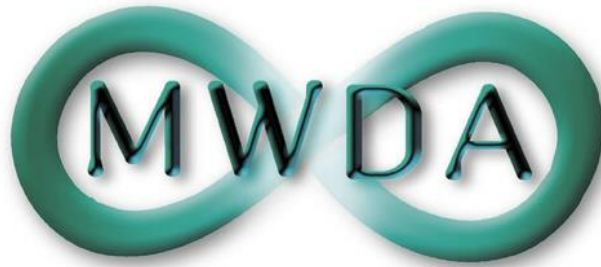


Name of Tenderer: _____



MERSEYSIDE WASTE DISPOSAL AUTHORITY

**CONTRACT FOR THE PROVISION OF MECHANICAL
ENGINEERING SERVICES**

APRIL 2017 – MARCH 2020

TENDER DOCUMENT

**Instructions for Tendering
Form of Tender
Conditions of Contract
Specification
Schedule of Rates**

JANUARY 2017

**Merseyside Waste Disposal Authority
7th Floor
No. 1 Mann Island
Liverpool
L3 1BP**

MERSEYSIDE WASTE DISPOSAL AUTHORITY

CONTRACT FOR THE PROVISION OF MECHANICAL ENGINEERING SERVICES

INSTRUCTIONS FOR TENDERING

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

1. Merseyside Waste Disposal Authority is inviting tenders for the provision of mechanical engineering services, for the period 1st April 2017 to 31st March 2020.
2. The Authority does not bind itself to accept the lowest or any tender.
3. The tender document 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 tender document other than on an In Confidence basis to those who have a legitimate need to know or whom they need to consult for the purpose of preparing the tender.
4. The tender should be made on the 'Form of Tender' incorporated in this document. It should be signed by the tenderer and submitted with the 'Schedule of Rates and Prices', which should be fully priced in ink, and accompanied by the Conditions of Contract and Specification to the address and not later than the date and time stated in paragraph 13 below.
5. No unauthorised alteration or addition should be made to the Form of Tender, to the Schedule of Rates and Prices or to any component of the tender document.
6. No tenders received after the fixed date shall be considered unless the Authority is satisfied that there is evidence of posting in time for delivery by the due date in the normal course of post, and the other tenders which were received by the specified time have not been opened.
7. Tenders must not be qualified and must be submitted strictly in accordance with the tender documents. Tenderers must not make unauthorised changes to the tender documents. Only tenders submitted without qualification strictly in accordance with the tender documents as issued (or subsequently amended by the Authority) will be accepted for consideration. The Authority's decision on whether or not a tender is acceptable will be final and the tenderer concerned will not be consulted. Qualified tenders will be excluded from further consideration and the tenderer notified.

8. Any queries arising from the tender documents which may have a bearing on the offer to be made should be raised as soon as possible with Mr. Tony Byers tel: 0151 255 1444.
9. Unit notes and prices must be quoted in pounds sterling and whole pence.
10. The appraisal of the tender submissions will be weighted 70% / 30%:

70% in favour of the Schedule of Rates
30% in favour of the Contractor Information Pack

The Contractor Information Pack is in itself weighted 60% / 40%:

60% of the score is allocated to Technical Resources and Experience
40% of the score is allocated to Health and Safety, Quality and the Environment

In this respect Tenderers attention is drawn to the need to complete and return with this tender the Contractors Information Pack

11. It is the responsibility of prospective tenderers to obtain for themselves and at their own expense, any additional information necessary for the preparation of their tenders.
12. All costs associated with the preparation of a response to the tender document shall be borne in full by the tenderer.
13. Tenders should be sent by registered post, recorded delivery service or Data post, or delivered by hand to;

Chief Executive,
Merseyside Waste Disposal Authority,
7th Floor, No.1 Mann Island,
Liverpool, L3 1BP

so as to arrive not later than the time and date stated in the letter accompanying this document. Tenders should be sealed in envelopes or secure packages with the labels provided affixed thereto. No envelope or package shall bear any mark or franking indicating the identity of the tenderer. Tenders must not be sent by any other form of postal service.

NB It is not a condition of posting required by the Post Office that the name of the sender must appear on the envelope in any of the postal services mentioned in this paragraph.

MERSEYSIDE WASTE DISPOSAL AUTHORITY

CONTRACT FOR THE PROVISION OF MECHANICAL ENGINEERING SERVICES

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PROVISION OF MECHANICAL ENGINEERING SERVICES

Form of Tender Incorporating Collusive Tendering Certificate

To: The Merseyside Waste Disposal Authority

Having examined the Conditions of Contract, Specification and Schedule of Rates for the above mentioned provision of mechanical engineering services we offer to provide the said services in conformity with said Conditions of Contract, Specification and Schedule of Rates, at the rates contained in the said Schedule of Rates.

