Column embellishment kits shall be manufactured from cast iron and consist of ornamental fittings suitable for direct fitment to the Contractors proposed columns.
- (ii) Only ladder arms shall be included on columns of nominal height up to 6m.
- (iii) Embellishments shall be designed and constructed in one piece to be installed by placement of each piece over the top of the lighting columns and lowering it to its prospective position on the column.
- (iv) Embellishment kits shall be protected to the paint specification G2a (black).
- (v) Embellishment kits shall be held in place by grub screws and all gaps between the lighting column and the embellishment shall be suitably filled to prevent water ingress and settling.

Lighting columns and brackets, CCTV masts and cantilever masts

TABLE A13/1/1: LIGHTING COLUMN AND BRACKET INFORMATION

Nr	Nominal Column/mounting Height	Bracket Details		Lantern Details				Location of Column				Column Details			Contractor to Complete Manufacturer Catalogue nos.
		Type	Proj.	Arm Angle	Lantern Angle	Weight (kg)	Projected Surface by Side (msq)	Terrain Category	Exposure Coeff.	Topo Factor (<i>f</i>)	Reference Wind Velocity Speed	Column Material / finish	Base Type	Doors to be Fixed	
Town Walls / Murivance															
4	8m	Scroll	1.0m	0°	0°	10kg	0.14m ²	II	2.21	2	22.58 m/sec	Steel / Embellished / G2a	Planted	N/A	
Belmont / Cresscent Lane															
6	8m	Scroll	1.0m	0°	0°	10kg	0.14m ²	II	2.21	2	22.58 m/sec	Steel / Embellished / G2a	Planted	N/A	
St Chads / Claremont Bank															
13	8m	Scroll	1.0m	0°	0°	10kg	0.14m ²	II	2.21	2	22.58 m/sec	Steel / Embellished / G2a	Planted	N/A	

Notes:

1. Assumed Terrain Category II in accordance with BSEN40-3-1 3.2.6.
2. The Contractor shall confirm the topography specific to each road lighting column and calculate the (*f*) factor in accordance with BSEN40-3-1 Annex B.
3. The Contractor shall confirm Reference Wind Velocity Speed ($V_{ref, 0}$) for road lighting columns in accordance with BSEN40-3-1 3.2.2.
4. All column types shall be approved by the Overseeing Organisation prior to placing orders with manufacturers.

APPENDIX 13.2

Column and bracket data sheet – Sheet 1

Name of Manufacture:

Column Reference No.

Revision No.

Date

NAME OF CONTRACT

Part A General

Column nominal height (m)

Column Material (m)

Material design strength (m)

No. of door openings

Door opening size - Height (mm)

- Width (mm)

Cross-section of	Height (mm)	Width (mm)	Depth (mm)
Base compartment	<input type="text"/>	<input type="text"/>	<input type="text"/>

Acceptable positions of bracket arms relative to door position
Door Opening



Any	<input type="text"/>
-----	----------------------

Manufacturers's Drawing ref. no.

Corrosion protection (steel columns only) - basic system type (NG 1901)

Reference Wind Velocity $V_{ref,0}$ as defined in BS EN 40-3-1 m/s

Details of signs and attachments allowed for in the design Area (mm²), Eccentricity (mm), Height

- additional sacrificial steel thickness, above that needed in the design, from the bottom of the column at least 250 mm above the anticipated ground level (mm)

Part B Foundation

Planting Depth (mm)

Diameter of concrete surround (if any)	Standard Soil Type Factor G		
	630	390	230
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Flange plate	Bolt Hole centres	Bolt hole diameter	Design load/bolt
	(mm)	(mm)	(N)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Relevant forces and moments at ground level	<input type="text"/>
Line of action of max. moment relating to door opening	<input type="text"/>

Note: For flange plates with slotted holes a diagram shall be included with the Data Sheet

Column and bracket data sheet – Sheet 2

PART C Acceptable Lanterns

Luminaire: Maximum Characteristics

Post Top Column	Luminaire Connection		Terrain Categories as defined in BS EN 40-3-1			
			I	II	III	IV
	Lantern Max. Wt (kg)		Maximum Windage Area (m ²) for Terrain Categories as defined in BS EN 40-3-1			
	Diameter	Length				

Single Arm Bracket Column:

Luminaire Lever Arm (mm)	
Due to Wt. of Luminaire	Due to Windage of lantern

Bracket proj. (m)	Ref No.	Dwg No.	Material		Lantern Fixing Angle	Lantern Connection		Lantern Max. Wt (kg)	Maximum Windage Area (m ²) for Terrain Categories as defined in BS EN 40-3-1				
			Grade	Design Strength (N/mm ²)		Dia. (mm)	Length (mm)						

Single Arm Bracket Column:

Luminaire Lever Arm (mm)	
Due to Wt. of Luminaire	Due to Windage of lantern

Bracket proj. (m)	Ref No.	Dwg No.	Material		Lantern Fixing Angle	Lantern Connection		Lantern Max. Wt (kg)	Maximum Windage Area (m ²) for Terrain Categories as defined in BS EN 40-3-1				
			Grade	Design Strength (N/mm ²)		Dia. (mm)	Length (mm)						

PART D Certification

It is certified that the information given in the data sheet has been obtained in accordance with the requirements of BS EN 40: Part 1 and BS5649 as implemented by Departmental Standard BD 26 (DMRB 2.2.1) and the Specifications.

Signed on Behalf of the
Contractor _____ Date _____

APPENDIX 13/3

Instructions for completion of column and bracket data sheets

General

- 1 When information is not required a dash shall be inserted in the appropriate boxes.
- 2 Where a Data Sheet is amended it shall be given a new revision number with a date.
- 3 The revision number shall be consecutive letters of the alphabet, commencing with A'.
- 4 The date of the revision shall agree with the date of the *Contractor's* signature.
- 5 The column or bracket material shall be steel, aluminium, reinforced or pre-stressed concrete, glass fibre, reinforced plastic or any other approved material.
- 6 The material design strength shall be the minimum specified in the design. Where more than one material is used values for all materials shall be given.
- 7 All relevant entries shall be made on the Data Sheet before the document is certified by the *Contractor*.

Column data

- 1 The column nominal height shall be selected from EN40.
- 2 The number of door openings shall agree with the manufacturer's drawing.
- 3 The cross-section of the base compartment shall be indicated by a dimensioned diagram / sketch.
- 4 The acceptable positions of bracket arms relative to the door position shall be indicated on the diagram. Where all positions are acceptable the box noted 'ANY' shall be ticked.
- 5 Where concrete is necessary around the planted base in accordance with Clause 1305.3 and 1305.4 the minimum diameter shall be entered.
- 6 For flange bases all forces and moments used in the design of the foundations anchorage's and attachment systems shall be given.
- 7 The corrosion protection system used on the column when new shall be recorded where additional steel is provided for sacrificial purposes the amount shall be recorded.
- 8 The signs and attachments surface area, eccentricity from the centre line of the column to the centre of the area of the sign and height above ground level to the centre of the area of the sign shall be stated.

Bracket Data

- 1 The lantern lever arms, weight and maximum windage area quoted shall be based on the most adverse loading on the bracket arm when it is attached to any of the columns quoted in the compatible column sections.

(Note: The lantern lever arms are the horizontal distances from the centre of gravity of the lantern and, if applicable, the centroid of the windage surface area to the end of the bracket joint.)

APPENDIX 14/1: SITE RECORDS

1. General

- (i) Information required to be addressed in the Health and Safety File will include the following detail relating to street lighting equipment:

(a)	Description of the works	Brief description of the work carried out
(b)	Residual hazards	Any residual hazards which remain and how they have been dealt with (for example surveys or other information concerning asbestos; contaminated land; water bearing strata; buried services etc.)
(c)	Hazardous materials used	Hazardous materials used (for example lead paint; pesticides; special coatings which should not be burnt off etc.)
(d)	Information regarding the removal or dismantling of installed plant and equipment	Information regarding the removal or dismantling of installed plant and equipment (for example any special arrangements for lifting, order or other special instructions for dismantling etc.
(e)	Equipment for cleaning or maintaining the structure	Health and safety information about equipment provided for cleaning or maintaining the structure
(f)	Location of significant services	The nature, location and markings of significant services, including underground cables; gas supply equipment; fire-fighting services etc.
(g)	Information and as-built drawings	Information and as-built drawings of the structure, its plant and equipment

- (ii) The Health and Safety File is a stand-alone document and any drawings or relevant documentation such as those referred to below should be included.

- (iii) The *Contractor* will include the following documentation on completion of works:-

- A plan of the works and details of the types of relevant Apparatus;
- The lighting classes which have been applied to each item of Apparatus and/or each road, footpath or cycle track within the development or works;
- Details of any special requirements by the Authority works must comply;
- A copy of the design of the Apparatus, including:
 - a) Details of all Apparatus types including manufactures catalogue numbers.
 - b) Location of the Apparatus;
 - c) Manufacturers guarantee;
 - d) Completion of *Contractor's* Visual Checklist detailed in table 14/1-1 5; and
 - e) Written confirmation by the *Contractor* that the design complies with the adoption required standards.
- Details of any cable distribution networks forming part of the Apparatus and proposed to be taken over by the Authority;
- The electrical test certificates for the Apparatus;
- Details of the connected/disconnected loads together with the relevant MPAN details;
- Written confirmation from the *Contractor* that the Apparatus complies with the design and specification; and

- Sufficient relevant information to allow the Service Provider to satisfy any Legislation.

(iv) As Built Drawings shall be provided and will include details such as:-

- Earthworks – Extent of batter slopes cross sections and levels should be included where relevant. Topsoil thickness where relevant. Ground conditions where relevant, Contaminated Land;
- Surfacing – Details including materials specifications, sizes, thicknesses patches inlays etc.;
- Drainage – Details of new drains (size, material, level, direction of flow etc.) chambers depth diameter standard detail;
- Utilities – Location of known services which were installed as part of the works, also services and protection with details and dimensions of known service locations, when available taken from trial pits etc. including photos;
- Fencing, and hedging Trees – Details including specification and standard detail;
- Street Lighting – Locations including details of new lights, cables, ducts, electrical connections etc.; and
- Traffic Signs – Locations including details of new signs, electrical connections etc.

2. *Contractor's* Visual Inspection Checklist

- (i) The following checklist shall, together with an electrical test certificate, be completed for all new sites and forwarded to the *Project Manager*. This is the same checklist which will be employed by the Councils Inspector before the works are certified as complete.
- (ii) should any aspects not be part of the *Contractor's* responsibility he shall complete each relevant section with N/A.

Table 14/1-1; Contractor's Checklist

	Item	Description of Inspection	Comments
1	General	Have the appropriate Risk Assessments been made regarding the installation and removal of street lighting apparatus?	
		Check NRSWA Notices have been issued and closed and that there are no outstanding defaults	
		Have all redundant items of equipment been removed from site	
		Check that operatives carrying out installation works are suitably trained, qualified and experienced for the works they are required to undertake.	
		Check that any site clearance works have been carried out correctly and that the site has been left clean and tidy	
		Check that any reinstatement works which have been carried out are to the required standard	

	Item	Description of Inspection	Tolerances	Example Asset Numbers										
				1	2	3	4	5	6	7	8	9	Etc.	
2 cont.	Design	Is the column height as designed												
		Is the lamp, gear and luminaire as per the design												
		Check the design category is correct for the road/footpath												
		Check the design for compliance with British Standard												
		Check that the minimum and maximum spacings (where applicable) have been complied with.												
		Check that any objects having an adverse influence on the design have been catered for												
		Check lamp lumen output and maintenance factors have been employed in lighting calculations												
		Is the column located in Local Authority owned land or has a Wayleave has been obtained												

		If the lighting is in a conservation area, are the columns, brackets and luminaires suitable for that conservation area													
		Have the lighting columns been designed to accommodate banners, hanging baskets and / or festive illuminations													
		Has the Statutory Undertakers provided details of their plant on-site and has this been made available during construction etc.													
3	Columns and Brackets	Has the column been planted to the correct depth	Manufacturers specification $\pm 25\text{mm}$												
		Check for compliance with design	$\pm 500\text{mm}$ longitudinally $\pm 50\text{mm}$ laterally												
		Check that the correct root protection is evident													
		If access is limited, has a raise / lower column been installed													
		Is the pole upright and plumb?	Spirit level bulb touching line												
		Is the bracket installed as designed?													

		Is the bracket outreach as designed?																
		Is the colour / finish correct and undamaged?	Minor scratches are not through to galvanised layer.															
		Is unit numbered correctly and in the correct manner?	Height \pm 25mm															
		If this is a replacement column, have any existing attachments been transferred to the new column																
4	Column Doors and Base Compartments	Is the column door in the correct orientation																
		Is the column door flush mounted																
		Does the door fit securely and does the lock operate correctly																
		Check that the correct cabling has been used, that wiring is neat and insulation is maintained up to termination blocks.																
		Check that earth bonding is correctly sized and is securely terminated																

		Check that all components are securely fixed to backboard																
		Check if double pole isolating devices have been fitted																
		Check that correctly rated electrical protection has been installed																
		Check that private supply cables are correctly sized, glanded and identified																
5	Luminaires	Is luminaire aligned correctly																
		Is luminaire bowl clean and free from blemishes																
		Is the optic setting as per design																
		Is the correct switching device fitted and set																
		Check that the lamp strikes																
		Does the installation respond to CMS commands																
6	Signs Supported By or Powered From a	Check that statutory signs have been installed where they need to be																
		Check that any holes made in the lighting column fabric has been																

	Lighting Column	adequately sealed to prevent water ingress.																	
		Check that any wiring to an illuminated sign is independently fused from street lighting circuits																	
		Check correct cables, sleeving and wiring has been used, is neat and tidy.																	
		Check insulation extends to terminals and that terminals are tight																	
7	Illuminated Signs and Bollards	Check the signs face type, post locations, orientation and door position are correct.																	
		Check the shell type, base is installed to correct depth and that it opens in correct direction.																	
8	Feeder Pillars	Check that location agrees with design																	
		Check that private supply cables are correctly sized, glanded and identified																	

		Check that the correct cabling has been used, that wiring is neat and insulation is maintained up to termination blocks.													
		Check that earth bonding is correctly sized and is securely terminated													
		Check that all components are securely fixed to backboard													
		Check if double pole isolating devices have been fitted													
		Check that correctly rated electrical protection has been installed													
9	Electrical Testing	Check that instruments used to undertake the electrical tests are calibrated.													
		Check that a test certificate is provided, valid and complete													

APPENDIX 14/2

Location of lighting units and feeder pillars

1. Clause 1401 - General

- (i) All information relating to the existing installations possessed by the Overseeing Organisation regarding the position of existing underground cabling, feeder pillars and lighting unit positions will be made available to the Contractor without any guarantee as to its accuracy. [1401.5]

2. Clause 1403 - Location of Lighting Units and Feeder Pillars

- (i) The location of all lighting units is detailed on the Contract Drawings. [1403.1]
- (ii) The minimum lighting requirements for this scheme are detailed in table A14/2/1 on the following page.
- (iii) To demonstrate conformance with the requirements of table A14/2/1 the following information shall be returned with the completed tender, based on the equipment proposed therein:
 - a) 2 no. Copies of Illuminance plot / explanatory notes demonstrating compliance with the above criteria.
 - b) The printouts shall include luminaire type / catalogue no., lamp type / design lumen output, and show the calculated lighting levels.
- (iv) The location of all feeder pillars are detailed on the Contract Drawings.

