VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

TENDER DOCUMENT
CONTENTS

Scope of Work	2
List of Documents	3
Specifications	4
Schedule of Rates	13
Form of Tender	17
Appendix	

The Pirbright Institute
Ash Road
Pirbright
Woking
Surrey
GU24 0NF

Gurney Consulting Engineers
Hallmark House
10-12 St Johns Road
Woking
Surrey
GU21 7SE

Project no. 10068

February 2019

VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

SCOPE OF WORK

The works comprise the installation of a new vehicle turning area. The works are to include the removal of the existing concrete Grass-Crete surface and sub-base and the installation of new concrete slabs as per drawing 10068-11. Modifications to existing ground levels will require soft landscaping to suit new hardstanding levels. Levels of existing gas valve covers and frames will require modification to suit new hardstanding levels. A small tree also requires removal. New slabs are to be constructed to allow movement using construction and isolation joints as shown on drawing 10068-11.

VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

LIST OF DOCUMENTS

1. Earthworks Specification
2. Concrete Specification
3. Schedule of Rates
4. Drawing No. 10068-11 by Gurney Consulting Engineers

VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

EARTHWORKS SPECIFICATION

INDEX

1.0	Definitions, Classification & General Use of Earthwork Material
2.0	Forming Areas of Fill
3.0	Preparation and Surface Treatment of Formation
4.0	Compaction of Areas of Fill
5.0	Earthworks to be Kept Free of Water
6.0	Testing
7.0	Manufacturer's instructions
8.0	Concrete specification

1.0 Definitions, Classification & General Use of Earthwork Material

1.1 (i) Formation level shall mean the bottom of the sub-base layer.

(iii) Sub-base to be 300mm DoT type 1 sub-base

(iv) Reinforcement mesh to bottom of slab to be discontinuous across joints and comply with BS 4483

(v) RC Slab to be 200mm PAV2 concrete to BS 8500, laid with falls as shown on drawing 10068-11

(vi) Construction joints in slab to use de-bonded dowel bars as shown on drawing 10068-11, using 20mm Colpor 200 PF sealant by Fosroc with 20mm filler board

(vii) Backfill to soft spot excavation to be variable type 6F2 compacted in no greater than 150mm layers.

1.2 All works are to comply with DfT Manual of Contract Documents for Highway Works, Specification for Highway Works.

1.3 Any fill material used within 500mm of concrete structures shall have soluble sulphate content not exceeding 2.5g/litre when tested in accordance with BS 1377 (Test 10).

1.4 Excavated material and topsoil shall be distributed back over the site evenly in areas not for use as the new car park, and not in spoil heaps.

1.5 The Contractor shall make his own arrangements for stockpiling of suitable material and for the provision of sites for the purpose.

2.0 Forming Areas of Fill

2.1 In areas of soft ground identified after proof rolling, soft ground is to be removed and back filled with 6F2 material.

3.0 Preparation & Surface Treatment of Formation

3.1 When the completed formation is not immediately covered with hardcore or sub-base, it may be protected by robust impermeable plastic sheeting with lapped overlaid joints set to prohibit ingress of water. Should the Contractor allow accepted formation to reach a moisture content greater than the value permitted for the compaction of that material in the Contract, then the Contractor shall allow the material to revert to an acceptable moisture content and if so directed by the Engineer, make good the surface by re-compaction prior to overlaying with hardcore or sub-base.

4.0 Compaction of Areas of Fill

4.1 Fill shall be deposited and spread evenly across the area of fill in layers, each of which shall be compacted to the following relative densities (as assessed by Test 15 in BS 1377) and to compacted thicknesses no greater than 150mm prior to overlaying with fresh fill material:
Uppermost layer 95%
Underlying layers 90% minimum.

4.2 Site trials to establish the number of passes required for the achievement of these states of compaction by proposed compaction plant shall be undertaken at the Engineer's direction for each type and source of fill anticipated, prior to the commencement of filling operations.