Unless and until a formal agreement 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 is a bona fide tender, and that we have not fixed or adjusted the rates contained in the said Schedule of Rates by or under or in accordance with any agreement with any other person. We also certify that we have not done and we undertake that we will not do at any time before the hour and date specified for the return of this tender any of the following acts:-

- a) Communicating to a person other than the person calling for those tenders the amount or approximate amount of the rates contained in the said Schedule of Rates, except where the disclosure, in confidence, of the approximate rates was necessary to obtain insurance premium quotations required for the preparation of the tender;
- b) Entering into any agreements or arrangements with any other person that he shall refrain from tendering or as to the amount of any rates to be submitted;
- c) Offering or paying or giving or agreeing to pay or give any sum of money or 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 said provision any acts or thing of the sort described above.

In this certificate the word 'person' includes any persons and anybody or association, corporate or incorporate, and 'any agreement or arrangement' includes any such transaction, formal or informal, and whether legally binding or not.

Signed _____

in the capacity of _____

Duly authorised to sign tenders and give such certificate for and behalf of (in BLOCK CAPITALS)

Company _____

Postal Address _____

Date _____

Conditions of Contract

1. Definitions and Interpretations

- 1.1 In the Contract (as herein after defined) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:-
- 1 “Authority” means the Merseyside Waste Disposal Authority and includes the Authority’s personal representatives successors and permitted assigns.
 - 2 “Base Rates” means the rates entered into the priced Schedule of Rates by the Contractor.
 - 3 “CDM Regs” means the Construction (Design and Management) Regulations 2015
 - 4 “Contract” means the Conditions of Contract Specification Priced Schedule of Rates the Tender the written acceptance thereof and the Contract Agreement (if completed).
 - 5 “Contractor” means the person or persons firm or company whose tender has been accepted by the Authority and includes the Contractor’s personal representative’s successors and permitted assigns.
 - 6 “Date for Commencement” means a date for commencement of the Contract determined in accordance with Clause 4 of the Conditions of Contract.
 - 7 “Day” means one working day, Monday to Friday, not including Bank Holidays
 - 8 “Month” means calendar month.
 - 9 “Principal Contractor” means the principal contractor as defined and described in the CDM Regs
 - 10 “Principal Designer” means the principal designer as defined and described in the CDM Regs
 - 11 “Schedule of Rates” means the priced and completed Schedule of Rates.
 - 12 “Specification” means the specification referred to in the Tender and any modification thereof or addition thereto as may from time to time be furnished or approved in writing by the Authority.

13 “Works” means the activities expressed in the Specification

- 1.2 Words importing the singular also include the plural and words importing the masculine gender include the feminine gender and vice versa where the context requires.
- 1.3 The headings in these Conditions shall not be deemed to be part thereof or to be taken into consideration in the interpretation or construction thereof or of the Contract.
- 1.4 All references herein to clauses are references to clauses numbered in these Conditions and not to those in any other documents forming part of the Contract.
- 1.5 The Contract shall be governed and construed in accordance with English Law.

2. General Obligations

- 2.1 The Contractor shall subject to the provisions of the Contract supply to the Authority mechanical engineering services as described in the Specification during the period of the Contract.
- 2.2 Acceptance of the Contractor’s Tender by the Authority constituting a binding contract between the Contractor and the Authority does not mean or imply that there will be a definite requirement for the mechanical engineering services described in the Contract but the Authority undertakes to employ the Contractor for the mechanical engineering services if such services are required during the contract period. In consideration of the said undertaking the Contractor shall if required and subject to the provisions of the Contract provide mechanical engineering services and provide all the labour transport equipment instrumentation and everything whether of a temporary or permanent nature required in and for the provision of mechanical engineering services so as far as the necessity for providing the same is specified or reasonably to be inferred from the Contract at the rates contained in the Schedule of Rates.

3. Contract Period

- 3.1 The Contract period shall be from the Date for Commencement of the Contract pursuant to Clause 4 for a period of 3 years, with an option to extend for a further two years.

4. Date of Commencement of the Contract

- 4.1 The Date for Commencement of the Contract shall be 1st April 2017.

5. Sufficiency of Tender

- 5.1 The Contractor shall be deemed to have satisfied himself before submitting his tender as to the correctness and sufficiency of the rates entered by him in the Schedule of Rates which shall (except insofar as it is otherwise provided in the Contract) cover all his obligations under the Contract and to have obtained for himself all the necessary information as to the risks contingencies and any other circumstances which might influence or affect his tender.
- 5.2 Claims on the grounds of want of knowledge, in any respect, will not be accepted.