Table A14/2/1: Lighting Level Requirements

Location	Compliance With	Maintenance Factor	Road Surface Category	Nominal Road Width	Lantern Overhang	Contractor's Proposed Lantern
Town Walls / Murivance	BSEN 5489:2013 lighting class P1	0.80	N/A	See Drawings	See Drawings	
Belmont / Crescent Lane	BSEN 5489:2013 lighting class P1	0.80	N/A	See Drawings	See Drawings	
St Chads / Claremont Bank	BSEN 5489:2013 lighting class P1	0.80	N/A	See Drawings	See Drawings	

APPENDIX 14/3

TEMPORARY LIGHTING

1. Clause 1405 - Temporary Lighting

- (i) Existing road lighting units, lit sign units and associated power supplies shall be maintained until the new installation has been commissioned. [1405.1]
- (ii) The *Contractor* shall ensure that the requirement for temporary lighting and associated power supplies is identified and appraised fully during preparation of the programme of works defined in Appendix 1/13.
- (iii) The *Contractor* shall design and install temporary LV power supply networks for all locations where the existing cable network is removed before/during installation of the permanent road lighting works.
- (iv) All temporary LV power supply networks designed by the *Contractor* shall comply fully with the requirements of BS 7671. The *Contractor's* proposals shall be submitted to the Overseeing Organisation, for appraisal, 7 days before installation.
- (v) All temporary lighting shall comply fully with the requirements of BS 5489:2013. The *Contractor's* proposals shall be submitted to the Overseeing Organisation, for appraisal, 7 days before installation.
- (vi) Temporary lighting shall not be removed or switched off until:
 - a) the permanent installation is in full operation;
 - b) an inspection has been carried out on the operation of the permanent installation not less than 24 hours or more than 7 days after commissioning;
 - c) any adjustments, remedial or replacement works found necessary have been carried out;
 - d) The system re-inspected as b. above.

APPENDIX 14/4

ELECTRICAL EQUIPMENT FOR ROAD LIGHTING

1. Clause 1407 - Luminaires

- (ii) All luminaires shall be as detailed on the Contract Drawings. [1407.2(i)]
- (iii) All luminaires for road lighting shall have degree of protection rating of at least IP66 to BS EN 60529. [1407.2(iii)]
- (iv) All luminaires shall be fitted with LucyZodion Vision CMS system Nodes and/or at least 1No. Collector as detailed on the Contract Drawings. [1407.2(iv)]
- (v) The Contractor shall insert in table A/14/4/1, details of all the luminaires he proposes to use. [1407.2(i)]

2. Clause 1409 - Photo-Electric Control Units (PECU's)

- (i) Not applicable.

3. Clause 1416 - Cut-outs, Fuse Holders, Fuses and Miniature Circuit Breakers (MCB's)

- (i) All fuses shall be HRC type, complying with the requirements of BS88 Pt II, Fuse ratings shall be in accordance with the Contract Drawings and/or the manufacturers recommendations. [1416.5]
- (ii) The Contractor shall insert in table A/14/4/2, details of all the double pole isolators he proposes to use. [1416.3]

4. Clause 1417 - Base Compartment Fixing Arrangements

- (i) All electrical equipment installed within the base compartment of lighting columns shall be arranged as detailed on the Contract Drawings. [1417.1]

5. Clause 1419 - Wiring

- (i) All wiring and installation of components within lighting columns and lit sign units shall be in accordance with the Contract Drawings. [1419.1]

6. Clause 1420 - Earthing

- (i) All earthing for lighting columns shall be carried out in accordance with the Contract Drawings. [1420]

7. Clause 1421 - Underground and Ducted Cable

- (i) The route for underground cable trenches shall be as described on the Contract Drawings. [1421.4]
- (ii) Cables shall be laid in accordance with the requirements of the Contract Drawings. Additional protection shall be provided to cables where described on the Contract Drawings. [1421.5]
- (iii) The Contractor shall insert in table A/14/4/4, details of all the cables he proposes to use. [1421]
- (iv) When cable termination does not proceed immediately following installation of the cable and the cable ends are buried, their positions shall be marked with a permanent marker block as described in Clause 1421.11. The block shall be marked as instructed by the Overseeing Organisation. [1421.11]

8. Clause 1422 - Cable Joints

- (i) Cable joints shall not be permitted unless stated otherwise on the Contract Drawings. [1422.3]
- (ii) Where cable joints are detailed on the Contract Drawings Cable joint marker blocks shall be placed over each cable joint. [1422.6]

9. Clause 1423 - Armoured Cable Termination's

- (i) Armoured cable terminations shall be carried out in accordance with the Contract Drawings. [1423.1]

TABLE A/14/4/1: ELECTRICAL EQUIPMENT FOR ROAD LIGHTING

Lanterns and Lamps											
Lantern		Light Source			Integral Or Remote Cell	Supplier To Complete					
Quantity / Type	Control Gear	Type	Number	Wattage		Lantern Manu:	Cat No:	Lamp Manu:	Ip Rating	Lantern Weight	Lantern Wind Area

Town Walls / Murivance

4	Integral	LED	48/700mA	106	N/A	Urbis	Albany Large	N/A	IP 66	10kg	0.14m ²
---	----------	-----	----------	-----	-----	-------	--------------	-----	-------	------	--------------------

Belmont / Crescent Lane

6	Integral	LED	48/700mA	106	N/A	Urbis	Albany Large	N/A	IP 66	10kg	0.14m ²
---	----------	-----	----------	-----	-----	-------	--------------	-----	-------	------	--------------------

St Chads / Claremont Bank

13	Integral	LED	48/700mA	106	N/A	Urbis	Albany Large	N/A	IP 66	10kg	0.14m ²
2	Integral	LED	16/500mA	26	N/A	Urbis	Albany Mini Zebra	N/A	IP 66	10kg	0.14m ²

TABLE A/14/4/2: ELECTRICAL EQUIPMENT FOR ROAD LIGHTING

Lighting Unit Cut Out Termination's		
Termination Type	Contractor To Complete	
	Manufacturer	Cat No.
T11		
T12		
NOTES;		
1. Completed Data Sheets shall be provided as soon as the Contract has been awarded.		

APPENDIX 14/5

ELECTRICAL EQUIPMENT FOR TRAFFIC SIGNS

1. Clause 1417 - Base Compartment Fixing Arrangements

- (i) All electrical equipment installed within the base compartment of traffic signs shall be generally arranged as detailed on the Contract Drawings. [1417.1]

2. Clause 1419 - Wiring

- (i) All wiring and installation of components within lighting columns and lit sign units shall be in accordance with the Contract Drawings. [1419.1]
- (ii) Luminaires for traffic signs shall be of aluminium construction with LED light source

APPENDIX 17/1: Schedule for the Specification of Designed Concrete

General

1. All concrete shall comply with the relevant requirements of BS 8500 Part 2 and BS EN 206-1.

APPENDIX 17/3: Concrete - Surface Finishes

Unformed Finishes

1. Unformed finishes are to be provided as follows:

Class of finish	Locations required
U1	The top surface of all buried concrete.

APPENDIX 19/1

(SPECIFICATION FOR HIGHWAY WORKS) SHEET 1 FORM HA/P1 (NEW WORKS) PAINT SYSTEM SHEET

1.CONTRACT TITLE: STRUCTURE NO.: GRID REF:				
2.DATE OF ISSUE OF DOCUMENTS TO TENDERERS:				
3.ENVIRONMENT AND ACCESSIBILITY: Inland and Ready				
4.REQUIRED DURABILITY OF SYSTEM: N/A			5.COLOUR OF FINISH: Black – G2a	
6. PAINT SYSTEM TO BE APPLIED OVER: AREA REF: AREA DESCRIPTION: PROTECTIVE SYSTEM TYPE: (i.e. I, II etc): G2a				
7. DETAILS	1 st Coat	2 nd Coat	3 rd Coat	4 th Coat
Registered Description Item No. and Colour Date Registered Brand Name and Manufacturer's Ref. No. Data Sheet No. Where applied How applied Min dry film thickness (mdft) Max local dft (See C1. 1914.7) Estimated total volume of paint likely to be used (litres) 'A' type testing required? (YES/NO) (See C1 1912.3) 'B' type testing required? (YES/NO) (See C1 1912.9)				
8. STRIPE COAT DESCRIPTION (Including Item No. and Colour) Shop: Site:			9. PAINT MANUFACTURER'S OFFICIAL STAMP:	
10. Mdft(um) NOTE: The minimum total dry film thickness of the paint system, neglecting primers and sealers under 30 microns, shall be 15% greater (to the nearest 25 microns) than the sum of the mdfts of the individual paint coats.			11. APPROVED BY DATE:	

APPENDIX 30/1

GENERAL: SHEETS 1, 2 AND 3

Notice and Liaison

1. 2 Additional Operations requiring notification include
 - (xi) Setting out approval.
 - (xii) Stripping topsoil for re-use.
 - (xiii) Importing of topsoil sample load to site.
 - (xiv) Applying herbicide.
 - (xv) Preparing seed bed.
 - (xvi) Applying fertiliser.
 - (xvii) Visiting site during maintenance period.
 - (xviii) Tree Felling (within existing woodland areas)
 - (xiv) Woodland Thinning

Pesticide Use

1. 13 Record of Pesticide Use

Record of Pesticide Use	
Type of Pesticide:	
Location Of Site:	
Weather Conditions:	
Name of Contractor:	
Name Of Operative:	
Position:	
Signed:	
Date:	

2. Pesticides shall not be used for weed control of the Bioretention bed shown on drawing number 1070997-T-10-3001 in order to prevent pollution to nearby watercourses.

Bird Nesting Season

1. 14 Bird Nesting Period: February until August inclusive.

Inspection Reports

1. 15 The contractor to provide inspection reports outlining the activity undertaken for:

- 3007 Grass, Bulbs and Wildflowers
- 3009 Establishing Maintenance for Planting
- 3010 Maintenance of Established Trees and Shrubs

APPENDIX 30/2

WEED CONTROL

General

1. 1 Weed Control required for all soft landscape areas, undertaken a minimum six times a year.
Weed Control required for all hard landscape areas, undertaken a minimum twice a year

Total Weed Control

1. 3 Hard-surfaced Areas, all weeds, grasses and ground cover vegetation of any kind prior to excavation shall be treated by Glyphosate pro-bioactive or similar approved and all dieback removed off site. Application of herbicide should contain colour dye to prevent overdosing or leaving strips untreated. The Contractor shall not continue with any further works to treated areas until the Overseeing Organisation is satisfied that the herbicide has taken effect. The earthworks outline of the hard-surfaced areas shall be treated with an approved granular residual herbicide. The rate of application shall comply with the manufacturer's specification. The Contractor shall inform the Overseeing Organisation of the make and specification of the weed killer prior to its use on hard-surfaced areas.

Selective Weed Control in Grass

1. 6 Grass Areas, prior to cultivation of any top soil areas due to be grass seeded shall be treated with Glyphosate pro-bioactive or similar approved. The rate of application shall comply with the manufacturer's specification. Application of herbicide should contain colour dye to prevent overdosing or leaving strips untreated. The Contractor shall not continue with any further works to treated areas until the Overseeing Organisation is satisfied that the herbicide has taken effect.

Weed Control by Pulling/Handweeding

1. 8 Handweeding to be undertaken for all planted beds a minimum six times per year

Arisings from Weed Control Operations

1. 10 Remove all arising's off site from the weed control operations.

APPENDIX 30/6

PLANTING, SHEETS 1 AND 2

Plants

1. 3 Planting Schedule:

Qty	Botanical Name	Girth/ Dia. cm	Height cm	Root Zone	Specification	No./m ²
Claremont Bank Trees						
1	Acer campestre 'Elegant'	16-18		2L	Extra heavy	
1	Zelkova serrata 'Green Vase'	16-18		2L	Extra heavy	3
1	Ginkgo biloba 'Saratoga'	16-18		2L	Extra heavy	3
Murivance Bioretention Bed						
7	Carex pendula			2L	Full pot: C	3
16	Juncus effusus			2L	Full pot: C	3
19	Panicum virgatum 'Heavy Metal'			2L	Full pot: C	3

2. 4 Grafted plants are not permitted
3. 5 Plants shall be supplied in a planting medium containing mycorrhizal. Stock shall have their root-balls/pots/roots dipped in approved Mycorrhizal hydrogel root dip in accordance with the manufacturer's instructions at the time of lifting from the nursery where they are obtained. The contractor shall provide written proof from the supply nursery that root dipping has taken place. Any plants not root-dipped shall be rejected and replaced at the contractor's cost.
4. 6 The seed origin of native plant species is required to be of specific provenance, the provenance shall be local provenance determined and described in accordance with Forestry Commission Practice Note 8: Using Local Stock for Planting Native Trees and Shrubs. Written evidence of its provenance shall be provided to the Overseeing Organisation prior to planting, using the Provenance Certificate pro-forma below.
- 7 The Overseeing Organisation reserves the right to inspect and select nursery stock prior to delivery to site.

PROVENANCE CERTIFICATE

Certificate No:.....

1. We hereby certify that the origins of the plant stock incorporated in the Works are as identified in the Plant Schedule contained in Annex 1 of this Certificate.

2. The words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Forestry Commission Practice Note 8: 'Using Local Stock for Planting Native Trees and Shrubs'.

<p>CONTRACTOR</p> <p>Firm:</p> <p>Name:</p> <p>Position:</p> <p>Signed:</p> <p>Date:/...../.....</p>

3. Receipt of this certificate is acknowledged by the Overseeing Organisation:

<p>OVERSEEING ORGANISATION</p> <p>Name:</p> <p>Position:</p> <p>Signed:</p> <p>Date:/...../.....</p>
--

PROVENANCE CERTIFICATE

Certificate No.:.....