4.3 Should any layer of fill be considered by the Contractor to have been inadequately compacted, he may carry out comparative field density tests (BS 1377 Test No.15) on these suspect layers. If the test results show the state of compaction to be below that specified in Clause 8.1, the Contractor shall carry out such remedial works as the Engineer directs.

5.0 Earthworks to be Kept Free of Water

5.1 The Contractor shall arrange for the rapid dispersal of water shed onto the earthworks or completed formation or which enters the earthworks from any source, and when practicable the water shall be discharged into the permanent outfall for the storm water pipe drainage system. Adequate means of trapping silt shall be provided on temporary systems discharging into the permanent drainage system

6.0 Testing

6.1 Materials

The Contractor shall supply the source of all materials to be approved by the Engineer prior to bulk delivery to site. The Engineer may test any material that appear unsuitable and reject any material that fails to comply with the requirements of the Specification.

7.0 Manufacturer's Instructions

Manufacturing installation instructions should be complied with at all times and are deemed to form part of this specification.

VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

CONCRETE SPECIFICATION

1.00	General
2.00	Materials
3.00	Ready mixed concrete
4.00	Transporting & Placing
5.00	Compaction of concrete
6.00	Construction joints
7.00	Curing and protection
8.00	Adverse Weather Conditions
9.00	Defective Concrete
10.00	Formawork
10.00	Tolerances

1.00 General

1.1 All material, workmanship and tests (where required) shall comply with the appropriate current British Standards, Building Regulations, Bye-Laws and the like, and shall be in strict accordance with all relevant drawings, schedules and specifications to the entire satisfaction of the Contract Administrator.

1.2 The Contractor is to furnish the Contract Administrator with certificates showing such information as to quality, weight, strength, description and other particulars in respect of all materials as may be required.

1.3 Materials are not to be used without prior sanction of the Contract Administrator and all materials condemned by the Contract Administrator as unfit for use in the Works are to be immediately removed from the site.

1.4 All materials stored on site are to be adequately protected against contamination from all sources.

2.00 Materials

2.1 Aggregates shall comply with the requirements of BS 882.

2.2 The aggregates shall be clean and stored on site separately on a clean hard drained surface to prevent mixing and contamination by other materials.

2.3 Fine aggregates shall be within Grading Zones C, M or F, coarse aggregate shall be graded in accordance with BS 882, Table 4, having a maximum size indicated by the class of concrete specified.

2.4 The coarse and fine aggregates together shall form a continuous grading to produce a concrete of the properties specified.

2.5 All-in aggregate shall only be used for lean mix concrete and shall comply with Table 6 of BS 882, but with nominal maximum size of 40mm.

2.6 Marine aggregate shall not be used with sulphate resisting cement.

2.7 Water shall be clean and uncontaminated and shall comply with BS 3148.

2.8 Admixtures shall not be used without specific written approval of the Contract Administrator.

2.9 Steel fabric shall comply with BS4483.

2.10 All reinforcement, immediately before placing, shall be free from dirt, loose rust, scale, paint, oil wash or other deleterious matter.

2.11 All reinforcement is to be bent in accordance with BS4466.

2.12 Bundles of reinforcement shall be clearly tagged with bar schedule and bar mark numbers.

3.00 Ready Mixed Concrete

3.1 Concrete grade to be PAV 2 designated mix. Ready mixed concrete shall be obtained from an approved supplier, who has a current QSRMC Certificate of Registration.

3.2 All concrete shall conform with the requirements of this Specification and all delivery/advice notes shall clearly state each of the following:-

1. Minimum cement content in kg/m³ of concrete.
2. Minimum crushing strength in N/mm² at the age of twenty eight days.
3. Specified slump.
4. Maximum size of aggregates.
5. Type of cement.
6. Time when concrete was mixed with water.

4.00 Transporting & Placing

4.1 Concrete shall be transported from the mixer to the works/formwork as rapidly as practicable by methods which will prevent the segregation or loss of the ingredients and maintain the required workability.

4.2 All concrete shall be placed in its final position and left undisturbed within two hours of the time of first contact between cement and water.

4.3 All vehicles and plant for transporting and placing concrete shall be kept clean and free from accumulation of hardened concrete and other deleterious matter, to avoid contamination or segregation.