6. Assignment and Sub-letting

- 6.1 Neither the Authority nor the Contractor shall assign the Contract or any part thereof or any benefit or interest therein or there under without the written consent of the other party.
- 6.2 The Contractor shall not sub-let the whole of the Contract. The Contractor shall not sub-let any part of the Contract without the consent of the Authority which consent shall not be reasonably withheld.
- 6.3 The Contractor shall be responsible for any acts defaults or neglects of any sub-contractor his agents servants or workmen in the execution of the Contract or any part thereof as if they were acts defaults or neglects of the Contractor.

7. Statutory Obligations

- 7.1 The Contractor shall comply with any statute directive statutory instrument rule or order or any regulation or by-law applicable to the performance of the Contract and shall indemnify and keep indemnified the Authority against all penalties and liability of every kind for breach of any such provision by the Contractor.

8. Quality Standards

- 8.1 Where an appropriate British Standard Specification or British Standard Code of Practice issued by the British Standards Institute is current all goods materials and services supplied used or provided shall be in accordance with that standard without prejudice to any higher standard required by the Contract.

9. Indemnity and Insurances

- 9.1 The Contractor shall indemnify and keep indemnified the Authority against all claims for injury to or death of any person and for the loss of or any damage to property (except insofar as the same are due to the act or neglect of the Authority or its Authorised employees) arising

directly or indirectly from the carrying out of this Contract and against all claims demands proceedings costs charges and expenses whatsoever in respect thereof or in relation thereto.

- 9.2 The Authority shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the Contractor or any sub-contractor save and except that such accident or injury results from or is contributed to by any act or default of the Authority its agents or servants and the Contractor shall indemnify and keep indemnified the Authority against all such damages and compensation (save and except as aforesaid) and against all claims demands proceedings costs charges and expenses whatsoever in respect thereof or in relation thereto.
- 9.3 Without prejudice to his liability to indemnify the Authority the Contractor shall maintain and shall cause any sub-contractor to maintain insurances to cover the Contractor's liability under Clause 9.1 to 9.2.
- 9.4 For all claims other than under Clause 9.2 against which this Clause requires the Contractor to insure the insurance cover shall be £2,000,000.00 or such greater sum as the Contractor may choose in respect of any one incident and the Contractor's insurance policy effecting such cover shall have the interest of the Authority's endorsed thereon or shall otherwise expressly by its terms confer its benefits upon the Authority.
- 9.5 At the start of the contract, and annually therein; the Contractor shall produce to the Authority the policy or policies of insurance cover notes premium receipts and other documents necessary to establish compliance with Clause.
- 9.6 The Authority shall indemnify and keep indemnified the Contractor against the injury to or death of any person or loss of or damage to any property including property belonging to the Contractor to the extent that it may arise out of the act default or negligence of the Authority its employees or agents other than the Contractor his employees and agents and against all actions claims demands proceedings damages costs charges and expenses whatsoever in respect thereof or in relation thereto.

10. Payment

- 10.1 The Contractor shall submit to the Authority after the end of each month an invoice in respect of the service provided. Item 1 of the Schedule of Rates

- 10.2 The Authority shall pay the Contractor the sum due in respect of the service provided within thirty days of the date of delivery to the Authority the invoice for payment in accordance with Clause 10.1

11. Termination

- 11.1 If the Contractor becomes bankrupt or has a receiving order or administration order made against him or presents his petition in bankruptcy or makes an arrangement with or assignment in favour of his creditors or (being a corporation) goes into liquidation (other than a voluntary liquidation for the purposes of amalgamation or reconstruction) or assigns or sub-lets any parts of the Contract without the consent in writing of the Authority first obtained or has an execution levied on his goods or if in the opinion of the Authority the Contractor:
- 11.1.1 has abandoned the Contract; or
 - 11.1.2 without reasonable justification has failed to commence the Contract in accordance with Clause 4; or
 - 11.1.3 despite previous warnings by the Authority in writing is failing to proceed with the Contract with due diligence or is otherwise persistently or materially in breach of his obligations under the Contract; then the Authority without prejudice to any accrued rights or remedies under the Contract may terminate the Contract by notice in writing having immediate effect and shall be entitled to recover from the Contractor the amount of any loss resulting from such termination.
- 11.2 If the Contractor shall have offered or given or agreed to give any person any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or having done or forborne to do any action in relation to the obtaining of the Contract or any other contract with the Authority or for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other contract with the Authority or if the like acts shall have been done by any person employed by the Contractor or acting on the Contractor's behalf (whether with or without the knowledge of the Contractor) or if in relation to the Contract or any other contract with the Authority the Contractor or any person employed by the Contractor or acting on the Contractor's behalf shall have committed any offence under the Prevention of Corruption Acts 1889 to 1916 or any superseding legislation or shall have given any fee for reward the receipt of which is an offence under Sub-Section (2) of Section 117 of the Local Government Act 1972 the Authority shall be entitled to terminate the Contract and to recover from the Contractor the amount of any loss resulting from such termination.

