

OTTERY St MARY TOWN COUNCIL



SPECIFICATION

for the

NEW MUGA & ASSOCIATED WORKS

at the

STRAWBERRY LANE SITE

OTTERY St MARY

DEVON

Hemstock Design Ltd

November 2023

Ref: OSM-SL_S_11-23

INDEX

Form of Contract and Instructions for Tendering	3
A Preambles	
1) Background Information	7
2) Construction Work Overview	9
3) General Requirements	9
B Technical Specification	11
C Bills of Quantities - preambles & attachment	22
APPENDICES	25
1 – Drawing Log	
➤ Site Location & General Layout	
➤ Proposal Drawings:	
• MUGA Pitch Line marking	
• Drainage System layout	
• Floodlighting	
2 – Site Images	
3 – Netball Standards	
4 - Fixtures Images	

INSTRUCTIONS FOR TENDERING

1. Tenders must be submitted as detailed in the Invitation to Tender and shall not be altered in any way whatever. Every person tendering shall arrive at the amount of his tender by fixing his price for the works required to each item as set forth in the Bill of Quantities and Schedule of Rates and each item must be fully priced out and not bracketed with another item. All entries must be written in ink and the Form of Tender must be completed and signed where indicated.

The offer shall be open for acceptance for 60 days from the closing date given in paragraph 3 below.

2. When no Tender is submitted all documents must be returned.

3. The Tender, together with any documents which require to be attached to it shall be **returned to the Client:**

Mrs Kerry Kennel, CEO
Ottery St Mary Town Council
Council Offices, 8 Broad Street
Ottery St Mary
Devon
EX11 1BZ

Technical queries relating to the tender can be directed to:

David Hemstock
Hemstock Design Ltd

E: david@hemstock.design

M: 07850 744957

Tenders must be received by **noon on Friday 9th January 2024**. Tenders received after this time and date will not be considered.

4. The award of this Contract will be based on competitive Tenders.

5. All Contractors are required to furnish in Appendix B to the Form of Tender the names and addresses of any specialist firms and sub-contractors they propose to employ on the Contract and on Appendix C the source of supply of materials they propose to use on the Contract. These specialist firms, subcontractors, materials and plant may not be changed without the written approval of the Engineer.

6. The Schedule of Rates at Appendix A shall be completed showing a list of plant with the hire rates and labour rates to be used when Dayworks are ordered.

7. The Contractor should be aware that the quantities shown in this document are indicative only, intending to give a basic measure of the amount of work intended to be done, for tendering purposes.

The value of works to be undertaken will be calculated based on the quantities and appropriate rates to meet the budgetary constraints of the Client. The calculated contract value will form the basis for the tender evaluation and agreement between the Client and the selected Contractor.

8. In awarding this Contract, the Client wishes to draw attention to the importance of safeguarding the rights and properties of individuals in the vicinity of the construction site. Private access roads must not be used without prior written agreement on restitution and maintenance with parties responsible for these roads. Contractors should note that the use of land not part of the Site or designated accesses thereto, otherwise than in accordance with the Specification, shall constitute a fundamental breach of Contract.

9. All Contractors are advised that they must not enter into any land or premises for the purpose of carrying out surveys or site investigation works without first obtaining the written approval of the Engineer and Client and the owners and occupiers of the lands or premises affected by the Works. Any Contractor who fails to comply with the above requirements may have his Tender disqualified.

10. The Client does not bind itself to accept the lowest or any Tender and no expense incurred by any person in submitting a Tender will be paid for.

11. The Contractor is requested to include a period and details for which the tendered price will be valid, and at what point the tender should be re-assessed for rising prices.

11. CONDITIONS OF CONTRACT

The Conditions of Contract shall be the ICE Conditions of Contract for Minor Works, Third Edition, produced jointly by the Institution of Civil Engineers, Association of Consulting Engineers and the Civil Engineering Contractors Association with the addition of the following Conditions.