ANNEX 1: Plant Schedule

Botanical Name:	Quantity:	Form/Age:	Height: (cm)	Zone of Provenance and Location:	Forestry Commission Local Provenance Certificate No. (if available)	Approx. date Propagation Material Collected:	Nursery(s) where the plants have been grown:

Topsoil, Compost, Fertiliser and Anti-dessicants

1. 12 Unless stated otherwise on the drawings, topsoil for planting to be obtained from site provided it conforms to BS 3882 with a sandy loam textural classification. Any imported top soil shall be General Purpose Grade conforming to BS 3882 with a sandy loam textural classification.
2. 13 Unless stated otherwise allow for mixing in Broadleaf P4 water storage granules in accordance with manufacturer's instructions to topsoil for backfilling all pits. Tree and shrub planting: 1g per 1L of topsoil, mixed.
3. 15 Slow-release fertiliser shall be used. Allow for Agroblen Tablets as follows:
Agroblen yellow slow-release fertiliser tablets shall be incorporated 200 mm deep with the backfill when pit planting or insert 200 mm deep into a notch. Where more than one tablet is required they should be evenly distributed around the plant.
 - 1 Nr tablet for whips or plants up to 1 Ltr
 - 2 Nr tablets for plants up to 3 Ltrs
 - 3 Nr tablets for plants up to 5 Ltrs
 - 4 Nr tablets for plants up to 10 Ltrs
 - 5 Nr tablets for plants up to 15 Ltrs

Time of Planting

1. 17 Planting season for all bare root and container grown stock to be between November and March (inclusive) unless otherwise instructed by the Project Manager.

Planting Pits, Beds and Trenches

1. 24 All excavations for planting to be carried out according to Table 30/1. Surplus arisings from excavations are to be spread evenly on site.

Planting in Cultivated Beds and Hedges

1. 29 For all shrub beds the ground shall be cultivated to a minimum depth of 300 mm removing all live injurious weed roots and growth to a tip off Site. Any stones or other rubbish over 75 mm in any direction shall be removed from the surface and disposed of in accordance with sub-Clause 3004.8. Root disturbance of adjacent plants shall be avoided and the surface left with a medium tilth. Any ameliorants specified in Appendix 30/6 shall be incorporated in a second pass following initial cultivation.
2. 33 Finely broken back-fill material shall be packed around the roots. The plants shall be gently shaken to allow fine soil to surround the roots. As soil is returned it shall be lightly consolidated and firmly heeled around the root-collar. Immediately after planting the soil surface shall be evenly graded. The soil shall then be watered to the full depth of the root system avoiding over saturation in accordance with Landscape Institute Technical Bulletin (May 2006).. The water shall be delivered by means of a low pressure hose to avoid any washing out of the soil, into a depression made in the planting medium around the base of the stem to ensure that the water goes to the root system. The planting medium shall then be returned to its previous level.

Organic Mulch

1. 55 All planting beds to be finished with timber mulch certified under the Forrest Stewardship Council as an appropriate grade for the site.

Replacement of Failed or Defective Plants

1. 87 For a defects period of 24 months the Contractor shall replace all plants which are missing, have died, or which in the opinion of the Overseeing Organisation are failing to make satisfactory extension growth.
2. 91 Replaced plants to be watered to field capacity in accordance with Landscape Institute Technical Bulletin (May 2006).

Post-planting Maintenance

1. 92 Maintenance operations shall run concurrently with the period stated in Clause 3006.87 and shall be carried out in accordance with Clauses 3007 and 3009 and as appropriate.

APPENDIX 30/8

WATERING

General

1. 1 The Contractor shall ensure that there is no delay in the execution of watering by obtaining all necessary licences and permissions from water companies for the efficient execution of watering on any particular Site including stand pipes, pressure reducing valves, hoses, bowsers, pumps, sprinklers and ascertaining the availability of second class water from sewage works or other approved sources in the event of a Hose Pipe Ban.
2. 2 Watering of grass, shrubs, hedges and trees shall be temporarily suspended in areas where ponding occurs or where there is a risk of surface run-off. Once any surface water has soaked away, repeated applications shall be applied until the watering operation has been completed.
3. 3 Water to individual trees shall be applied via the RootRain irrigation system (or similar system approved by the Project Manager) in such a way that the water is able to percolate through the system, avoiding any run-off.
4. 4 Any damage caused as a result of watering operations shall be reinstated including the replacement of any soil lost from pits or beds due to washing off. Following watering, bed and pit surfaces shall be left even and all plants firm and root systems not exposed. Particular care shall be taken not to damage plants when handling hoses in planted areas.

Establishment Watering

1. 5 The Contractor shall water all planting undertaken under the Contract, in accordance with this Clause, at the frequency necessary to ensure establishment and survival, until all planting works are completed. The minimum recommended rates of watering for trees is as follows: approx. 20 litres (5 gallons) of fresh water applied to each tree, the frequency of watering should be at least every 14 days during dry periods during the summer months (June – August).
1. 6 Establishment period to be for 24 months from practical completion of planting.

Additional Watering

1. 7 Additional watering shall be applied to planting areas and trees according to prevailing weather conditions as directed by the Project Manager, water shall be applied at the following rates:
 - (ii) Shrubs, hedges and ornamental beds: water shall be applied at the rate of 25 l/m² to shrub beds by low pressure hose sprinkler or spray evenly over the entire area. Careful forking of sealed or compacted surfaces shall be carried out to facilitate percolation.

APPENDIX 30/9

ESTABLISHMENT MAINTENANCE FOR PLANTING

1. 1 All new planting to be maintained for a period of 24 months from completion

Pruning

1. 5 All pruning shall be undertaken in accordance with the requirements of Clause 3010, using secateurs and handsaws. Stems shall only be removed so as to retain the natural appearance of the individual plant species in accordance with the guidance in BS 7370 Part 4. Arisings from pruning shall be disposed of in accordance with Clause 3010.
2. 6 All broken and badly damaged branches from the plants shall be pruned by cutting back to within 10 mm of the parent branch or trunk or to a suitable bud/node. The cut shall be angled correctly in accordance with BS 7370 Part 4.
3. 7 At the edges of planted areas, branches and stems shall be cut back to a minimum of 300 mm behind the kerbline, fence, wall or other edge demarcation.

Organic Mulch

- 1 8 Any mulch which has fallen onto adjoining hard surfaces and grassed areas shall be swept up and if not contaminated by weeds or rubbish returned to the planted area and spread to original depth. Any mulch which has been contaminated by weeds or rubbish shall be removed off Site.

Weed Control

- 1 15 Ornamental planted areas shall be cleared of all litter and debris prior to weed control operations and the arisings removed off Site.
- 2 16 Planting areas shall be visited monthly to carry out specified weed control operations. Any grass and weed growth within the planted beds shall be removed by hand.

Individual Trees in Urban Streets

- 2 25 The trees shall be inspected annually during the growing season and maintained as follows:
 - (i) Irrigation systems shall be maintained in working order. Any irrigation pipes shall be checked and repaired if necessary.
 - (ii) All weeds around the base of the tree shall be removed to a whole tree station.
 - (iii) Formative pruning shall be carried out in accordance with Clause 3010, including removal of epicormic shoots and the removal of deadwood. Competing secondary leader shoots, and closely spaced, duplicated branches with potentially weak or tight forks shall be removed.
 - (iv) Formative pruning shall be carried out in accordance with Clause 3010, including removal of epicormic shoots and the removal of deadwood. Competing secondary leader shoots, and closely spaced, duplicated branches with potentially weak or tight forks shall be removed.
 - (iv) The Contractor shall report to the Project Manager any defects requiring further action.

APPENDIX 30/11

MANAGEMENT OF WATERBODIES

1. 3 All Inlets and outlets as detailed shall be inspected twice per year usually in February and October and their condition reported to the Overseeing Organisation.

Appendix 62/70AR: SIGN CLEANING

1. Permitted detergents and cleaning agents

Mild Detergent	Such as Dreft or Surf
Tri-Sodium Phosphate	Mixed 0.025 kg to 1 litre of water - strength of solution should vary with condition of sign
Sodium Hypochlorite	3% to 5% solution
Mid-Klenz RSC*	Diluted with up to 16 parts water
Oakite 202**	Diluted with 10 parts water
Suppliers (Cleaners and Solvents) * Dimex Ltd, Dimex House, 116 High Street, Solihull, West Midlands B91 3SB, Telephone No: 0121 704 3551/2/3/4 ** Oakite Ltd, West Carr Road Industrial Estate, Retford, Nottinghamshire DN22 7SN, Telephone No: 01777 704191	

PREAMBLES TO BILL OF QUANTITIES

General Directions

1. The Bill of Quantities has been prepared in accordance with the Method of Measurement for Highway Works published by The Stationery Office as Section 1 of Volume 4 of the Manual of Contract Documents for Highway Works. The relevant publication date of each page of the Method of Measurement for Highway Works is given in the Schedule of Pages and Relevant Publication Dates.
2. In the Bill of Quantities the sub-headings and item descriptions identify the work covered by the respective items, read in conjunction with the matters listed against the relevant marginal headings "Item coverage" in Chapter IV of the Method of Measurement for Highway Works, these Preambles and the amendments to the Method of Measurement immediately following these Preambles. The nature and extent of the work is to be ascertained by reference to the Drawings, Specification and Conditions of Contract. The rates and prices entered in the Bill of Quantities shall be deemed to be the full inclusive value of the work covered by the several items including the following, unless expressly stated otherwise.
 - (i) Labour and costs in connection therewith.
 - (ii) The supply of materials, goods, storage and costs in connection therewith including delivery to Site. Taking delivery of materials and goods supplied by others, unloading, storage, and costs in connection therewith.
 - (iii) Plant and costs in connection therewith.
 - (iv) Fixing, erecting and installing or placing of materials and goods in position.
 - (v) Temporary Works.
 - (vi) The effect on the phasing of the Works or any element of the Works to the extent set forth or reasonably implied in the documents on which the tender is based.
 - (vii) General obligations, liabilities and risks involved in the execution of the Works set forth or reasonably implied in the documents on which the tender is based.
 - (viii) Establishment charges, overheads and profit.
 - (ix) Waste.
 - (x) Testing carried out by the *Contractor* in accordance with the particular requirements of Appendix 1/5 including supplying results of tests, reports and certificates.
 - (xi) Supply and delivery of samples to the *Project Manager* in accordance with the particular requirements of Appendix 1/6.
 - (xii) Checking, inspecting, examining, measuring and verifying goods, materials and workmanship including supplying results, reports and certificates.
 - (xiii) Attendance and transport for sampling and testing carried out by the *Project Manager*.
 - (xiv) Complying with Quality Assurance requirements of the Contract and providing certificates of conformity.
 - (xv) Preparation and supply of detailed working drawings.
 - (xvi) Awaiting approvals and or consents.
 - (xvii) Where stipulated complying with the particular requirements of Appendix 1/24.

Measurement

3. (i) The measurement of work shall be computed net from the dimensions stated in the Contract unless otherwise stated in the Method of Measurement.
- (ii) Where the tender documents specify the Type of Pavement to be constructed then the measurement of work shall be based upon the thinnest pavement construction and surfacing over structures permitted by the Contract for that Type of Pavement. Where the tender documents provide for the *Contractor* to select the type of safety barrier, pavement or buried structure (where the structure is not within Designated Outlines) to be constructed then the measurement of all work in each area so affected shall be based upon the thinnest pavement construction and surfacing over structures permitted by the Contract in that area for the particular type of safety fence, pavement or buried structure the *Contractor* has elected to construct.

Pricing of Items

4. Each individual item shall have a rate or price entered against it. Rates and prices shall be expressed to two decimal places.

Alternative Specified Materials, Designs and Options within Types of Pavement

5. Where in the Contract a choice of alternatives is permitted:
 - (i) the description billed and the rates and prices inserted shall be deemed to cover any of the permitted alternative materials or designs the *Contractor* may elect to use;
 - (ii) and where separate Bills of Quantities are provided within Series 600: Earthworks for each Type of Pavement permitted by the Contract the rates and prices inserted in respect of the earthworks for the particular Type of Pavement shall be deemed to cover the earthworks for any inherent permitted option within the Type of Pavement elected to be constructed by the *Contractor*;
 - (iii) and where separate Bills of Quantities are provided within Series 700: Pavements for each Type of Pavement permitted by the Contract the rates and prices inserted in respect of the particular Type of Pavement shall also be deemed to cover any inherent permitted option within the Type of Pavement elected to be constructed by the *Contractor*.

In all cases the rates and prices inserted in all Series of the Bill of Quantities shall be deemed to include for any adjustments of work content, rates, costs and the like occasioned by the choice of alternatives elected to be used or constructed by the *Contractor*.

Privately and Publicly Owned Services or Supplies

6. The information in the Contract as to the whereabouts of existing services and mains is believed to be correct but the *Contractor* shall not be relieved thereby of his obligations under the Contract. The *Contractor* shall include in his rates and prices for locating and taking measures for the support and full protection of pipes, cables and other apparatus during the progress of the Works, obtaining the written consent of the appropriate authority to interrupt the service or supply and for keeping the *Project Manager* informed of all arrangements he makes with the owners of privately owned services or supplies, Statutory Undertakers and Public Authorities as appropriate.

Labours

7. **Labours in connection with Nominated Subcontractors shall include:**
 - (i) in the case of work or services executed - for affording the use of existing working space, access, temporary roads, erected scaffolding, working shelters, staging, ladders, hoists, storage, latrines, messing, welfare and other facilities existing on Site and the provision of protection, water, electricity for lighting and clearing away rubbish and debris arising from the work;
 - (ii) in the case of goods, materials or services supplied - for taking delivery, unloading, storing, protecting and returning crates, cartons and packing materials.

Roadworks Overall Requirements

8. The *Contractor* shall allow in his rates and prices for complying with requirements in respect of pavement construction, horizontal alignments, surface levels and surface regularity of pavement courses, dealing with changes in weather conditions, use of surfaces by traffic and construction plant, and general requirements for sub-bases and road bases.

Work Within and Below Non-tidal Open Water or Tidal Water

9. The *Contractor* shall allow in his rates and prices for taking measures required to execute the work within and below non-tidal open water or tidal water. The *Contractor* shall include in his rates and prices for any investigations to ascertain actual boundaries, surface levels and ranges affected by non-tidal open water or tidal water.