12. Variations

- 12.1 No variation of the Contract shall be effective unless produced in writing and signed by or on behalf of a duly authorised representative of each party.
- 12.2 The Authority shall have the power to give instructions for any variation to the service including any addition thereto or omission therefrom and such instruction shall be valued by the Authority on a fair and reasonable basis using where relevant the prices contained in the Schedule of Rates.

13. Waiver

- 13.1 Failure by the Authority at any time to enforce the provisions of the Contract or to require performance by the Contractor of any of the provisions of the Contract shall not be construed as a waiver of any such provision and shall not affect the validity of the Contract or any part thereof or the right of the Authority to enforce any provision in accordance with its terms.

14. Notices

- 14.1 Any demand notice or other communication required to be given hereunder shall be sufficiently served if served personally on the addressee or if sent by prepaid first class recorded delivery post by telex electronic mail or facsimile transmission to the registered office or last known address of the party to be served therewith and if so sent shall subject to proof to the contrary be deemed to have been received by the addressee on the second business day after the date of posting or on successful transmission as the case may be.

15. Value Added Tax

- 15.1 The Contractor's rates entered in the Schedule of Rates shall be deemed to be exclusive of Value Added Tax. In addition to the sums certified pursuant to Clause 10 the Authority shall pay the Contractor such Value Added Tax as may be properly chargeable by the Contractor in connection with the performance of Contract. The Contractor shall issue a tax invoice in respect thereof.

16. Contract Agreement

- 16.1 The Contractor shall when called upon to do so enter into and execute as a deed a Contract Agreement in the form of the Contract Agreement included in these Condition

17. The Construction (Design and Management) Regulations 2015

- 17.1 It is foreseeable that the Contractor will appoint or be assisted by other contractors while undertaking the Works. As such, and in accordance with the requirements of the Construction (Design and Management) Regulations 2015:

The Authority shall fulfil the role of Principal Designer

The Contractor shall be appointed as Principal Contractor

- 17.2 In accordance with the requirements of the CDM Regs the Authority has completed a Pre-Construction Information pack.
- 17.3 In accordance with the CDM Regs the successful Contractor shall submit a Construction Phase Plan in advance of commencing the term contract.

FORM OF AGREEMENT

THIS AGREEMENT made the _____ day of _____ 2017 **BETWEEN THE MERSEYSIDE WASTE DISPOSAL AUTHORITY** of 7th Floor, No. 1 Mann Island, Mann Island, Liverpool, L3 1BP (hereinafter called “the Authority”) of the one part and _____ whose registered office is situated at _____ (hereinafter called “the Contractor”) of the other part

WHEREAS

- (1) The Authority wishes certain services to be carried out namely the provision of Mechanical Engineering Services and all other obligations contained in the Contract and has prepared the following documents which deal with the Authority’s specific requirements in that regard
 - a) The Specification
 - b) The Conditions of Contract
 - c) The Schedule of Rates and Prices
- (2) The Contractor has submitted a Tender in the form required by the Authority offering to perform the services and the Tender has been accepted by the Authority by a letter dated _____ (“the letter of acceptance”)

NOW IT IS HEREBY AGREED as follows

- (1) The following documents shall be deemed to form and be construed as part of this Agreement and shall be hereinafter collectively referred to as “the Contract Documents”
 - a) The Specification
 - b) The Conditions of Contract
 - c) The Priced Schedule of Rates and Prices
 - d) The Tender
 - e) The Letter of Acceptance
- (2) In consideration of the Contractor carrying out and fulfilling the Authority’s requirements as set out in the Contract Documents the Authority will make to the Contractor such payments as such times and in such a manner as is more particularly described in the Contract Documents

(3) In consideration of the Authority making to the Contractor such payments at such times and in such a manner as is more particularly described in the Contract Documents the Contractor will carry out and fulfil the Authority's requirements as set out in the Contract Documents

IN WITNESS whereof the Authority had caused its Common Seal to be hereunto affixed and the Contractor (has caused his Common Seal to be hereunto affixed) (executed this Agreement as a Deed) the day and year first before written

THE COMMON SEAL OF THE MERSEYSIDE)

WASTE DISPOSAL AUTHORITY was)

hereunto affixed in the presence of:)

Clerk

THE COMMON SEAL OF)

was)

hereunto affixed in the presence of:)

Director

Secretary

SIGNED AS A DEED by)

OR for and behalf of)

Limited)

in the presence of:)

SPECIFICATION

1. General

- 1.1 The provision of day to day mechanical engineering service support to the Authority's Estates Management section in providing a planning, design, contract procurement, and maintenance and monitoring service in respect of the Authority's seven closed landfill sites.

