

Reference: PS2146 QV2 Date: 16th January 2019

Matthew Gardner Ridge & Partners LLP The Cowyards Blenheim Park Oxford Road Woodstock OX20 1QR

Dear Matthew,

RE: Bicester Heritage, new Technical Site

Thank you for your valued enquiry for a packaged pumping station at the above project. We take pleasure in supplying a costing proposal for a Non Adoptable pumping station to handle waste water discharge from the site.

The pumping station detailed in the following costing proposal, has been designed using the information forwarded to Paradigm on 10/01/2019.

As experienced pump station technicians and manufacturers, we ensure you are provided with the most cost effective solution for your project requirement. Our systems are built in accordance with BS EN 752-6: 1998. Further project specific calculation documents can be supplied upon request.

I trust that this equipment proposal meets your requirements, if you need any clarification or additional information, please do not hesitate to contact me.

Yours sincerely

Glen Gulley Technical Design Consultant

E. <u>glen.g@pump.net</u> T. 0118 986 6101 M. 07881 311 904



System Type:Foul Water Pump StationInvert Depth:2.012m

1. **Pump Chamber -** 1 no GRP holding tank 2,500mm diameter x 4,200mm deep fitted with 1,10mm x 900mm opening and SWL 10 Tonne cover (supplied loose). Chamber is manufactured with external heavy duty reinforcement ribs. One loose wall seal for inlet supplied for contractor to install unless otherwise agreed. The calculated storage volume in this chamber is 6,800 litres.

<u>Design Notes</u>: Due to the depth of excavation and ground pressures present, this pumping station has been designed with reinforcement ribs.

- 2. Submersible Pumps 2no three phase 1.5kW heavy duty 80-200 submersible pumps, 3.8 l/sec on duty/standby configuration with multi-vane vortex impeller facilitating an 74mm clear passage for solids (see attached specification sheet). Pumps are fitted with quick release couplings and lifting chains and shackles for easy maintenance removal and include 10m cable. <u>Design Notes</u>: 80mm solids handling has been selected to reduce the risk of blockages in the pumping system and to ensure hydraulic efficiency.
- 3. **Pipework -** Set of dual high pressure 80mm pipework with dual GG25 Cast Iron epoxy coated non-return valves and sluice valves, dual pump auto couplings and guiderails to be pre-installed in the chamber terminating in a 90mm compression outlet for connection by contractor. <u>Design Notes</u>: Class 7 U-PVC has been selected for this pumping station due to the durability and chemical resistance qualities.

4. **Control Panel -** 1no 415V Dual Pump Control Panel with automatic duty changeover to ensure consistent pump operation. Control Panel is built to the following Specification;

- Wall mounted enclosure with a lockable door for internal installation
- Compartments with door interlocked 'ON LOAD' isolator
- Contactor starter(s) with timers where appropriate, incorporating thermal overload and single phasing protection
- Hand/Off/Auto selection switches
- Automatic duty pump alternator
- Indicator lamps for Supply On, Run and Tripped conditions
- High Level Alarm circuit operating from a separate float switch
- Audible & Visual High Level alarm
- Set of volt free contacts for External Contractor's BMS

<u>Design Notes</u>: This is a standard Heavy Duty 5kW specification Paradigm panel selected because of its capacity to support an external BMS system as well has having integral audible & visual alarms. Contractor will need to mount and power panel prior to commissioning.

- 5. Level Controls 4no 10m Heavy duty mercury-free float switches with counter-weights to be installed and set by Paradigm Engineers at point of commissioning.
- 6. **Commissioning -** Electrical and Mechanical commissioning and pump installation to be carried out by Paradigm Engineers (when required) with reports and 'as built' drawings to be supplied with comprehensive O&M Manual.
- 7. **Rising Main Specification -** The rising main for this system is to be a 90mm OD Black HDPE SDR17 and is to be supplied, fitted and tested by others.

Total Project Cost for Above

Including Commissioning & Free Set of Universal Manhole Keys

£10,521.00 + VAT



Optional Extras

Inlet Kits

Heavy duty DART HSS Bi-Metal Hole Saw & Arbor for cutting inlets in GRP or HDPE pumping station chambers prior to inserting the self-expanding inlet seals. Wall Seals are suitable for standard 4" & 6" drainage connections



6" (150mm) Inlet Kit (Including 1 Seal)	£56.00 ea
4" (100mm) Inlet Kit (Including 1 Seal)	£42.00 ea
6" (150mm) Additional Inlet Seal	£11.50 ea
4" (110mm) Additional Inlet Seal	£9.50 ea

Anti-Back-up Universal Drain Valve – NEW FOR 2018

Universal fit water, odour and rodent non-return valve *for pump station inlets* designed to *prevent foul water flowing back in to the sewage system* in the event of a pump failure *reducing the risk of flooding* the property. Can be installed in Clay and Plastic 4"/110mm & 6"/150mm pipes and WRc Tested with a 5 year guarantee.