Dealing with Flow

10. The *Contractor* shall allow in his rates and prices for taking measures to deal with the existing flow of water, sewage and the like.

Reimbursement of Fees, Rates Taxes and *Project Managers* Telephone Calls

11. The *Contractor* will be reimbursed the actual price paid by the *Contractor* in respect of:
- (i) fees, rates and taxes - the sums certified as properly repayable to the *Contractor* in accordance with the Contract;
 - (ii) *Project Manager's* telephone calls - telephone calls charged to the number or numbers allocated to the *Project Manager*.

Any other cost, charge or expense in respect of these items shall be allowed for in the rates and prices for temporary accommodation.

Site Limitations and Constraints

12. The *Contractor* shall allow in his rates and prices for complying with any limitations and constraints on the use of the Site.

Hard Material

13. For the purposes of the Contract the following are designated as Hard Material in accordance with Chapter 1 Definitions, paragraph 1(h)(i):
- (a) rock below designated stratum;
 - (b) those deposits designated by limits shown on the Drawings;
 - (c) existing pavements, footways, paved areas (but excluding unbound materials) and foundations in masses in excess of 0.20 cubic metres.

Equivalent Products and Materials

14. Where the *Contractor* offers an equivalent product or material in place of the one identified or specified, then the rates and prices in the Bill of Quantities shall be deemed to include for all the obligations and costs associated with the incorporation of the equivalent into the Works, including design, provision of data and drawings, certificates, awaiting acceptance, resubmissions and modifications and amendments to the Works.

Unless specifically stated to the contrary in the Contract the measurement of the Works affected by the incorporation of the equivalent products and materials shall be based on the Tender documents and not on the Works as amended and completed to incorporate the equivalent products and materials.

Permanent Works Designed by the *Contractor*

15. Where the Contract requires part(s) of the Permanent Works to be designed by the *Contractor*, the rates and prices in the Bill of Quantities shall include for all the obligations and costs associated with the incorporation of the *Contractor's* design into the Works, including design, provision of data and drawings, certificates, awaiting approvals, resubmissions and modifications and amendments to the Works.

Additionally the rates and prices in the Bill of Quantities shall include for the costs of all testing and sampling to be carried out by the *Contractor* in respect of workmanship, goods and materials incorporated into the Works or to prove the *Contractor's* design.

Structures Designed by the *Contractor*

16. In respect of each priced Bill of Quantities comprising a single item for a structure designed by the *Contractor*, the *Contractor* shall prepare a priced schedule of quantities. This priced schedule shall be prepared in accordance with the relevant Chapters and Series of the Method of Measurement and submitted to the *Project Manager*.

The quantities, rates and prices in the priced schedule of quantities shall in each case, when extended and totalled, give the amount entered in the priced Bill of Quantities against the item for the relevant structure designed by the *Contractor*.

The priced schedule of quantities shall only be used for Payment Applications and for the valuation of variations ordered under the Contract in connection with structures designed by the *Contractor*.

Unless specifically stated to the contrary in the Contract the measurement of the Works affected by the incorporation of the *Contractor's* design shall be based on the Tender documents and not on the Works as amended and completed to incorporate the *Contractor's* design.

The parts of the Works included by the *Contractor* in the priced schedule of quantities shall include all the parts of the Works within the Designated Outline except those designed and scheduled by the *Project Manager* as not to be included.

National Alterations for The *Project Managers* of Scotland, Wales and Northern Ireland

17. Where a paragraph in Chapter IV of the Method of Measurement for Highway Works (Units and Methods of Measurement) or in the Notes for Guidance on the Method of Measurement for Highway Works or in the Library of Standard Item Descriptions for Highway Works is prefixed by # this indicates that this particular paragraph has a National Alteration for one or more of the *Project Managers* of Scotland, Wales or Northern Ireland. The use of national paragraphs is permitted only within the countries to which they specifically apply and they are deemed to replace corresponding paragraphs in the main body of Chapter IV of the Method of Measurement for Highway Works (Units and Methods of Measurement) or in the Notes for Guidance on the Method of Measurement for Highway Works or in the Library of Standard Item Descriptions for Highway Works as appropriate. The National paragraphs correspond to the particular requirements of the National Alterations for the *Project Managers* of Scotland, Wales or Northern Ireland contained in Volume 1 of the Manual of Contract Documents for Highway Works. The substitute or additional paragraphs are located at the end of the relevant Series.

Testing

18. Testing as paragraph 2(x) above, is in respect of tests to be carried out by the *Contractor* to verify workmanship, goods and materials incorporated into the permanent works and testing of the permanent works in order to prove the *Project Manager's* design as set out in Appendix 1/5.

Checking, inspecting, examining, measuring and verifying goods, materials and workmanship incorporated in the permanent works, as paragraph 2(xii) above, is in respect of other operations set forth or reasonably implied in the Contract to be carried out by the *Contractor* to demonstrate compliance with the particular requirements of the Contract, or to prove the *Project Manager's* design where not separately listed in Appendix 1/5, but excluding trial erection of structural steelwork which shall be measured separately in accordance with Series 1800.

Procedural trials, trial panels and trial areas required to be carried out or constructed as separate operations in advance of the permanent works in order to verify goods, materials and workmanship shall not be measured separately but are included within the item coverage for the relevant Series.

Testing of existing structures and other investigative works shall be individually measured within the relevant Series.

Landscape and Ecology

19. The rates and prices inserted in the Bill of Quantities for new Planting, Seeding and Turfing measured in accordance with Volume 4 – Series 3000 include for all post-planting maintenance work required to be carried out in accordance with the Specification and the relevant Appendices.

In order to properly reflect the scope and duration of the planting and post-planting requirements a series of staged payments for the various items of planting, seeding and turfing will be made in accordance with the Staged Payments Schedule.

The Staged Payments Schedule is to be inserted in the Bill of Quantities immediately preceding the collection page for Landscape and Ecology and shall be used for assessing payments due to the *Contractor* in accordance with the Contract.

Amendments to the Method of Measurement

20. For the purposes of the Contract the Method of Measurement for Highway Works is amended in accordance with the pages immediately following.

AMENDMENTS TO THE METHOD OF MEASUREMENT FOR HIGHWAY WORKS

Series 100: Preliminaries

Progress Photographs

Units **40** *Add the following:*

(iii) set of before and after photographs, set of pre-start dilapidation survey photographs, set of as-built photographs.....number.

Itemisation **42** *Add the following:*

Group	Feature	
I	5	Set of before and after photographs.
	6	Set of pre-dilapidation survey photographs.
	7	Set of as-built photographs.

Item coverage **43** *Add the following:*

(d) survey of condition of areas before commencement and upon completion of the Works, including measurement, and photographic record.

Series 500: Drainage and Service Ducts

Add the following: Bio-Retention Areas

Units **85** The unit of measurement shall be:
(i) bio-retention area.....item.

Measurement **86** The measurement of the bio-retention area shall be the complete installation excluding kerbing and shrub planting billed separately under Series 1100 and 3000 respectively measured to the limits shown on the specified drawing.

AMENDMENTS TO THE METHOD OF MEASUREMENT FOR HIGHWAY WORKS
(continued)

Series 500: Drainage and Service Ducts (continued)

Bio-Retention Area (continued)

Itemisation **87** Separate items shall be provided for the bio-retention area in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Bio-retention area.
II	1 In accordance with specified detail.

Bio-Retention Area **88** The items for bio-retention area shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) excavation of acceptable material (as Series 600 paragraph 17 and 18);
 - (b) excavation of unacceptable material (as Series 600 paragraph 19);
 - (c) extra over for excavation in hard material (as Series 600 paragraph 23);
 - (d) disposal of material (as Series 600 paragraph 39);
 - (e) deposition of fill (as Series 600 paragraph 33);
 - (f) imported fill (as Series 600 paragraph 45);
 - (g) compaction of fill (as Series 600 paragraph 52);
 - (h) topsoiling (as Series 600 paragraph 80);
 - (i) 150mm diameter PVC perforated pipe as HCD – F1, including fittings, cutting, laying, jointing and bedding;
 - (j) connections;
 - (k) chambers (as Series 500 paragraph 37);
 - (l) locating existing sewers and chambers;
 - (m) geo-membrane;
 - (n) concrete (as Series 1700 paragraph 4);
 - (o) formwork (as Series 1700 paragraph 14);
 - (p) reinforcement (as Series 1700 paragraph 25).

AMENDMENTS TO THE METHOD OF MEASUREMENT FOR HIGHWAY WORKS
(continued)

Series 700: Pavements

Add the following:

Pre-Formed Speed Cushions

- Units **82** The unit of measurement shall be:
 (i) pre-formed speed cushion.....number.
- Measurement **83** The measurement shall be for the complete installation of the pre-formed speed cushion.
- Itemisation **84** Separate items shall be provided for pre-formed speed cushion in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Pre-formed speed cushion.
II	1 Different types.

Pre-Formed Speed Cushion

85 The items for pre-formed speed cushion shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) surface preparation;
 - (b) drilling or forming holes and pockets and casting in bolts, base plates and anchorage assemblies, etc.;
 - (c) complete installation in accordance with manufacturer's instructions;
 - (d) reinstatement of surfaces;
 - (e) road markings (as Series 1200 paragraph 18).

**AMENDMENTS TO THE METHOD OF MEASUREMENT FOR HIGHWAY WORKS
(continued)**

Series 1200: Traffic Signs and Road Markings

Add the following:

Cleaning Existing Traffic Signs

- Units **46** The unit of measurement shall be:
(i) cleaning existing traffic signs.....number .
- Measurement **47** The measurement of cleaning existing traffic signs shall be cleaning of both sides of the sign face and sign post(s).
- Itemisation **48** Separate items shall be provided for the pavement reinforcing mesh in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Cleaning existing traffic sign.
II	1	Particular sign reference.
III	1	Lit sign unit.
	2	Non lit sign unit.
IV	1	Stated number of posts.

Cleaning Existing Traffic Signs

- 49** The items for cleaning existing traffic signs shall in accordance with the Preambles to Bill of Quantities General Directions include for:
- (a) provision of water, detergents, and washing equipment;
(b) access and elevating equipment;
(c) clearing up and disposal;
(d) reinstatement of surfaces.

Item coverage

Series 1400: Electrical Work for Road Lighting and Traffic Signs

Trench for Cable or Duct

Item coverage

- 8** *Add the following:*
- (r) lowering existing duct(s) to provide a minimum of 450mm cover from proposed finished pavement level.

**AMENDMENTS TO THE METHOD OF MEASUREMENT FOR HIGHWAY WORKS
(continued)**

Series 1400: Electrical Work for Road Lighting and Traffic Signs (continued)

- Item coverage **13** *Add the following:*
- (n) PVC covers and saddles or alternative fixing method;
 - (o) brass ring type compression glands;
 - (p) PVC shrouds.

Series 3000: Landscape and Ecology

Add the following: Tree Pits

- Units **53** The unit of measurement shall be:
- (i) tree pit.....item.
- Measurement **54** The measurement of the tree pit shall be the complete installation measured to the limits shown on the specified drawing.
- Itemisation **55** Separate items shall be provided for tree pits in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Tree pit.
II	1 Incorporating single height soil support system. Incorporating double height soil support system.
III	1 In accordance with specified detail.

AMENDMENTS TO THE METHOD OF MEASUREMENT FOR HIGHWAY WORKS
(continued)

Series 3000: Landscape and Ecology (continued)

Tree Pits	56	The items for tree pits (<i>note in addition to those items for planting included under this series paragraph 13</i>) shall in accordance with the Preambles to Bill of Quantities General Directions include for:
Item coverage	(a)	excavation of acceptable material (as Series 600 paragraph 17 and18);
	(b)	excavation of unacceptable material (as Series 600 paragraph 19);
	(c)	extra over for excavation in hard material (as Series 600 paragraph 23);
	(d)	deposition of fill (as Series 600 paragraph 33);
	(e)	imported fill (as Series 600 paragraph 45)
	(f)	compaction of fill (as Series 600 paragraph 52);
	(g)	double inlet aeration/irrigation system;
	(h)	twinwall geotextile;
	(i)	single or double height soil support system;
	(j)	metal inlets;
	(k)	plastic open reinforcing mesh;
	(l)	wire mesh;
	(m)	edgings (as Series 1100 paragraph 4);
	(n)	footway and tree surround construction (as Series 1100 paragraph 21).