2. Scope of the Works

Principally but not exclusively this shall include:

- 2.1 Undertake servicing and maintenance activities in accordance with the particular requirements of the installed apparatus, plant and equipment; and in accordance with the Authority's annual programme of works.
- 2.2 Undertake field calibration of flow meters, pipeline pressure monitors, and dissolved methane meters; to an acceptable accredited standard
See Appendix 4 for information on Methane meters
- 2.3 Carry out inspections of installed apparatus, plant and equipment sufficient to ensure continued operation and performance of the same. Report on the condition and advise on any necessary repairs, refurbishment and replacements Etc.
- 2.4 Organise and coordinate work activities (both planned and reactive) to ensure the satisfactory maintenance and performance of the installed apparatus, plant and equipment.
- 2.5 Provision of out of hour's emergency breakdown cover
- 2.6 Supervision of external contractors' on-site activities.
- 2.7 Develop and implement solutions to issues associated with the treatment and discharge of emissions (landfill gases and landfill leachate) arising from the landfill sites.
- 2.8 Source appropriate apparatus, plant and equipment to meet the requirements of existing installed or modified environmental mechanical infrastructure. (Procurement of said shall be made by the Authority once satisfied on best value).
- 2.8 Work closely with and liaise with all members of the Estates Management section.

- 2.10 Attendance at meetings as and when required (Office and site based meetings).
- 2.11 Maintain records and documentation to support management systems.
- 2.12 Coordinate and liaise with Regulatory bodies as and when required.
- 2.13 Ensure that all systems, along with discharges and releases, are compliant with all Licences, Permits and Consents Etc.
- 2.14 Compliance with the Authority's ISO 14001 Environmental Management System including all relevant H&S legislation and policies.
- 2.15 Seek to continually improve mechanical and electrical systems by way of efficiency, effectiveness and sustainability.
- 2.16 Keep abreast of development in mechanical engineering apparatus, plant and equipment with particular regard to the Waste Disposal / Management industry.
- 2.17 Other duties consistent with the above which may arise given the variable nature of the function of the Estates Management section.

3. Essential attributes

The appointed contractor shall possess the following attributes:

3.1	QUALIFICATIONS	A relevant qualification in Mechanical Engineering, or proven experience in the mechanical engineering field.
3.2	EXPERIENCE	<p>Closed landfill management, gas field management, and landfill leachate control and treatment systems.</p> <p>Dissolved methane metering and field calibration</p> <p>Supervision of contracts particularly in respect of those matters relating to specification compliance</p>
3.3	ABILITIES	To organise and prioritise workload, working without immediate supervision, and as part of a multi-disciplined team

To provide practical advice on methods of mechanical installation, along with ability for implementation of mechanical systems.

To liaise effectively with third party contractors and Regulators Etc.

To monitor, supervise and report on the work activities of third party contractors.

To undertake, document, report and evaluate Risk Assessments, Method Statements and Construction Phase Plans

To work in compliance with the Authority's Environmental Management System

To undertake field calibration of methane meters, flow meters and pressure monitors.

3.4 KNOWLEDGE AND SKILLS

Mechanical engineering methods and techniques specifically with respect to pump design and installation, and the principals of leachate aeration and air stripping.

'Industry' knowledge of:

The Control of Substances Hazardous to Health Regulations 2002

The Dangerous Substances and Explosive Atmospheres Regulations 2002 and ATEX Directives

The Confined Spaces Regulations 1997

The Construction (Design and Management) Regulations 2015

Permit to Work Systems

The Waste (England & Wales) Regulations 2011

In relation to the transfer of controlled waste and waste transfer notes, along with waste carrier licences

Verbal and written communications along with computer literacy and accurate record

		keeping.
3.5	OTHER REQUIREMENTS	Possession of a full driving licence and use of own vehicle
		Possession of an EA Waste Carriers Licence

4. Location of the works

- 4.1 Working day will be distributed between the Authority's head office and each of the seven closed landfill sites subject to the requirements of the installations, the maintenance programme, reactive works and other workload as required.
- 4.2 A workstation, with computer Etc., is available for use in the Authority's head office at Mann Island for central administration activities as required.
- 4.3 The landfill sites are located at:
- Bidston Moss Community Woodland, Wallasey Bridge Road, Wallasey, Wirral, CH41 1EB
 - Billinge Hill Quarry, Rainford Road, Billinge, St Helens, WN5 7PF
 - Foul Lane Closed Landfill Site, Foul Lane, Southport, Sefton, PR8 5LA
 - Red Quarry Closed Landfill Site, Chester Lane, St Helens, WA9 4DE
 - Roughdales Closed Landfill Site, Sutton Heath Road, St Helens, WA9 5HP
 - Sefton Meadows Extension II Closed Landfill Site, Sefton Lane, Maghull, Sefton, L31 8BX
 - Sefton Meadows Extension III Closed Landfill Site, Sefton Lane, Maghull, Sefton, L31 8BX
- 4.4 See Appendix 3 for location plans of the sites

5. Details of site infrastructure and installations

- 5.1 Details of the existing site infrastructure, along with system operational details can be found in Appendix 1 and Appendix 2

SCHEDULE OF RATES
PREAMBLE TO THE SCHEDULE OF RATES

These preambles are deemed to form part of the Schedule of Rates.