4.4 Spaces to be occupied by concrete shall be clean and free from standing water. However, any absorbent surfaces shall be thoroughly wetted prior to the placing of concrete.

4.5 The placing of concrete shall be continuous, for the full thickness of the work between specified or approved movement or construction joints. Variation from this method must be approved by the Contract Administrator, but concrete having initial set must not be disturbed by subsequent placing or compaction.

4.6 Concrete must not be dropped through a height of more than 2.0m. Chutes used to convey concrete must not produce segregation during discharge.

4.7 The Contractor shall keep on-site records indicating date, time and location of all concrete placed.

5.0 Compaction of Concrete

5.1 Unless otherwise approved, all concrete shall be thoroughly compacted by the use of immersion vibrators. Vibrators shall be operated uniformly within the mass of the concrete during placing, and thoroughly worked around reinforcement, into corners of the formwork etc., to form a solid mass free from voids and having the required surface finish on removal of the formwork.

5.2 Over vibration causing segregation, surface laitence or leakage through formwork must be avoided.

5.3 Vibrators shall not be applied directly to reinforcement or formwork.

6.0 Construction Joints

6.1 Concreting shall be carried out continuously up to construction joints.

6.2 Construction joints will be as shown on the drawings or as approved by the Contract Administrator.

7.0 Curing & Protection

7.1 The Contractor shall protect and cure all concrete for such periods as are necessary to ensure development of the specified strength and to prevent cracking, crazing and efflorescence.

7.2 The concrete shall be protected against the harmful effects of sunshine, drying winds, frost, rain or running water. The protection shall be applied as soon as practicable after the placing of the concrete and shall be in position for a period of seven days.

7.3 No concrete shall be disturbed for a period of at least 24 hours after placing.

8.0 Adverse Weather Conditions

8.1 In cold weather concrete shall not be deposited when the air temperature is below 2 degrees centigrade. A maximum/minimum thermometer should be kept on site to record air temperature.

8.2 Chemicals for the prevention of freezing or to accelerate the rate of hardening of concrete are not to be used unless prior approval, in writing, has been given by the Contract Administrator.

8.3 The surface temperature of concrete when placed must be at least 5 degrees centigrade, and this temperature must be maintained for not less than 24 hours, thereafter the concrete temperature must not fall below 2 degrees centigrade for a further period of 48 hours.

8.4 Concrete must not be placed against frozen or frost covered surfaces.

8.5 In hot weather suitable precaution shall be taken to ensure that the temperature of the concrete when deposited does not exceed 32 degrees centigrade to avoid premature stiffening of concrete placed in contact with hot dry surfaces.

9.0 Defective Concrete

9.1 Any concrete which, in the opinion of the Contract Administrator, is damaged during setting from any cause whatsoever, shall be cut out and replaced by the Contractor at his own expense.

10.0 Formwork

10.1 The design and construction of formwork shall be the total responsibility of the Contractor, notwithstanding that all formwork shall be to the approval of the Contract Administrator.

10.2 All formwork shall be so arranged to be readily dismantled and removed without shock, disturbance or damage, with side forms capable of removal in advance of soffit forms. In no circumstances shall formwork be struck until the concrete has set sufficiently to withstand any stress to which the structure will be subjected.

11.0 Tolerances

11.1 The dimensions of concrete as cast when compared with those on the drawings shall be within the tolerances given below.