METHOD OF MEASUREMENT FOR HIGHWAY WORKS

SCHEDULE OF PAGES AND RELEVANT PUBLICATION DATES

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Contents	1	November 2004	
	2	May 2005	
	3	November 2004	
Chapter I	4 to 7 inclusive	May 2005	
	1 to 3 inclusive	March 1998	
Chapter II	1	March 1998	
	2	May 2001	
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	400	1 to 2 and 4 to 8 inclusive	November 2004
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	900) <i>Not taken up</i>	
	1000)	
1100	1	May 2001	
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	2 to 3 inclusive	May 2001
2100	1	March 1998
2200	<i>Not taken up</i>	May 2004
2300	1 to 3 inclusive	March 1998
2400	1 to 3 inclusive	May 2001
	4	March 1998
2500	1 to 2 inclusive	May 2001
2600	<i>Not taken up</i>	
2700	1	May 2001
3000	1 to 15 inclusive	May 2001
5000	1 to 2 inclusive	May 2003



**Shrewsbury Integrated Transport Package:
Town Centre Package 1**

Document 3

Bill of Quantities

Contents

Bill Part No. 1: Preliminaries

Bill Part No. 2: Claremont Bank and Town Walls

Bill Part No. 3: Murivance, Swan Hill and St. John's Hill

Bill Part No. 4: Town Walls and Belmont

Grand Summary

Bill Part No. 1

Preliminaries

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 100: PRELIMINARIES</u>					
<u>Temporary Accommodation</u>					
100-01	Erection of principal offices for the Overseeing Organisation		item		
100-02	Erection of offices and messes for the Contractor		item		
100-03	Erection of stores and workshops for the Contractor		item		
100-04	Servicing of principal offices for the Overseeing Organisation until completion of the works		item		
100-05	Servicing of offices and messes for the Contractor		item		
100-06	Servicing of stores and workshops for the Contractor		item		
100-07	Dismantling of principal offices for the Overseeing Organisation		item		
100-08	Dismantling of offices and messes for the Contractor		item		
100-09	Dismantling of stores and workshops for the Contractor		item		
<u>Information Board</u>					
100-10	Static information sign in accordance with Appendix 1/21	6	no		
100-11	Variable message sign (VMS) in accordance with Appendix 1/21 for 2 week duration only	1	no		
100-12	Variable message sign (VMS) in accordance with Appendix 1/21 for 1 week duration only	2	no		
100-13	Public information sign in accordance with Appendix 1/21	1	no		
<u>Traffic Safety and Management</u>					
100-14	Traffic safety and management		item		
<u>Progress Photographs</u>					
100-15	Set of aerial before and after photographs in accordance with Appendix 1/22	1	no		

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 100: PRELIMINARIES (continued)</u>					
<u>Progress Photographs (continued)</u>					
100-16	Set of pre-start dilapidation survey photographs in accordance with Appendix 1/22	1	no		
100-17	Set of progress photographs in accordance with Appendix 1/22	25	no		
100-18	Set of as-built photographs in accordance with Appendix 1/22	1	no		
Page 1/2 To Part Summary					

Series No.	Part Summary	Amount
100	PRELIMINARIES - PAGE 1/1	
100	PRELIMINARIES - PAGE 1/2	
Page 1/3 To Grand Summary		

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 200: SITE CLEARANCE</u>				
	<u>Note:</u> Series 200 sign clearance works for Murivance, Swan Hill and St. John's Hill and Town Walls and Belmont also included under this bill part				
	<u>Take Up or Down and Set Aside for Re-use or Remove to Store or Tip off Site</u>				
200-01	Take up or down and set aside for re-use unlit traffic sign face	17	no		
200-02	Take up or down and set aside for re-use two unlit traffic sign faces	2	no		
200-03	Take up or down and set aside for re-use unlit traffic sign face and plate	1	no		
200-04	Take up or down and set aside for re-use unlit traffic sign face and post	1	no		
200-05	Take up or down and set aside for re-use manhole cover and frame	3	no		
200-06	Take up or down and set aside for re-use stop valve cover and frame	26	no		
200-07	Take up or down and set aside for re-use air valve cover and frame	1	no		
200-08	Take up or down and set aside for re-use fire hydrant cover and frame	3	no		
200-09	Take up or down and set aside for re-use gas valve cover and frame	7	no		
200-10	Take up or down and set aside for re-use telecommunication cover and frame	7	no		
200-11	Take up or down and set aside for re-use electric cover and frame	2	no		
200-12	Take up or down and set aside for re-use gully grating and frame	4	no		
200-13	Take up or down and remove to store Yorkstone paving flag	2,000	m ²		
200-15	Take up or down and set aside for re-use Yorkstone paving flag	60	m		
200-15	Take up or down and remove to store Yorkstone kerb	420	m		
Page 2/1				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 200: SITE CLEARANCE (continued)</u>				
	<u>Take Up or Down and Set Aside for Re-use or Remove to Store or Tip off Site (continued)</u>				
200-16	Take up or down and remove to store unlit cast iron finger post sign and post assembly	3	no		
201-17	Take up or down and remove to tip off site concrete paving block	1,430	m ²		
201-18	Take up or down and remove to tip off site tactile paving	30	m ²		
201-19	Take up or down and remove to tip off site concrete kerb	80	m		
201-20	Take up or down and remove to tip off site road lighting power cable laid underground	120	m		
200-21	Take up or down and remove to tip off site road lighting column of 5m nominal height	2	no		
200-22	Take up or down and remove to tip off site road lighting column of 8m nominal height	12	no		
200-23	Take up or down and remove to tip off site unlit traffic sign face	49	no		
200-24	Take up or down and remove to tip off site unlit traffic sign face and lit traffic sign face	2	no		
200-25	Take up or down and remove to tip off site two unlit traffic sign faces	8	no		
200-26	Take up or down and remove to tip off site unlit traffic sign face and beacon full assembly	3	no		
200-27	Take up or down and remove to tip off site unlit traffic sign face, lit traffic sign face and plate	2	no		
200-28	Take up or down and remove to tip off site unlit traffic sign face on one post	7	no		
200-29	Take up or down and remove to tip off site unlit traffic sign face on two posts	2	no		
200-30	Take up or down and remove to tip off site two unlit traffic sign faces on one post	3	no		
200-31	Take up or down and remove to tip off site lit traffic sign face on one post	9	no		
200-32	Take up or down and remove to store bollard	3	no		
Page 2/2				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 200: SITE CLEARANCE (continued)</u>					
<u>Take Up or Down and Set Aside for Re-use or Remove to Store or Tip off Site (continued)</u>					
200-31	Take up or down and remove to tip off site two lit traffic sign faces on one post	1	no		
200-32	Take up or down and remove to tip off site unlit traffic sign face and lit traffic sign face on one post	8	m		
200-33	Take up or down and remove to tip off site unlit traffic sign face and two lit traffic sign face on one post	1	m		
200-34	Take up or down and remove to tip off site traffic sign post	3	no		
200-35	Take up or down and remove to tip off site pelican crossing full assembly	4	no		
200-36	Take up or down and remove to tip off site illuminated bollard	10	no		
200-37	Take up or down and remove to tip off site feeder pillar	1	no		
200-38	Take up or down and remove to tip off site gully grating and frame	4	no		
200-39	Take up or down and remove to tip off site gully grating, frame and pot	1	no		
Page 2/3					To Part Summary

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 500: DRAINAGE AND SERVICE DUCTS</u>				
	<u>Drains and Service Ducts (Excluding Filter Drains, Narrow Filter Drains and Fin Drains)</u>				
500-01	150mm internal diameter drain with bed and surround Type Z in trench, depth to invert not exceeding 2 metres, average depth to invert 1.5m	82	m		
500-02	Adjustment on last item for variation greater than 150mm above or below the average depth of 1.5m per 25mm variation in excess of 150mm	-	m		Rate only
	<u>Connections</u>				
500-03	Connection of 150mm internal diameter pipe to existing 225mm diameter drain or existing piped culvert depth to invert not exceeding 2m	2	no		
500-04	Connection of 150mm internal diameter pipe to existing chamber depth to invert not exceeding 2m	4	no		
	<u>Chambers and Gullies</u>				
500-05	Precast concrete chamber reference IC1 in accordance with drawing 1070997-T-08-502 with 450mm x 450mm x 100mm D400 cast iron cover and frame, depth to invert not exceeding 1m	1	no		
500-06	Precast concrete chamber reference C4 in accordance with drawing 1070997-T-08-502 with 450mm x 450mm x 100mm D400 cast iron cover and frame, depth to invert not exceeding 1m	1	no		
500-07	Precast concrete gully in accordance with HCD-F13, depth not exceeding 1m with Class D400 450x450x100mm cast iron grating and frame	13	no		
	<u>Soft Spots and Other Voids</u>				
500-08	Excavation of soft spots in bottom of trenches, chambers and gullies	15	m ³		
Page 2/4			To Part Summary		

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 500: DRAINAGE AND SERVICE DUCTS (continued)</u>				
	<u>Soft Spots and Other Voids (continued)</u>				
500-09	Filling of soft spots and other voids in bottom of trenches, chambers and gullies with pipe bedding material	15	m ³		
	<u>Renewal, Raising or Lowering of Covers and Gratings on Existing Chambers and Gullies</u>				
500-10	Renewal of existing cover and frame with D400 450mm x 450mm x 100mm cast iron cover and frame on existing chamber	2	no		
500-11	Renewal of existing grating and frame with C250 cast iron cover and frame on existing gully	2	no		
500-12	Raising level of D400 450mm x 450mm x 100mm cast iron cover and frame on existing chamber not exceeding 150mm	2	no		
500-13	Raising level of C250 cast iron cover and frame on existing gully not exceeding 150mm	1	no		
500-14	Raising level of reinstalled manhole cover and frame not exceeding 150mm	3	no		
500-15	Raising level of reinstalled stop valve cover and frame not exceeding 150mm	26	no		
500-16	Raising level of reinstalled air valve cover and frame not exceeding 150mm	1	no		
500-17	Raising level of reinstalled fire hydrant cover and frame not exceeding 150mm	3	no		
500-18	Raising level of reinstalled gas valve cover and frame not exceeding 150mm	7	no		
500-19	Raising level of reinstalled telecommunication cover and frame not exceeding 150mm	7	no		
500-20	Raising level of reinstalled electric cover and frame not exceeding 150mm	2	no		
500-21	Raising level of reinstalled gully grating and frame not exceeding 150mm	4	no		
Page 2/5				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 500: DRAINAGE AND SERVICE DUCTS (continued)</u>					
<u>Remove from Store and Reinstall Chamber Covers and Frames, and Gully Gratings and Frames</u>					
500-22	Remove from store and reinstall manhole cover and frame	3	no		
500-23	Remove from store and reinstall stop valve cover and frame	26	no		
500-24	Remove from store and reinstall air valve cover and frame	1	no		
500-25	Remove from store and reinstall fire hydrant cover and frame	3	no		
500-26	Remove from store and reinstall gas valve cover and frame	7	no		
500-27	Remove from store and reinstall telecommunication cover and frame	7	no		
500-28	Remove from store and reinstall electric cover and frame	2	no		
500-29	Remove from store and reinstall gully grating and frame	4	no		
<u>Excavation in Hard Material</u>					
500-30	Extra over excavation for excavation in Hard Material in drainage	15	m ³		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 600: EARTHWORKS</u>				
	<u>Excavation</u>				
600-01	Excavation of unacceptable material Class U1A in cutting and other excavation	460	m ³		
	<u>Excavation in Hard Material</u>				
600-02	Extra over excavation for excavation in Hard Material in cutting and other excavation	200	m ³		
	<u>Disposal of Material</u>				
600-03	Disposal of unacceptable material Class U1A	460	m ³		
	<u>Geotextiles</u>				
600-04	Geogrid below asphalt layer in accordance with Clause 971AR	100	m ²		
Page 2/7					To Part Summary

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 700: PAVEMENTS</u>				
	<u>Sub-base</u>				
700-01	ST4 concrete sub-base in carriageway, hardshoulder and hardstrip	15	m ³		
	<u>Pavement</u>				
700-02	Dense Asphalt Concrete BIN1 (AC 20 dense bin 40/60 rec.) binder course, 60mm thick in carriageway, hardshoulder and hardstrip	50	m ²		
700-03	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) surface course, 40mm thick in carriageway, hardshoulder and hardstrip	1,673	m ²		
700-04	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) surface course, 60mm thick in carriageway, hardshoulder and hardstrip	640	m ²		
	<u>Regulating Course</u>				
700-06	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) regulating course	25	t		
	<u>Surface Treatment</u>				
700-07	Buff coloured high friction surfacing CA1 (65 PSV)	591	m ²		
	<u>Tack Coat</u>				
700-08	Bond coat in accordance with Appendix 7/4	2,363	m ²		
	<u>Cold Milling (Planing)</u>				
700-09	Milling pavement 40 to 135mm deep	1,670	m ²		
700-10	Milling pavement 100mm deep	50	m ²		
	<u>Pre-Formed Speed Cushions</u>				
700-11	Bolt down pre-formed speed cushion in recycled rubber 2000mm x 1650mm x 65mm, pre-marked with warning triangle 750mm wide at base to diagram number 1062	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
1100-01	Yorkstone kerb (including quadrants) 150mm wide with 60mm kerb face (flush where raised table) laid straight or curved exceeding 12 metres radius	215	m		
1100-02	Yorkstone kerb 150mm wide with 60mm kerb face (flush where raised table) curved not exceeding 12 metres radius	14	m		
1100-03	Yorkstone kerb 150mm wide laid flush laid straight or curved exceeding 12 metres radius	92	m		
1100-04	Yorkstone kerb (including dropper kerbs) 150mm wide with 6mm kerb face laid straight or curved exceeding 12 metres radius	28	m		
1100-05	Granite kerb (including quadrants) 150mm wide with 60mm kerb face (flush where raised table) laid straight or curved exceeding 12 metres radius	142	m		
1100-06	Granite kerb 150mm wide with 60mm kerb face (flush where raised table) curved not exceeding 12 metres radius	25	m		
1100-07	Granite kerb 150mm wide laid flush silver grey laid straight or curved exceeding 12 metres radius	16	m		
1100-08	Granite kerb (including dropper kerbs) 150mm wide with 6mm kerb face laid straight or curved exceeding 12 metres radius	16	m		
1100-09	Linear slot drain system laid straight or curved exceeding 12 metres radius	30	m		
1100-10	Precast concrete drainage channel block with C250 cast iron grating laid straight or curved exceeding 12 metres radius	10	m		
	<u>Footways and Paved Areas</u>				
1100-11	Paved area comprising 600mm x 450/600/900mm x 75mm Yorkstone paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 1a)	830	m ²		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS (continued)</u>				
	<u>Footways and Paved Areas (continued)</u>				
1100-12	Paved area comprising 300mm x 450/600/900mm x 50mm PCC granite paving, silver grey, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail C reference 1b)	460	m ²		
1100-13	Paved area comprising 300mm x 450/600/900mm x 50mm PCC granite paving, charcoal, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail C reference 1b)	80	m ²		
1100-14	Paved area comprising 180mm x 150/220/300mm x 75mm Yorkstone setts, indigenous, blue grey to brown, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail B reference 2a)	158	m ²		
1100-15	Paved area comprising 160mm x 120/160/240mm x 80mm PCC granite setts, silver grey, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail D reference 2b)	40	m ²		
	Paved area comprising 160mm x 120/160/240mm x 80mm PCC granite setts, charcoal, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail D reference 2b)	25	m ²		
1100-16	Paved area comprising 180mm x 150/220/300mm x 75mm Yorkstone setts, indigenous, blue grey to brown, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail B reference 3a)	110	m ²		
1100-17	Paved area comprising 160mm x 120/160/240mm x 80mm PCC granite setts, silver grey, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail D reference 3b)	20	m ²		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS (continued)</u>				
	<u>Footways and Paved Areas (continued)</u>				
1100-18	Paved area comprising 160mm x 120/160/240mm x 80mm PCC granite setts, charcoal, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail D reference 3b)	15	m ²		
1100-19	Paved area comprising 400mm x 400mm x 75mm Yorkstone tactile paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 4a)	6	m ²		
1100-20	Paved area comprising 400mm x 400mm x 75mm concrete tactile paving, buff, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail C reference 4b)	25	m ²		
1100-21	Paved area comprising 400mm x 400mm x 75mm granite tactile paving, pink, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 4c)	20	m ²		
1100-22	Footway comprising 6mm Dense Surface Course SURF 2 (AC6 dense surf 100/150) 20mm thick to surfaces sloping at 10 degrees or less to the horizontal	20	m ²		
	<u>Remove from Store and Relay Paving Flags, Slabs and Blocks</u>				
1100-23	Remove from store and relay Yorkstone flags on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 1a)	60	m ²		
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Item No.	Description	Quantity	Unit	Rate	Amount
<p><u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS (continued)</u></p>					
<p><u>Remove from Store and Re-erect Street Furniture</u></p>					
<p><u>Note:</u> The following items are free-issue as they are being supplied to the employer under separate contracts</p>					
1100-24	Remove from store and re-erect bench type A 2000mm x 600mm x 450mm (approx.)	3	no		
1100-25	Remove from store and re-erect bench type B 600mm sq. x 450mm (approx.)	2	no		
1100-26	Remove from store and re-erect bench type C as type B with gradient-correcting support legs	4	no		
1100-27	Remove from store and re-erect planter 1500mm sq. x 1000mm (approx.) with base lifting points (for front-loading), fixing not required	3	no		
1100-28	Remove from store and re-erect Wayfinding unit reference P3	1	no		
<p>Page 2/12 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
	<p><u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS</u></p> <p><u>Note:</u> Series 1200 works for Murivance, Swan Hill and St. John's Hill and Town Walls and Belmont also included under this bill part</p> <p><u>Traffic Signs</u></p>				
1200-01	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS01) on one existing tubular steel post	1	no		
1200-02	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS02, TS06, TS09, TS32, TS38, TS42, TS50) on existing lighting column	7	no		
1200-03	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS03, TS07, TS19, TS28, TS29, TS31, TS40, TS48, TS52, TS54, TS55 TS59, TS62) on one tubular steel post	13	no		
1200-04	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS08, TS10, TS11, TS56) on one existing tubular steel post	4	no		
1200-05	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS12, TS13) on existing railings	2	no		
1200-06	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS04) on one tubular steel post	1	no		
1200-07	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS05) on one tubular steel post	1	no		
1200-08	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS15) on one tubular steel post	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>				
	<u>Traffic Signs (continued)</u>				
1200-09	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS15-616) located back to back on same one tubular steel post as sign reference TS15	1	no		
1200-10	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS15-521) located back to back on same one tubular steel post as sign reference TS15	1	no		
1200-11	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS16) on one tubular steel post	1	no		
1200-12	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS18) on one tubular steel post	1	no		
1200-13	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS18-652) located above on same one tubular steel post as sign reference TS18	1	no		
1200-14	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS21, TS22, TS23, TS24, TS25, TS45, TS86, TS90, TS91) on existing lighting column	9	no		
1200-15	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS84, TS85, TS87) on one tubular steel post	3	no		
1200-16	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS14, TS44) on existing railings	2	no		
Page 2/14			To Part Summary		