- The Schedule of Rates for the services to be performed is to be ascertained by reference to the Specification and Conditions of Contract.
- The rates included in the Schedule of Rates shall be deemed to be the full inclusive value of the service covered by the item. This shall include all expenses, mileage and transportation costs, labour, tools, equipment and instrumentation required to undertake the works expressed in the Specification.
- The financial costs for replacement parts and components, and upgraded and new apparatus, appertaining to the existing site infrastructures, will be borne by the Authority

The rates entered into the Schedule of Rates shall be exclusive of VAT.

SCHEDULE OF RATES

ITEM		UNIT	RATE	
			£	p
1	Provision of mechanical engineering services	Per month*		
2	Provision of mechanical engineering services	Per annum		
3	Total sum for duration of term contract	Sum**		

**Sum payable monthly*

***Three year term contract*

Appendix 1

Operational manuals

The documents provided in Appendix 1 provide an overview of the landfill site management along with a description of each site and operational systems.

This information is provided in good faith; and the Contractor is directed to visit the sites and satisfy himself as to the nature of the installations and operations, and the nature and full extent of the works to be carried out, along any condition affecting the execution of the Works generally.

Contents:

EMS5 Closed landfill sites management plan Issue 03

EMS 5 Maintenance manual_Bidston Moss Issue 2

EMS 5 Maintenance manual_Billinge Issue 9

EMS 5 Maintenance manual_Foul Lane Issue 04

EMS 5 Maintenance manual_Red Quarry Issue 5

EMS 5 Maintenance manual_Roughdales Issue 4

EMS 5 Maintenance manual_Sefton Meadows II Issue 4

EMS 5 Maintenance manual_Sefton Meadows III Issue 3

Appendix 2

The following drawings are provided in good faith for indicative purposes only:

DSEAR ASSESSMENT		
Bidston Moss	MWDA.511-500-001	Site infrastructure
	MWDA.511-500-002	Leachate system
Billinge HQ	MWDA.510-500-001	Site infrastructure
	MWDA.510-500-002.B	Leachate compound – Plan
	MWDA.510-500-003.B	Leachate compound – Elevation
	GS-01	Gas extraction system
Foul Lane	MWDA.530-500-001	Site infrastructure
	MWDA.530-500-002.B	Leachate treatment system
Red Quarry	MWDA.531-500-001	Site infrastructure
Roughdales	MWDA.521-500-001	Site infrastructure
Sefton Meadows II	MWDA.520.2-500-001	Site infrastructure
Sefton Meadows III	MWDA.520.3-500-001	Site infrastructure
CONFINED SPACE SCHEDULES		
Bidston Moss	MWDA.511-502-001	Confined space schedule
Billinge HQ	MWDA.510-502-001	Confined space schedule
Foul Lane	MWDA.530-502-001.A	Confined space schedule
Red Quarry	MWDA.531-502-001	Confined space schedule
Roughdales	MWDA.521-502-001	Confined space schedule
Sefton Meadows II	MWDA.520.2-502-001	Confined space schedule
Sefton Meadows III	MWDA.520.3-502-001	Confined space schedule
SITE INFRASTRUCTURE AND OPERATIONS		
Bidston	MWDA.511-501-001	Site infrastructure
Billinge HQ	MWDA.510-501-001	Site infrastructure
	MWDA.510-350-001B	Pump chamber (compound) layout
	MWDA.510-350-002B	Pump chamber (compound) elevation
	MWDA.510-350-003B	Aeration system flow diagram and component details
Foul Lane	GS-01.A	Gas extraction system
	MWDA.530-501-001.A	Site infrastructure
	MWDA.530-350-001	Pump chamber layout
	MWDA.530-350-002.B	Pump chamber (compound) layout
Red Quarry	MWDA.530-350-003.B	Aeration system flow diagram and component details
	MWDA.531-501-001	Site infrastructure
	MWDA.521-501-001	Site infrastructure
	MWDA.520.2-501-001	Site infrastructure
Sefton Meadows II	MWDA.520.2-350-002.B	Pump chamber (compound) layout
	MWDA.520.2-350-003.A	Aeration system flow diagram and component details
	MWDA.520.3-501-001	Site infrastructure

Appendix 3
Location Plans

Appendix 4

Methane Meters

The Authority has three dissolved methane meters installed in the leachate treatment systems at:

Billinge HQ
Foul Lane and
Sefton Meadows II

The Methane Meters serve to monitor and control the level of dissolved methane within the leachate being discharged to sewer in order to comply with the Trade Effluent Discharge Consent.