12. HEALTH AND SAFETY

The Contractor shall carry out all operations associated with the specified works in accordance with all current legislation, including the Construction (Design and Management) Regulations 2015 (CDM).

The Contractor shall ensure that his rates are adequate to meet the cost of making all necessary arrangements for the health, safety and welfare of all persons affected by the construction work.

APPENDIX TO THE CONDITIONS OF CONTRACT**1 Short description of the work to be carried out under the Contract:**

- Installation of a new MUGA of 36.6 x 36.5m adjacent to the existing sports pavilion with multi-use surface, fencing, floodlighting and associated hard landscaping at:

Strawberry Lane Sports Pavilion, Salston, Ottery St Mary, Devon, EX11 1RG

The site lies within a river floodplain zone, adjacent to the River Otter. Soil arising are intended to be removed from site by a third party, organised by Ottery St Mary Town Council (OSMTC).

- The MUGA will be used for netball, tennis and soccer, in this order of priority. Two options for surfacing are requested, one based on an acrylic-coated macadam finish, one on a needle-punched carpet type over macadam, in both cases to be certified to England Netball standards, Club level.
- Construction of the MUGA is programmed for Spring 2024, with associated works to follow.
- Certain items may or may not be included in the first phase of the contract, dependent on ongoing stakeholder liaison and funding aspects. These include:
 - Phase 2 surfacing - Overspill parking.
 - Floodlight masts and power connection.
 - Cricket practice ball-stop net.

2. The payment to be made under Article 2 of the Agreement in accordance with Clause 7 will be ascertained on the following basis:

(a) measure and value using a priced Bill of Quantities,

(b) valuation based on a Schedule of Rates (with an indication in the Schedule of the approximate quantities of major items).

3. Where a Bill of Quantities or a Schedule of Rates is provided the method of measurement used is:

The Civil Engineering Standard Method of Measurement; 3rd Edition.

4. Name of Engineer (Clause 2.1): David Hemstock, Hemstock Design Ltd. Tel: 07850 744957

5. Starting date (if known) (Clause 4.1): 1 April 2024

6. Period for completion (Clause 4.2): 31 May 2024

7. Period for completion of parts of the Works if applicable and details of the work to be carried out within each such part (Clause 4.2): not applicable.

8. Liquidated damages (Clause 4.6): £500 per week.

9. Limit of liquidated damages (Clause 4.6): 10%

10. Defects Correction Period (Clause 5.1): 12 calendar months

11. Rate of retention (Clause 7.3): 5%
12. Limit of retention (Clause 7.3): 3%
13. Minimum amount of interim certificate (Clause 7.3): £5,000.00
14. Bank whose base lending rate is to be used (Clause 7.8): Bank of England.
15. Insurance of the Works (Clause 10.1): Required
16. Minimum amount of third party insurance (persons and property) (Clause 10.6): £5,000,000 for each and every occurrence.
17. Name of the CDM Co-ordinator (Clause 13(1)(b)): To be confirmed
18. Name of the Principal Contractor (Clause 13(1)(b)): N/A
19. The Arbitration Procedure to be used is (Clause A.11(a)):
(a) The Institution of Civil Engineers' Arbitration Procedure (1997)

A) PREAMBLES

1) Background Information

i) Scope of Works – Hemstock Design Ltd have been commissioned by Ottery St Mary Town Council to oversee the tender process and site monitoring work on the Strawberry Lane site. The work under this specification consists of:

Contractor Responsibility

- Protection of the working area using Heras fencing to exclude the public. Compound proposed adjacent to the existing Pavilion.
- Strip topsoil and subsoil to the formation depth from the MUGA area. All soil/spoil to be carted off-site by a third party following loading by the Contractor.
- Remove the northern section of fencing, kerbing and gully pot and reposition.
- Compact the subgrade and lay geotextile.
- Install a new 160mm main drainage pipe from the existing headwall, with lateral drains to the MUGA.
- Install stone base and porous macadam layers.
- OPTION 1 – provide a non-slip porous acrylic surface to the macadam
- OPTION 2 – supply and lay an approved needle-punch carpet and shockpad, suitable for netball primarily, and other sports secondarily.
- Install fencing and gates.
- Install floodlighting and connect to the power supply point (pavilion location).
- Install sockets for netball posts and dividing net posts.
- Install a cellular reinforced turf access track between MUGA and Pavilion
- Renovation works to the compound and working area.
- Aftercare maintenance period.