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>				
	<u>Traffic Signs (continued)</u>				
1200-17	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS26, TS61) on one tubular steel post	2	no		
1200-18	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS33-616) on one tubular steel post	1	no		
1200-19	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS33-616) located back to back on same one tubular steel post as sign reference TS33-616	1	no		
1200-20	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS33) on one cranked tubular steel post	1	no		
1200-21	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS35) fixed to property wall	1	no		
1200-22	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS36) on one tubular steel post	1	no		
1200-23	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 1 but not exceeding 2 square metres in area (sign reference TS37) on one tubular steel post	1	no		
1200-24	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.50 but not exceeding 0.75 square metres in area (sign reference TS37-662) on same one tubular steel post as sign reference TS37	1	no		
1200-25	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS39, TS66, TS68, TS75) on one tubular steel post	4	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>					
<u>Traffic Signs (continued)</u>					
1200-26	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS43) on one existing tubular steel post	1	no		
1200-27	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS46A) on existing railings	1	no		
1200-28	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS46B) on existing railings	1	no		
1200-29	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS47) on one tubular steel post	1	no		
1200-30	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS51, TS53) on existing lighting column	2	no		
1200-31	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 1 but not exceeding 2 square metres in area (sign reference TS57) on reverse of existing lit "no entry" traffic sign including extension post	1	no		
1200-32	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS64) on one tubular steel post	1	no		
1200-33	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS64-652) on same one tubular steel post as sign reference TS64	1	no		
1200-34	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS63) on one existing tubular steel post	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>					
<u>Traffic Signs (continued)</u>					
1200-35	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 1 but not exceeding 2 square metres in area back to back with Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area on one tubular steel post (sign reference TS57)	1	no		
1200-36	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 1 but not exceeding 2 square metres in area (sign reference TS71, TS88) on one tubular steel post	2	no		
1200-37	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS72) on one tubular steel post	1	no		
1200-38	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS72-616) on same one tubular steel post as sign reference TS72	1	no		
1200-39	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS73) on one tubular steel post	1	no		
1200-40	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS73-606) on same one tubular steel post as sign reference TS73	1	no		
1200-41	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS76) on one tubular steel post	1	no		
1200-42	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS76-616) on same one tubular steel post as sign reference TS76	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>				
	<u>Traffic Signs (continued)</u>				
1200-43	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS77-661A, TS78-661A) on one tubular steel post	2	no		
1200-44	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS77-606, TS78-606) on same one tubular steel post as sign reference TS77-661A and TS78-661A respectively	2	no		
1200-45	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS79) on one tubular steel post	1	no		
1200-46	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 2 but not exceeding 3 square metres in area (sign reference TS80) on two tubular steel posts	1	no		
1200-47	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS01) on same two tubular steel posts as sign reference TS80	1	no		
1200-48	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS81) on one tubular steel post	1	no		
1200-49	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 2 but not exceeding 3 square metres in area (sign reference TS82) on two tubular steel posts	1	no		
1200-50	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference RPZ - 3 Peak) on same two tubular steel posts as sign reference TS82	1	no		
1200-51	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS83) on one tubular steel post	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>					
<u>Traffic Signs (continued)</u>					
1200-52	Permanent retroreflective traffic sign as non-lit sign unit, sign face not exceeding 0.25 square metres in area (sign reference TS89) on one existing tubular steel post	1	no		
1200-53	Permanent retroreflective traffic sign as non-lit sign unit, sign face exceeding 0.25 but not exceeding 0.50 square metres in area (sign reference TS92) on one cranked tubular steel post	1	no		
<u>Remove from Store and Re-erect Traffic Signs</u>					
1200-54	Remove from store and re-erect permanent retroreflective "turn right" traffic sign and plate as non-lit sign unit on same one tubular steel post as sign reference TS05	1	no		
1200-55	Remove from store and re-erect permanent retroreflective "hydrant" traffic sign as non-lit sign unit on same one tubular steel post as sign reference TS16	1	no		
1200-56	Remove from store and re-erect permanent retroreflective "restricted zone" traffic sign as non-lit sign unit on same one tubular steel post as sign reference TS18	1	no		
1200-57	Remove from store and re-erect permanent retroreflective "school warning" traffic sign and plate as non-lit sign unit on one tubular steel post (sign reference TS30)	1	no		
1200-58	Remove from store and re-erect permanent retroreflective "town centre cycle" traffic sign as non-lit sign unit on same one tubular steel post as sign reference TS36	1	no		
1200-59	Remove from store and re-erect permanent retroreflective "medical centre" and "turn right" traffic signs as non-lit sign unit on same existing one tubular steel post as sign reference TS63	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>				
	<u>Remove from Store and Re-erect Traffic Signs (continued)</u>				
1200-60	Remove from store and re-erect permanent retroreflective "school warning" and "CCTV" traffic signs as non-lit sign unit on existing one tubular steel post including new extension post (sign reference TS67)	1	no		
1200-61	Remove from store and re-erect permanent retroreflective "direction" traffic sign as non-lit sign unit on one tubular steel post (sign reference TS69)	1	no		
1200-62	Remove from store and re-erect permanent retroreflective "parking restriction" traffic sign as non-lit sign unit on one tubular steel post (sign reference TS70)	1	no		
	<u>Cleaning Existing Traffic Signs</u>				
1200-63	Cleaning existing traffic sign as non-lit sign unit on one tubular steel post (sign reference EX55)	1	no		
	<u>Road Markings</u>				
1200-64	Removal of yellow continuous line 50mm wide	2,960	m		
1200-65	Solid area in white thermoplastic screed 4000mm long 600mm wide in zebra crossing to diagram 1001.4	20	m ²		
1200-66	Continuous line in white thermoplastic screed with applied solid glass beads 400mm wide to diagram 1002.1	4	m		
1200-67	Continuous double line in primrose thermoplastic screed with applied solid glass beads 50mm wide to diagram 1018.1	70	m		
1200-68	Intermittent line in white thermoplastic screed with applied solid glass beads 100mm wide with 2000mm line and 150mm gap to diagram 1001.4	100	m		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u>				
	<u>Road Markings (continued)</u>				
1200-69	Intermittent line in white thermoplastic screed with applied solid glass beads 200mm wide with 500mm line and 500mm gap to diagram 1001.5	13	m		
1200-70	Intermittent double line in white thermoplastic screed with applied solid glass beads 200mm wide with 600mm line and 300mm gap to diagram 1003	65	m		
1200-71	Intermittent line in white thermoplastic screed with applied solid glass beads 100mm wide with 4000mm line and 2000mm gap to diagram 1004	168	m		
1200-72	Intermittent line in white thermoplastic screed with applied solid glass beads 100mm wide with 600mm line and 300mm gap to diagram 1009	30	m		
1200-73	Intermittent line in white thermoplastic screed with applied solid glass beads 50mm wide with 600mm line and 600mm gap to diagram 1028.4	6	m		
1200-74	Ancillary terminal line in white thermoplastic screed with applied solid glass beads 200mm wide with 600mm line to diagram 1001.4	4	m		
1200-75	Ancillary terminal line in primrose thermoplastic screed with applied solid glass beads 50mm wide with 300mm line to diagram 1018.1	2	m		
1200-76	Triangle in white thermoplastic screed with applied solid glass beads 750mm wide to diagram 1062	12	no		
1200-77	Arrow in white thermoplastic screed with applied solid glass beads 4000mm long straight to diagram 1038	5	no		
1200-78	Arrow in white thermoplastic screed with applied solid glass beads 4000mm long turning to diagram 1038	2	no		
1200-79	Arrow in white thermoplastic screed with applied solid glass beads 2000mm long straight to diagram 1059	2	no		
1200-80	Letter in white thermoplastic screed with applied solid glass beads 1600mm high to diagram 1022	4	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
<p><u>SERIES 1200: TRAFFIC SIGNS AND ROAD MARKINGS (continued)</u></p> <p><u>Road Markings (continued)</u></p>					
1200-81	Letter in white thermoplastic screed with applied solid glass beads 1600mm high to diagram 1046	14	no		
1200-82	Symbol in white thermoplastic screed with applied solid glass beads 750mm wide to diagram 1057	2	no		
1200-83	Letter in white thermoplastic screed with applied solid glass beads 1600mm high to diagram 1024	4	no		
1200-84	Continuous line in white thermoplastic screed with applied solid glass beads 100mm wide to diagram 1012.1	60	m		
<p>Page 2/22 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
1300-01	<p><u>SERIES 1300 - ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS</u></p> <p><u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u></p> <p>Tubular steel road lighting column of 8m nominal height with planted base and with 1m projection bracket arm (0 degrees) with specified luminaire (4000K/48LED/700/5098) and specified CMS. Column to be fitted with specified embellishment kit and scroll bracket arm. Full installation to be painted black in accordance with specification</p>	13	no		
1300-02	<p>Zebra lighting column of 5m nominal height with planted base and with post mounted specified luminaire (4000K/16LED/500/NW/356452/5DEG) and specified CMS</p>	2	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1400 - ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS</u>				
	<u>Locating Buried Road Lighting and Traffic Signs Cable</u>				
1400-01	Locating buried road lighting and traffic signs cable in carriageways, footways, bridge decks and paved areas	120	m		
	<u>Trench for Cable or Duct</u>				
1400-02	Trench for duct exceeding 300mm but not exceeding 450mm wide, trench depth not exceeding 1.5 metres in carriageways, footways and paved areas	50	m		
	<u>Cable and Duct</u>				
1400-03	6mm ² 3 core XPLE/PVC/SWA/PVC cable with copper conductors laid in duct in trench depth not exceeding 1.5 metres	50	m		
1400-04	100mm diameter orange UPVC flexi-duct in trench depth not exceeding 1.5 metres	50	m		
	<u>Cable Joints and Terminations</u>				
1400-05	Type 11 termination up to 25mm ² 3 core XLPE/PVC/SWA/PVC cable in road lighting column or traffic sign	15	no		
	<u>Feeder Pillars</u>				
1400-06	Feeder pillar	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<p><u>SERIES 2700: ACCOMMODATION WORKS, WORKS FOR STATUTORY UNDERTAKERS, PROVISIONAL SUMS AND PRIME COST ITEMS</u></p> <p><u>Provisional Sums</u></p> <p>2700-01 Allow the Provisional Sum of £10,000 for all works associated with Distribution Network Operator requirements</p> <p>2700-02 Add Fee percentage as per Contract Data Part 2 to item 2700-01</p>		<p>sum</p> <p>%</p>		<p>£10,000.00</p>
<p style="text-align: right;">Page 2/25 To Part Summary</p>					<p style="text-align: right;">£10,000.00</p>

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 3000: LANDSCAPE AND ECOLOGY</u>					
<u>Planting</u>					
3000-01	Heavy standard tree Zelkova serrata 'Green Vase', 16-18cm, in pits (Type A), surfaces sloping at 10 degrees or less to the horizontal	1	no		
3000-02	Heavy standard tree Ginkgo biloba 'Saratoga', 16-18cm, in pits (Type A), surfaces sloping at 10 degrees or less to the horizontal	1	no		
3000-03	Heavy standard tree Acer campestre 'Elegant', 16-18cm, in pits (Type B), surfaces sloping at 10 degrees or less to the horizontal	1	no		
<u>Tree Pits</u>					
3000-04	Tree pit Type A incorporating single height soil support system in accordance with drawing 1070997-T-08-3001	1	item		
3000-05	Tree pit Type B incorporating double height soil support system in accordance with drawing 1070997-T-08-3001	1	item		
<u>Street Furniture</u>					
3000-06	Round cast iron closed top litter bin with ash tray, black with gold-coloured detailing	1	no		
3000-07	Tubular galvanised steel black coloured 'Sheffield' cycle stand	10	no		
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Series No.	Part Summary	Amount
200	SITE CLEARANCE - PAGE 2/1	
200	SITE CLEARANCE - PAGE 2/2	
200	SITE CLEARANCE - PAGE 2/3	
500	DRAINAGE AND SERVICE DUCTS - PAGE 2/4	
500	DRAINAGE AND SERVICE DUCTS - PAGE 2/5	
500	DRAINAGE AND SERVICE DUCTS - PAGE 2/6	
600	EARTHWORKS - PAGE 2/7	
700	PAVEMENTS - PAGE 2/8	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 2/9	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 2/10	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 2/11	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 2/12	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/13	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/14	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/15	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/16	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/17	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/18	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/19	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/20	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/21	
1200	TRAFFIC SIGNS AND ROAD MARKINGS - PAGE 2/22	
1300	ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS - PAGE 2/23	
1400	ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS - PAGE 2/24	
2700	ACCOMMODATION WORKS, WORKS FOR STATUTORY UNDERTAKERS, PROVISIONAL SUMS AND PRIME COST ITEMS - PAGE 2/25	£10,000.00
3000	LANDSCAPE AND ECOLOGY - PAGE 2/26	
Page 2/27 To Grand Summary		£10,000.00