Function

Through Head Space Monitoring, the methane meters provide a continual display of the dissolved methane content from samples of the leachate taken automatically from the leachate treatment systems.

In the event of the dissolved methane content rising above a pre-determined level, the monitor will automatically engage a forced aeration system which will continue to operate until the dissolved methane levels drop to a predetermined limit.

The frequency of samples taken is controlled and adjusted through the PLC unit within the methane meters

Maintenance

The methane meters require ongoing attention in order to maintain gas conditioning systems as required; which is subject temperature, humidity Etc. along with the composition of the leachate being sampled at any one time. This is achieved through visual inspections of the meters, and by attending to the moisture and hydrogen sulphide filters containing silica gel and potassium permanganate respectively.

Calibration

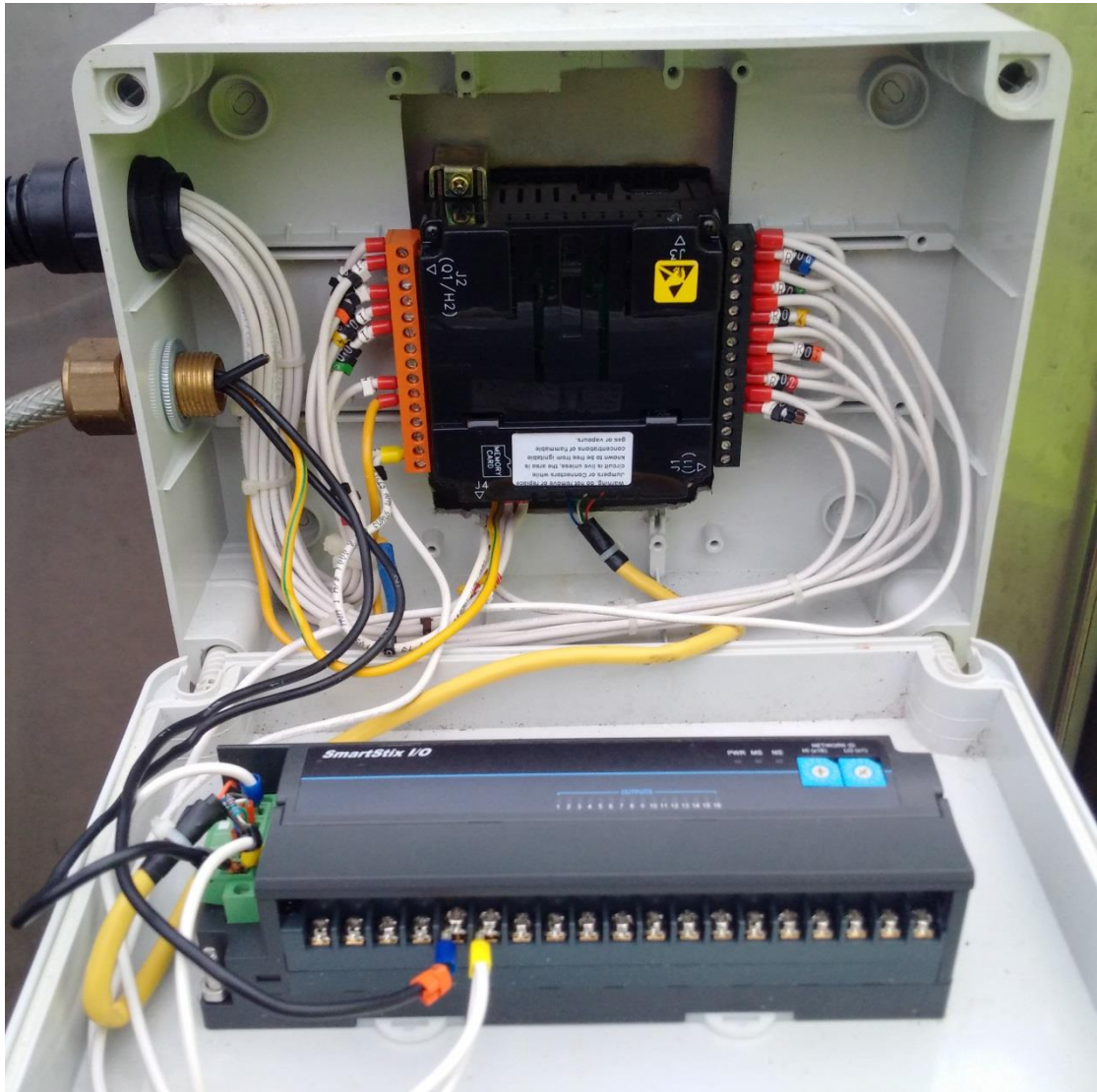
The methane meters contain infra-red gas cards which measure the methane content of the sampled gas. The gas cards require ongoing calibration to ensure accuracy and validity of the gas sample.