4"/100mm 6"/150mm £58.00 ea £143.00 ea

Control Panel Kiosk

Green Mild steel roadside kiosk 1250mm high x 750mm wide x 400mm deep with locking door, and warning beacon. Standard colour is Dark Green Shade RAL 6005.

Value £375.00

Price Each

£511.00



Wireless SMS alarm system for early warnings of power failure, pump failure and high level in the pumping chamber. The system comes free with 12 months of data usage to cover warranty period. It is incorporated directly into Paradigm control panel and can be accessed remotely for historic data by a smartphone device or PC.





Scope of Works

The following displays the typical scope of works for a packaged pumping station from design to commissioning also outlining responsibilities covered;

- 1. System proposed
- 2. Proposal approved by client/engineer/contractor
- 3. Order placed with Paradigm
- 4. Site levels confirmed prior to manufacture
- 5. Delivery arranged
- 6. Pumping Station and control panel offloaded
- 7. Pumping station installed, cable duct(s) inc. draw rope(s), vent and pipework connection(s) complete
- 8. Control panel mounted and powered
- 9. Pre-commissioning checklist to be returned to Paradigm
- 10. Pull cables from pumping station to control panel
- 11. Install pumps and level controls
- 12. Commission pumping station
- 13. Supply O&M Manual with Commissioning Certification

<u>Key</u>

By Paradigm By Others

Pumping Station Warranty

Warranty is limited to replacement or repair, at Manufacturer's discretion, of any parts or equipment without removal and reinstallation cost for a period of twelve months from date of invoice, provided such part of equipment that is deemed by the respective manufacturer to be faulty.

Any work done on site to inspect or remedy faults that are subsequently not accepted as being under warranty by the manufacturer, or are caused by misuse, fair wear or operating procedures, will be charged at parts and labour and travelling time rates applicable at the time.

If the buyer requires our services in respect of site inspection or service outside of what is covered by Manufacturers' warranties, then Buyer should enter into a separate agreement with Paradigm Systems in respect to the same. In the event of no such separate agreement, all operations, calibrating, cleaning and maintenance of plant are the responsibility of the buyer.

Paradigm Systems have not acted as a consultant nor charged design fees on this project, and are in no way responsible for, nor guarantee any particular level or performance of the pumping station unless such guarantee is specially given in writing.

Under no circumstances is Paradigm Systems liable for any direct or consequential loss or damage to persons or properties of any nature due to any cause whatsoever. Application of warranties is conditional on Paradigm Systems having received in cash the total contract price. Furthermore, Paradigm Systems reserves the right to withdraw any code compliance, British/European Standard compliance or selection compliance, should the contract not be paid in full.

Paradigm would like to confirm their keenest interest in working with you on your Bicester Heritage project and please don't hesitate to contact us should you require any further information.



PARADIGM SYSTEMS TERMS & CONDITIONS OF SUB-CONTRACT

These Terms & Conditions shall apply to all orders placed with the Sub-Contractor, and any stipulations or conditions in a Contractor's order which conflict with, qualify or seek to negate any of these Terms & Conditions shall be inapplicable and have no force or effect. 1. Definitions

(a) "Sub-Contractor" Paradigm Systems

(b) "Contractor" means the Sub-Contractor's Customer for the Works.

(c) "Works" means the building works the subject of the contract, in accordance with the Quotation.

(d) "Quotation" means the quotation issued by the Sub-Contractor. 2. The Works

(a) The Sub-Contractor will carry out and complete the Works in accordance with the Quotation in a good and workmanlike manner. (b) The Sub-Contractor is entitled to rely on the accuracy and completeness of Contractors plans, specifications and reports provided to the Sub-Contractor.

(c) Unless expressly agreed the Sub-Contractor will not carry out any form of design for these Works. Insofar as the Sub-Contractor will use best endeavours to comply with current legislation, Building Regulations and best practice, no warranty or other liability on the part of the Sub-Contractor shall be created or implied in regard to the suitability or fitness for purpose of components or systems recommended or any calculations undertaken. Structural and other calculations shall be undertaken by the Contractor

(d) In the case where design forms part of the works, the Contractor shall allow a period of 4 weeks from the date of instruction for the Sub-Contractor to complete the design and produce design drawings required by the Contractor and shall allow a further 6-8 weeks from the date upon which the Contractor approves design drawings to manufacture the Works. Copyright in all design drawings or documents prepared by the Sub Contractor shall remain vested in the Sub-Contractor.