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 200: SITE CLEARANCE</u>				
	<u>Take Up or Down and Set Aside for Re-use or Remove to Store or Tip off Site</u>				
200-01	Take up or down and set aside for re-use drainage channel block	28	m		
200-02	Take up or down and set aside for re-use bollard	6	no		
200-03	Take up or down and remove to store bollard	14	no		
200-04	Take up or down and set aside for re-use litter bin	1	no		
200-05	Take up or down and set aside for re-use manhole cover and frame	5	no		
200-06	Take up or down and set aside for re-use stop valve cover and frame	16	no		
200-07	Take up or down and set aside for re-use fire hydrant cover and frame	3	no		
200-08	Take up or down and set aside for re-use gas valve cover and frame	2	no		
200-09	Take up or down and set aside for re-use telecommunication cover and frame	6	no		
200-10	Take up or down and set aside for re-use wash out cover and frame	1	no		
200-11	Take up or down and set aside for re-use gully grating and frame	8	no		
200-12	Take up or down and remove to store Yorkstone paving flag	420	m ²		
200-13	Take up or down and remove to store Yorkstone sett	15	m ²		
200-14	Take up or down and remove to store Yorkstone kerb	240	m		
200-15	Take up or down and remove to tip off site tactile paving	3	m ²		
200-16	Take up or down and remove to tip off site pedestrian guardrail	13	m		
200-17	Take up or down and remove to tip off site road lighting power cable laid underground	50	m		
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Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 200: SITE CLEARANCE (continued)</u>					
<u>Take Up or Down and Set Aside for Re-use or Remove to Store or Tip off Site (continued)</u>					
200-18	Take up or down and remove to tip off site road lighting column of 5m nominal height	1	no		
200-19	Take up or down and remove to tip off site road lighting column of 8m nominal height	4	no		
200-20	Take up or down and remove to tip off site illuminated bollard	1	no		
200-21	Take up or down and remove to tip off site drainage channel block	75	m		
200-22	Take up or down and remove to tip off site gully grating and frame	3	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
400-01	<p><u>SERIES 400: ROAD RESTRAINT SYSTEMS</u> (VEHICLE AND PEDESTRIAN)</p> <p><u>Pedestrian Parapets and Pedestrian Guardrails</u></p> <p>Pedestrian guardrail in accordance with drawing 1070997-T-10-3001 straight or curved exceeding 50 metres radius</p>	12	m		
<p>Page 3/3 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 500: DRAINAGE AND SERVICE DUCTS</u>				
	<u>Drains and Service Ducts (Excluding Filter Drains, Narrow Filter Drains and Fin Drains)</u>				
500-01	75mm internal diameter drain with bed and surround Type Z in trench, depth to invert not exceeding 2 metres, average depth to invert 1.5m	2	m		
500-02	Adjustment on last item for variation greater than 150mm above or below the average depth of 1.5m per 25mm variation in excess of 150mm	-	m		Rate only
500-03	100mm internal diameter drain with bed and surround Type Z in trench, depth to invert not exceeding 2 metres, average depth to invert 1.5m	3	m		
500-04	Adjustment on last item for variation greater than 150mm above or below the average depth of 1.5m per 25mm variation in excess of 150mm	-	m		Rate only
500-05	150mm internal diameter drain with bed and surround Type Z in trench, depth to invert not exceeding 2 metres, average depth to invert 1.5m	15	m		
500-06	Adjustment on last item for variation greater than 150mm above or below the average depth of 1.5m per 25mm variation in excess of 150mm	-	m		Rate only
	<u>Connections</u>				
500-07	Connection of 150mm internal diameter pipe to existing 150mm diameter drain or existing piped culvert depth to invert not exceeding 2m	2	no		
500-08	Connection of drainage channel block to existing 75mm diameter drain (downspout) or existing piped culvert depth to invert not exceeding 2m	1	no		
500-09	Connection of 150mm internal diameter pipe to existing chamber depth to invert not exceeding 2m	2	no		
	<u>Chambers and Gullies</u>				
500-10	Precast concrete gully in accordance with HCD-F13, depth not exceeding 1m with Class D400 450x450x100mm cast iron grating and frame	4	no		
500-11	Precast concrete gully in footway, depth not exceeding 1m with Class C250 cast iron grating and frame	1	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 500: DRAINAGE AND SERVICE DUCTS (continued)</u>				
	<u>Soft Spots and Other Voids</u>				
500-12	Excavation of soft spots in bottom of trenches,	5	m ³		
500-13	Filling of soft spots and other voids in bottom of trenches, chambers and gullies with pipe bedding material	5	m ³		
	<u>Renewal, Raising or Lowering of Covers and Gratings on Existing Chambers and Gullies</u>				
500-14	Renewal of existing grating and frame with C250 cast iron cover and frame on existing gully	3	no		
500-15	Raising level of C250 cast iron cover and frame on existing gully	3	no		
500-16	Raising level of reinstalled manhole cover and frame not exceeding 150mm	5	no		
500-17	Raising level of reinstalled stop valve cover and frame not exceeding 150mm	15	no		
500-18	Raising level of reinstalled fire hydrant cover and frame not exceeding 150mm	2	no		
500-19	Raising level of reinstalled gas valve cover and frame not exceeding 150mm	2	no		
500-20	Raising level of reinstalled telecommunication cover and frame not exceeding 150mm	6	no		
500-21	Raising level of reinstalled wash out cover and frame not exceeding 150mm	1	no		
500-22	Raising level of reinstalled gully grating and frame not exceeding 150mm	8	no		
	<u>Remove from Store and Reinstall Chamber Covers and Frames, and Gully Gratings and Frames</u>				
500-23	Remove from store and reinstall manhole cover and frame	5	no		
500-24	Remove from store and reinstall stop valve cover and frame	16	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 500: DRAINAGE AND SERVICE DUCTS (continued)</u>					
<u>Remove from Store and Reinstall Chamber Covers and Frames, and Gully Gratings and Frames (continued)</u>					
500-25	Remove from store and reinstall fire hydrant cover and frame	3	no		
500-26	Remove from store and reinstall gas valve cover and frame	2	no		
500-27	Remove from store and reinstall telecommunication cover and frame	6	no		
500-28	Remove from store and reinstall wash out cover and frame	1	no		
500-29	Remove from store and reinstall gully grating and frame	8	no		
<u>Excavation in Hard Material</u>					
500-30	Extra over excavation for excavation in Hard Material in drainage	5	m ³		
<u>Bio-Retention Areas</u>					
500-31	Bio-retention area in accordance with drawing 1070997-P-10-501 (excluding kerbing and shrub planting billed separately under Series 1100 and 3000 respectively)		item		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 600: EARTHWORKS</u>				
	<u>Excavation</u>				
600-01	Excavation of unacceptable material Class U1A in cutting and other excavation	160	m ³		
	<u>Excavation in Hard Material</u>				
600-02	Extra over excavation for excavation in Hard Material in cutting and other excavation	70	m ³		
	<u>Disposal of Material</u>				
600-03	Disposal of unacceptable material Class U1A	160	m ³		
	<u>Geotextiles</u>				
600-04	Geogrid below asphalt layer in accordance with Clause 971AR	50	m ²		
	<u>Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring at Formation or Sub-formation Level; Disused Basements, Cellars and the Like and Gullies</u>				
600-5	Removal of disused 75mm diameter pipe with 1 metre or less of cover to formation level	2	m		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 700: PAVEMENTS</u>				
	<u>Sub-base</u>				
700-01	ST4 concrete sub-base in carriageway, hardshoulder and hardstrip	4	m ³		
	<u>Pavement</u>				
700-02	Dense Asphalt Concrete BIN1 (AC 20 dense bin 40/60 rec.) binder course, 60mm thick in carriageway, hardshoulder and hardstrip	1,035	m ²		
700-03	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) surface course, 40mm thick in carriageway, hardshoulder and hardstrip	1,035	m ²		
	<u>Regulating Course</u>				
700-04	Dense Asphalt Concrete BIN1 (AC 20 dense bin 40/60 rec.) regulating course	15	t		
700-05	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) regulating course	5	t		
	<u>Surface Treatment</u>				
700-06	Buff coloured high friction surfacing CA1 (65 PSV)	448	m ²		
	<u>Tack Coat</u>				
700-07	Bond coat in accordance with Appendix 7/4	2,070	m ²		
	<u>Cold Milling (Planing)</u>				
700-08	Milling pavement 50 to 135mm deep	1,019	m ²		
700-09	Milling pavement 100mm deep	16	m ²		
	<u>Pre-Formed Speed Cushions</u>				
700-10	Bolt down pre-formed speed cushion in recycled rubber 2000mm x 1650mm x 65mm, pre-marked with warning triangle 750mm wide at base to diagram number 1062	2	no		
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Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
1100-01	Yorkstone kerb (including quadrants) 150mm wide with 60mm kerb face laid straight or curved exceeding 12 metres radius	107	m		
1100-02	Yorkstone kerb 150mm wide with 60mm kerb face curved not exceeding 12 metres radius	20	m		
1100-03	Yorkstone kerb 150mm wide laid flush laid straight or curved exceeding 12 metres radius	20	m		
1100-04	Yorkstone kerb (including dropper kerbs) 150mm wide with 6mm kerb face laid straight or curved exceeding 12 metres radius	65	m		
1100-05	Granite kerb 150mm wide laid flush charcoal laid straight or curved exceeding 12 metres radius	7	m		
1100-06	Precast concrete drainage unit with heal guard grating laid straight or curved exceeding 12 metres radius	4	m		
1100-07	Paved area comprising 600mm x 450/600/900mm x 75mm Yorkstone paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 1a)	368	m ²		
1100-08	Paved area comprising 600mm x 450/600/900mm x 75mm Yorkstone paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base, including additional ST4 concrete to fill voids and soft spots, to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 1a)	8	m ²		
Page 3/9				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
<p><u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS (continued)</u></p>					
<p><u>Footways and Paved Areas</u></p>					
1100-9	Paved area with fan/splayed radius pattern double tapered with a minimum width of 200mm comprising 600mm x 450/600/900mm x 75mm Yorkstone paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 1a)	104	m ²		
1100-10	Paved area comprising 180mm x 150/220/300mm x 75mm Yorkstone setts, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail C reference 2a)	44	m ²		
1100-11	Paved area comprising 180mm x 150/220/300mm x 75mm Yorkstone setts, indigenous, blue grey to brown, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail B reference 2a)	37	m ²		
1100-12	Paved area comprising 180mm x 150/220/300mm x 75mm Yorkstone setts, indigenous, blue grey to brown, with sand joint sealing resin laid on 35mm thick sand laying course and 120mm thick asphalt base BIN1 (AC 20 dense bin 40/60 rec.) to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail B reference 3a)	25	m ²		
<p><u>Remove from Store and Relay Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u></p>					
1100-13	Remove from store and relay drainage channel block straight or curved exceeding 12 metres radius	28	m		
<p style="text-align: center;">Page 3/10 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
<p><u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS (continued)</u></p>					
<p><u>Remove from Store and Re-erect Street Furniture</u></p>					
1100-14	Remove from store and re-erect bollard	6	no		
1100-15	Remove from store and re-erect litter bin	1	no		
<p><u>Note:</u> The following items are free-issue as they are being supplied to the employer under a separate contract</p>					
1100-16	Remove from store and re-erect bench type A 2000mm x 600mm x 450mm (approx.)	1	no		
1100-17	Remove from store and re-erect Wayfinding unit reference S14	1	no		
<p>Page 3/11 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
1300-01	<p><u>SERIES 1300 - ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS</u></p> <p><u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u></p> <p>Tubular steel road lighting column of 8m nominal height with planted base and with 1m projection bracket arm (0 degrees) with specified luminaire (4000K/48LED/700/5098) and specified CMS. Column to be fitted with specified embellishment kit and scroll bracket arm. Full installation to be painted black in accordance with specification</p>	4	no		
<p style="text-align: center;">Page 3/12 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1400 - ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS</u>				
	<u>Locating Buried Road Lighting and Traffic Signs Cable</u>				
1400-01	Locating buried road lighting and traffic signs cable in carriageways, footways, bridge decks and paved areas	50	m		
	<u>Trench for Cable or Duct</u>				
1400-02	Trench for duct exceeding 300mm but not exceeding 450mm wide, trench depth not exceeding 1.5 metres in carriageways, footways and paved areas	20	m		
	<u>Cable and Duct</u>				
1400-03	6mm ² 3 core XPPE/PVC/SWA/PVC cable with copper conductors laid in duct in trench depth not exceeding 1.5 metres	20	m		
1400-04	100mm diameter orange UPVC flexi-duct in trench depth not exceeding 1.5 metres	20	m		
	<u>Cable Joints and Terminations</u>				
1400-05	Type 11 termination up to 25mm ² 3 core XLPE/PVC/SWA/PVC cable in road lighting column or traffic sign	3	no		
1400-06	Type 12 termination up to 25mm ² 3 core XLPE/PVC/SWA/PVC cable in road lighting column or traffic sign	1	no		
Page 3/13				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 2700: ACCOMMODATION WORKS, WORKS FOR STATUTORY UNDERTAKERS, PROVISIONAL SUMS AND PRIME COST ITEMS</u>					
<u>Provisional Sums</u>					
2700-01	Allow the Provisional Sum of £5,000 for all works associated with Distribution Network Operator requirements		sum		£5,000.00
2700-02	Add Fee percentage as per Contract Data Part 2 to item 2700-01		%		
Page 3/14					To Part Summary £5,000.00