1. Span Gas Calibration. To ensure that the value of the dissolved methane detected by the gas card is by use of certified calibration gas consisting of 5% methane in nitrogen.

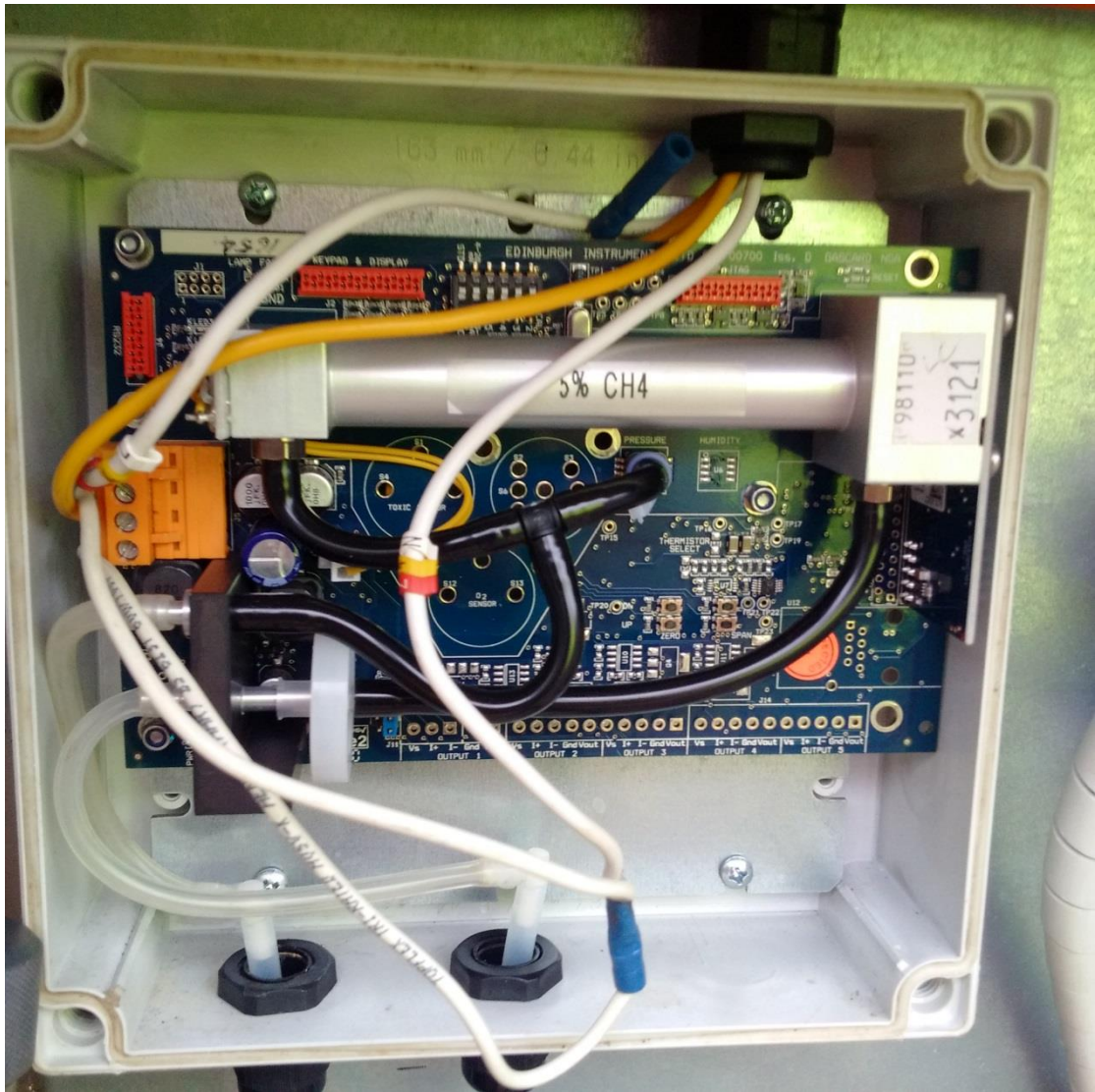
2. Zero Calibration.

To ensure that the gas card produces a minimum output of 4 milliamps in order to detect dissolved methane. Output adjustments are made through a Process Meter.

Photographs of methane meters



PLC Unit



Gas card



Methane meter internal components