Top surfaces of slabs	+ 5mm	–5mm
Cross sectional dimensions	+ 5mm	–5mm

	1.0 SCHEDULE OF WORKS	Quant/ Unit	Unit	Rate	£	p
	All works to be carried out as shown on the drawings and in accordance with the specifications.					
1	Mobilisation and site establishment	Item				
2	Undertake a detailed condition survey of the site and record the conditions in text with photographs. The condition report is to be reviewed and approved by the Engineer prior to commencement of the works.	Item				
3	Remove existing Grass-Crete surface and excavate exisitng sub-base. Excavated material to be carted to licensed off site tip. Proof roll formation level.	Item				
		Item				
4	Modify levels of existing gas valve cover and frames					
		Item				
5	Remove exisitng tree as shown on drawing 10068-11					
6	Import and lay 300mm Type 1 sub-base and compact in maximum 150mm layers.	Item				
		Item				
7	Construct new concrete slabs to falls in sections no greater than as shown on drawing 10068-11 using construction / isolation joints	Item				
8	Soft landscape to adjust surrounding levels to suit new hardstanding.	Item				
9	Leave site clean and tidy ready for use					
		Item				
10	Provisional Sum Allow a provisional sum for removing soft spots and backfilling with granular material as specified.	Item				
	TOTAL TO COLLECTION:					

	COLLECTION	Quant/ Unit	Unit	Rate	£	P
	Vehicle Turning Area Preliminaries: 1.0 Schedule of Works :					
	Sub-total					
	Contingency Sum — The Tenderer shall allow the contingency sum of 5% of the Sub-total for unforeseen works that may arise. This sum shall be expended only upon the Engineer's written instructions and shall be deducted in whole or in part on completion of the works.					
	TENDER SUM					

GURNEY
consulting engineers

VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

SCHEDULE OF RATES

(To be completed in full by the Tenderer)

NOTE: This schedule of rates is not intended to reflect all the items that are required in the works. Neither are the quantities necessarily representative of the actual quantities that form the works. The schedule of rates may be used by the Engineer in determining the value of any significant variations in quantities. The Bill of Quantities prices will also be taken into account in any such valuation of variations.

The Bill of Quantities, Schedule of Rates and Method of Measurement are not in strict accordance with CESMM3, but are based on a simplified approach. The requirements stated or implied by the contract documents and drawings have broadly been split into a number of different lump sums. The list of items covered under each lump sum description is not exhaustive but it is the Contractor's responsibility to ensure that his prices include all requirements specified or implied by the contract documents.

SCHEDULE OF RATES

All rates to be inclusive of supervision, setting out and all other preliminary elements

	ITEM DESCRIPTION	Unit	Rate £
	Method related charges:		
1	Maintaining accommodation, supervision, services and plant on site as a result of extension to the Contract, where certifiable by the Engineer in accordance with the Conditions of Contract.	day	
2	General excavation of sub-soil maximum depth not exceeding 1m.	m^3	
3	Supply, erect and maintain 2.0 m high wire-mesh anti-intruder fencing area working areas	m	
4	Filling voids or soft spots encountered during Works with approved granular material obtained from on-site stockpile. Fill material to be laid on good ground and compacted in layers not exceeding 150mm.	m^3	
5	Disposal of material off-site	m^3	
6	Undertake WAC test to check for contaminants in material to be disposed of off site	No.	

VEHICLE TURNING AREA
AT
THE PIRBRIGHT INSTITUTE
PIRBRIGHT, SURREY

FORM OF TENDER

Project No 10068

The Pirbright Institute
Ash Road
Pirbright
Woking
Surrey
GU24 0NF

Sirs,

We, the undersigned, having inspected the site, offer to carry out the Works associated with the installation of a new vehicle turning area at the The Pirbright Institute, Pirbright, Surrey in accordance with the Conditions of Contract, Specification, Bill of Quantities, Schedule of Rates and the Drawings for the fixed price sum of:

£..... TENDER SUM

(_____) (in words) (_____) (in words)

or such as may be ascertained in accordance with the said conditions.

We undertake to complete the work within ..... weeks.

The contractor is asked to quote daywork rates as per the following schedule, notwithstanding the fact that the Tender is a Lump Sum Tender and these rates will only be used should it be necessary to instruct any variation.

DAYWORK RATES:

Labourer	.....
Concreter	.....
Carpenter	.....
Ground Worker	.....
Percentage on costs for plant & materials	.....

If our tender is accepted we will, if required, provide security for the due performance of the Contract as stipulated in the Conditions of Contract.

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 that you may receive.

We are,

Yours faithfully,

Date:

APPENDIX

- Drawings no's 10068-11 by Gurney Consulting Engineers