Item No.	Description	Quantity	Unit	Rate	Amount
<u>SERIES 3000: LANDSCAPE AND ECOLOGY</u>					
<u>Planting</u>					
3000-01	Shrub planting Carex pendula, in beds, surfaces sloping at 10 degrees or less to the horizontal	7	no		
3000-02	Shrub planting Juncus effusus, in beds, surfaces sloping at 10 degrees or less to the horizontal	16	no		
3000-03	Shrub planting Panicum virgatum 'Heavy Metal', in beds, surfaces sloping at 10 degrees or less to the horizontal	19	no		
3000-04	Tubular galvanised steel black coloured 'Sheffield' cycle stand	2	no		
Page 3/15					To Part Summary

Series No.	Part Summary	Amount
200	SITE CLEARANCE - PAGE 3/1	
200	SITE CLEARANCE - PAGE 3/2	
400	ROAD RESTRAINT SYSTEMS (VEHICLE AND PEDESTRIAN) - PAGE 3/3	
500	DRAINAGE AND SERVICE DUCTS - PAGE 3/4	
500	DRAINAGE AND SERVICE DUCTS - PAGE 3/5	
500	DRAINAGE AND SERVICE DUCTS - PAGE 3/6	
600	EARTHWORKS - PAGE 3/7	
700	PAVEMENTS - PAGE 3/8	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 3/9	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 3/10	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 3/11	
1300	ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS - PAGE 3/12	
1400	ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS - PAGE 3/13	
2700	ACCOMMODATION WORKS, WORKS FOR STATUTORY UNDERTAKERS, PROVISIONAL SUMS AND PRIME COST ITEMS - PAGE 3/14	£5,000.00
3000	LANDSCAPE AND ECOLOGY - PAGE 3/15	
	Page 3/16	To Grand Summary
		£5,000.00

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 200: SITE CLEARANCE</u>				
	<u>Take Up or Down and Set Aside for Re-use or Remove to Store or Tip off Site</u>				
200-01	Take up or down and set aside for re-use manhole cover and frame	2	no		
200-02	Take up or down and set aside for re-use stop valve cover and frame	12	no		
200-03	Take up or down and set aside for re-use stop tap cover and frame	3	no		
200-04	Take up or down and set aside for re-use fire hydrant cover and frame	1	no		
200-05	Take up or down and set aside for re-use gas valve cover and frame	3	no		
200-06	Take up or down and set aside for re-use telecommunication cover and frame	2	no		
200-07	Take up or down and set aside for re-use gully grating and frame	1	no		
200-08	Take up or down and remove to store Yorkstone paving flag	280	m ²		
200-09	Take up or down and remove to store Yorkstone kerb	180	m		
200-10	Take up or down and remove to tip off site kerb inlet	4	no		
200-11	Take up or down and remove to tip off site road lighting column of 8m nominal height	6	no		
200-12	Take up or down and remove to tip off site drainage channel block	130	m		
200-13	Take up or down and remove to tip off site dish drainage channel block	18	m		
200-14	Take up or down and remove to tip off site gully grating and frame	6	no		
201-15	Take up or down and set aside for re-use rubber speed cushion	2	no		
Page 4/1				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 500: DRAINAGE AND SERVICE DUCTS</u>				
	<u>Drains and Service Ducts (Excluding Filter Drains, Narrow Filter Drains and Fin Drains)</u>				
500-01	150mm internal diameter drain with bed and surround Type Z in trench, depth to invert not exceeding 2 metres, average depth to invert 1.5m	1	m		
500-02	Adjustment on last item for variation greater than 150mm above or below the average depth of 1.5m per 25mm variation in excess of 150mm	-	m		Rate only
	<u>Connections</u>				
500-03	Connection of 150mm internal diameter pipe to existing chamber depth to invert not exceeding 2m	1	no		
	<u>Chambers and Gullies</u>				
500-04	Precast concrete gully in accordance with HCD-F13, depth not exceeding 1m with Class D400 450x450x100mm cast iron grating and frame	3	no		
	<u>Soft Spots and Other Voids</u>				
500-05	Excavation of soft spots in bottom of trenches, chambers and gullies	1	m ³		
500-06	Filling of soft spots and other voids in bottom of trenches, chambers and gullies with pipe bedding material	1	m ³		
	<u>Renewal, Raising or Lowering of Covers and Gratings on Existing Chambers and Gullies</u>				
500-07	Renewal of existing grating and frame with C250 cast iron cover and frame on existing gully	3	no		
500-08	Raising level of reinstated manhole cover and frame not exceeding 150mm	1	no		
500-09	Raising level of reinstated stop valve cover and frame not exceeding 150mm	12	no		
500-10	Raising level of reinstated stop tap cover and frame not exceeding 150mm	3	no		
500-11	Raising level of reinstated fire hydrant cover and frame not exceeding 150mm	1	no		
Page 4/2				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 500: DRAINAGE AND SERVICE DUCTS</u>				
	<u>Renewal, Raising or Lowering of Covers and Gratings on Existing Chambers and Gullies (continued)</u>				
500-12	Raising level of reinstalled gas valve cover and frame not exceeding 150mm	2	no		
500-13	Raising level of reinstalled telecommunication cover and frame not exceeding 150mm	2	no		
500-14	Raising level of reinstalled gully grating and frame not exceeding 150mm	1	no		
	<u>Remove from Store and Reinstall Chamber Covers and Frames, and Gully Gratings and Frames</u>				
500-15	Remove from store and reinstall manhole cover and frame	2	no		
500-16	Remove from store and reinstall stop valve cover and frame	12	no		
500-17	Remove from store and reinstall stop tap cover and frame	3	no		
500-18	Remove from store and reinstall fire hydrant cover and frame	1	no		
500-19	Remove from store and reinstall gas valve cover and frame	3	no		
500-20	Remove from store and reinstall telecommunication cover and frame	2	no		
500-21	Remove from store and reinstall gully grating and frame	1	no		
	<u>Excavation in Hard Material</u>				
500-22	Extra over excavation for excavation in Hard Material in drainage	1	m ³		
Page 4/3					
To Part Summary					

Item No.	Description	Quantity	Unit	Rate	Amount
	<p><u>SERIES 600: EARTHWORKS</u></p>				
	<p><u>Excavation</u></p>				
600-01	Excavation of unacceptable material Class U1A in cutting and other excavation	100	m ³		
	<p><u>Excavation in Hard Material</u></p>				
600-02	Extra over excavation for excavation in Hard Material in cutting and other excavation	40	m ³		
	<p><u>Disposal of Material</u></p>				
600-03	Disposal of unacceptable material Class U1A	100	m ³		
<p style="text-align: center;">Page 4/4 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 700: PAVEMENTS</u>				
	<u>Pavement</u>				
700-01	Dense Asphalt Concrete BIN1 (AC 20 dense bin 40/60 rec.) binder course, 60mm thick in carriageway, hardshoulder and hardstrip	442	m ²		
700-02	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) surface course, 40mm thick in carriageway, hardshoulder and hardstrip	442	m ²		
	<u>Regulating Course</u>				
700-03	Dense Asphalt Concrete BIN1 (AC 20 dense bin 40/60 rec.) regulating course	6	t		
700-04	Stone Mastic Asphalt SURF1 (10mm 60 PSV minimum) regulating course	3	t		
	<u>Surface Treatment</u>				
700-05	Buff coloured high friction surfacing CA1 (65 PSV)	371	m ²		
	<u>Tack Coat</u>				
700-06	Bond coat in accordance with Appendix 7/4	884	m ²		
	<u>Cold Milling (Planing)</u>				
700-07	Milling pavement 50 to 135mm deep	442	m ²		
	<u>Pre-Formed Speed Cushions</u>				
700-11	Remove from store and reinstall bolt down pre-formed speed cushion in recycled rubber	2	no		
Page 4/5					To Part Summary

Item No.	Description	Quantity	Unit	Rate	Amount
	<u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS</u>				
	<u>Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems</u>				
1100-01	Yorkstone kerb (including quadrants) 150mm wide with 60mm kerb face laid straight or curved exceeding 12 metres radius	133	m		
1100-02	Yorkstone kerb (including dropper kerbs) 150mm wide with 6mm kerb face laid straight or curved exceeding 12 metres radius	25	m		
1100-03	Yorkstone kerb (including dropper kerbs) 150mm wide with 6mm kerb face curved not exceeding 12 metres radius	18	m		
1100-04	Precast concrete drainage channel block with heal guard grating	6	m		
1100-05	Yorkstone drainage channel 150mm wide laid straight or curved exceeding 12 metres radius	62	m		
1100-06	Yorkstone drainage channel 150mm wide curved not exceeding 12 metres radius	10	m		
	<u>Footways and Paved Areas</u>				
1100-07	Paved area comprising 600mm x 450/600/900mm x 75mm Yorkstone paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 1a)	302	m ²		
1100-08	Paved area comprising 400mm x 400mm x 75mm Yorkstone tactile paving, indigenous, blue grey to brown, laid on 35mm thick Type B - plastic mix bedding mortar and 150mm thick ST4 concrete base to surfaces sloping at 10 degrees or less to the horizontal (pavement construction detail A reference 4a)	18	m ²		
1100-09	Footway comprising grey coloured high friction surfacing HFS1	5	m ²		
Page 4/6				To Part Summary	

Item No.	Description	Quantity	Unit	Rate	Amount
1100-10	<p><u>SERIES 1100: KERBS, FOOTWAYS AND PAVED AREAS (continued)</u></p> <p><u>Remove from Store and Re-erect Street Furniture</u></p> <p><u>Note:</u> The following item is free-issue as it is being supplied to the employer under a separate contract</p> <p>Remove from store and re-erect Wayfinding unit reference S16</p>	1	no		
<p>Page 4/7 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
1300-01	<p><u>SERIES 1300 - ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS</u></p> <p><u>Road Lighting Columns and Brackets, Wall Mountings, CCTV Masts and Cantilever Masts</u></p> <p>Tubular steel road lighting column of 8m nominal height with planted base and with 1m projection bracket arm (0 degrees) with specified luminaire (4000K/48LED/700/5098) and specified CMS. Column to be fitted with specified embellishment kit and scroll bracket arm. Full installation to be painted black in accordance with specification</p>	6	no		
<p style="text-align: center;">Page 4/8 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
<p><u>SERIES 1400 - ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS</u></p>					
<p><u>Locating Buried Road Lighting and Traffic Signs Cable</u></p>					
1400-01	Locating buried road lighting and traffic signs cable in carriageways, footways, bridge decks and paved areas	60	m		
<p><u>Trench for Cable or Duct</u></p>					
1400-02	Trench for duct exceeding 300mm but not exceeding 450mm wide, trench depth not exceeding 1.5 metres in carriageways, footways and paved areas	20	m		
<p><u>Cable and Duct</u></p>					
1400-03	6mm ² 3 core XPLE/PVC/SWA/PVC cable with copper conductors laid in duct in trench depth not exceeding 1.5 metres	20	m		
1400-04	100mm diameter orange UPVC flexi-duct in trench depth not exceeding 1.5 metres	20	m		
<p><u>Cable Joints and Terminations</u></p>					
1400-05	Type 11 termination up to 25mm ² 3 core XLPE/PVC/SWA/PVC cable in road lighting column or traffic sign	6	no		
<p>Page 4/9 To Part Summary</p>					

Item No.	Description	Quantity	Unit	Rate	Amount
2700-01	<p><u>SERIES 2700: ACCOMMODATION WORKS, WORKS FOR STATUTORY UNDERTAKERS, PROVISIONAL SUMS AND PRIME COST ITEMS</u></p> <p><u>Provisional Sums</u></p> <p>Allow the Provisional Sum of £5,000 for all works associated with Distribution Network Operator requirements</p>		sum		£5,000.00
2700-02	Add Fee percentage as per Contract Data Part 2 to item 2700-01		%		
<p>Page 4/10 To Part Summary</p>					<p>£5,000.00</p>

Series No.	Part Summary	Amount
200	SITE CLEARANCE - PAGE 4/1	
500	DRAINAGE AND SERVICE DUCTS - PAGE 4/2	
500	DRAINAGE AND SERVICE DUCTS - PAGE 4/3	
600	EARTHWORKS - PAGE 4/4	
700	PAVEMENTS - PAGE 4/5	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 4/6	
1100	KERBS, FOOTWAYS AND PAVED AREAS - PAGE 4/7	
1300	ROAD LIGHTING COLUMNS AND BRACKETS, CCTV MASTS AND CANTILEVER MASTS - PAGE 4/8	
1400	ELECTRICAL WORK FOR ROAD LIGHTING AND TRAFFIC SIGNS - PAGE 4/9	
2700	ACCOMMODATION WORKS, WORKS FOR STATUTORY UNDERTAKERS, PROVISIONAL SUMS AND PRIME COST ITEMS - PAGE 4/10	£5,000.00
<p style="text-align: right;">Page 4/11 To Grand Summary</p>		<p style="text-align: right;">£5,000.00</p>

Part No.	Grand Summary	Amount
1	PRELIMINARIES	
2	CLAREMONT BANK AND TOWN WALLS	£10,000.00
3	MURIVANCE, SWAN HILL AND ST JOHN'S HILL	£5,000.00
4	TOWN WALLS AND BELMONT	£5,000.00
Page 5/1 GRAND TOTAL		£20,000.00

Company:

Address:

.....

.....

.....

Signature:

Name:

Position in Company:

Date:

personal & commercial info

For the attention of [REDACTED]
P.Casey (Land Reclamation) Ltd.
Rydings Road
Rochdale
OU2 9PS

Shropshire Council
Shirehall
Abbey Foregate
Shrewsbury
Shropshire SY2 6ND

Date: 21.03.2018
My Ref: 2018.3.21L-DMNH016S
Your Ref: DMNH016

Dear Sirs

SITP TOWN CENTRE PACKAGE 1 (CONTRACT REF. DMNH 016)

SUBJECT TO CONTRACT

We refer to your tender of 6th March 2018 for the above and write to inform you that it is accepted, subject to contract and to a voluntary standstill period.

Although this contract award is below the EU procurement thresholds, The Employer will now be observing a voluntary 10 day standstill period before entering into any contract to ensure there are no challenges to the contract award, prior to the contract being entered into. This voluntary standstill period will conclude at midnight on 30th March 2018.

Thank you for tendering. The formal contract will be forwarded to you in due course for execution.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

If you have any queries, please contact me on [REDACTED] of WSP on 01743 501090.

Yours faithfully

[REDACTED]

Strategic Transport and Contracts Manager