3. Materials

Samples submitted for approval show substance and general character only. Colour, size, thickness or shape cannot be guaranteed. 4. Title

All materials will remain the Sub-Contractor's property with title fully vested in the Sub-Contractor until the Contractor has paid for the Works in full. 5. Variations and Extras

(a) The prices quoted are based upon dimensions, quantities, drawings and specifications given at time of tender. The Sub-Contractor reserves the right to require re-calculation and apply supplemental charges if any of these parameters change or to increase the contract price to reflect increases in the cost of materials or labour between the end of the fixed price period specified in the Quotation and the date of completion. (b) If additional work is requested by the Contractor a quotation will be submitted and the additional work will not be started until the Contractor has placed an order and agreed the price to be paid for the additional works. The Sub-Contractor shall not be liable for the consequences of late acceptance.

6. Payment

(a)The Sub-Contractor may invoice or provide applications for payment for interim payments each month as the Works proceed. The sums on each interim invoice or application become due upon the date of issue. The payment mechanism and timetable shall be in accordance with the Scheme for Construction Contracts (England & Wales) Regulations 1998, (As amended from time to time), (The Scheme). (1) 40% on Design, 55% on Delivery, 5% on Commissioning, (2) Account holders 30 days end of month following. Non account holding customers, payment on pro-forma. (b) The Contractor will not be entitled to withhold payment in whole or in part of any sum due unless and until he issues a valid Pay-less Notice in accordance with The Scheme. No set-off or abatement will be permitted by reference to any sum due under one or more other contracts. (c) The Contractor will not be entitled to make any retention unless agreed in writing. The Sub-contractor retains the entitlement to issue a Retention Bond in lieu of cash retentions. It is a condition precedent that the first moiety of retention is to be released in full together with VAT upon practical completion of the Sub-Contractors works. The second moiety of retention shall be released 12 calendar months later.

(d)If any payment is not made by the Contractor by the expiry of its respective Final date for Payment the Sub-Contractor will be entitled to statutory compensation and to charge interest pursuant to the Late Payment of Commercial Debt Regulations 2013. The applicable rate is 8% per annum above Bank of England base rate. In addition the Sub-Contractor will after the expiry of seven days from the giving of written notice to this effect to the Contractor, be entitled to suspend the Works and any works under any other contract with the Contractor until such outstanding sum is paid. The sub-contractors reasonable costs incurred by such suspension will be reimbursed by the Contractor.

(e) The Sub-Contractor reserves the right to refuse to execute any order or contract if the arrangements for payment of the Contractor's credit are not satisfactory. In the case of non-payment of any account by its Final date for Payment or in the case of death, incapacity, bankruptcy or insolvency of the Contractor or when the Contractor is a Limited Company in the case of liguidation or the appointment of a receiver the purchase price of all goods delivered to date and/or any sums already due from the Contractor shall become payable immediately from the Contractor and in addition the Sub-Contractor has the right to cancel every contract made with the Contractor or to cancel, suspend or discontinue delivery of goods and materials for same. This provision acts without prejudice to the Sub-Contractor's right to recover any loss sustained, caused by the above circumstances.

7. Time for Completion

Time shall not be of the essence. The Sub-Contractor will use reasonable endeavours to ensure that the Works are completed within the time (if any) stated in the Sub-contractors Quotation, otherwise completion shall be within a reasonable time. The Contractor expressly waives all claims for delay charges or Liquidated Damages.

8. Defects

The Sub-Contractor will rectify at its own cost any defects or faults which appear and are notified by the Contractor to the Sub-Contractor in writing within 12 months of completion of the Works and are due to defective workmanship by the Sub-Contractor or defective materials supplied by the Sub-Contractor. The Sub-Contractor shall be afforded reasonable opportunity and facilities to investigate such claims. 9. Consequential Damage

The Contractor expressly waives all claims for special, incidental, or consequential damages it may have against the Sub-Contractor, including without limitation damages for principal office expenses, financing costs, loss of business and reputation, and loss of use. 10. Liability

The Sub-Contractor's liability for death or personal injury to any individual caused by negligence of the Sub-Contractor or its Sub-Sub-Contractors or agents is not limited. Without prejudice to the above, the maximum liability of the Sub-Contractor for all other events shall not exceed the contract price.

11. Disputes

(a) The Sub-Contractor and Contractor agree that either party may refer a dispute to adjudication at any time, following the rules and procedures of the Scheme for Construction Contracts Part 1 (the Scheme). The Decision of the Adjudicator shall be binding on the parties until the dispute is finally resolved through agreement or by Arbitration under the CIMAR rules

(b) Save in the circumstances provided for below, the parties shall each bear their own legal costs and other expenses incurred in the adjudication. (c) Where the referring party is awarded in the aggregate a sum more than 50% of the amount claimed, the non-referring party shall reimburse the referring party's legal costs and other expenses which the referring party incurred in the adjudication process

(d) The adjudicator shall decide how his fee and reasonable expenses are to be apportioned between the parties

(e) The adjudicator shall be permitted to correct his decision so as to remove clerical or typographical errors arising by accident or omission 12. Jurisdiction

This contract is governed by the law of England and Wales.