Client Responsibility:

- Cleaning-out of the outfall ditch.
- Maintenance of the grassed area
- Provision of services information and liaison with the bowls club on fencing work, etc.
- Provision of goals and other fitting.

Joint Responsibility:

- Security of the site for users and pedestrians, ensuring public areas and working areas are kept separate and safe, main gates are closed at the end of the working day for site security.

ii) **Location & Access**

Ottery St Mary Town Council sports pavilion, access via the track to the pavilion:
Strawberry Lane
Salston
Ottery St Mary
Devon,
EX11 1RG

Google Earth co-ordinates: 50°44'45.65"N 3°17'16.94"W

OS Grid Reference: SY 09224 94848

Easting: 309224 , Northing: 094875

2) Construction Work Overview

The basic time-line is currently proposed as follows (assuming weather and ground conditions do not interfere with the construction period):

Tender Return – **by NOON on the 9th February 2024.**

Award Contract -

Construction work to start – **as soon as possible, to be agreed, expected to be when ground conditions on the grass field allow from late March 2024**

Practical completion – **June 2024**

The Contractor is to allow provision throughout the works for the grass area maintenance team to have access and for the Petanque Club members to park and play.

3) General Requirements

1.0 Assistance to the Engineer

Ottery St Mary Town Council have appointed Hemstock Design Ltd as Engineers to carry out monitoring of the works. The Contractor shall provide all due assistance to the Engineer's representative in carrying out his duties including the services of a competent chain-man or supervisor whenever required.

2.0 British Standards

Where an appropriate British Standard Specification or British Standard Code of Practice issued by the British Standards Institution is current at the date of the tender all goods and materials used or supplied, and all workmanship, shall either be in accordance with that standard, any equivalent European Economic Community standard, or of a higher standard.

3.0 Testing of Materials

No material shall be supplied for the Works without prior approval from the Engineer. Upon acceptance of the Tender the Contractor shall submit samples of the selected materials, i.e. gravel/stone, sand for pipe drainage and sand dressing and topsoil. Representative samples of all approved materials shall be retained on site throughout the duration of the works.

4.0 Services

The Contractor shall be responsible for determining the exact position of any services affected by the works. Any information provided to the Contractor shall be confirmed on site by liaising with the relevant Authority and hand digging where necessary. A water supply source will be made available during the duration of the works from an existing hydrant point.

5.0 Site Conditions

The Contractor's attention is drawn to the need to satisfy themselves fully as to all of the conditions on site; access, subsurface conditions, services, etc.

6.0 Hand Work

The Contractor shall allow in his pricing for hand working on parts and in conditions where the use of machinery will not produce results to the Engineer's satisfaction even though specific reference is not made to such in the body of the Specification.

7.0 Procedure

No variation from the sequence and nature of the works detailed in the specification will be permitted except with the prior written consent of the Engineer.

8.0 Inclement Weather

The Works or any part thereof shall be suspended temporarily by the Engineer when working conditions are deemed unsuitable due to inclement weather or ground conditions.

Work must cease when ground conditions on site are such that soil damage, puddling and/or rutting of the soil or any other detriment would result.

9.0 Site Meetings

The Contractor shall attend periodic meetings on site as required by the Engineer.

10.0 Traffic Control and Pedestrian Safety

The Contractor shall provide and maintain all necessary road signs on public highways as required by the Employer's representative or by the Police. Vehicular and pedestrian access for the public and residents to all dwellings and services adjoining the site and affected by the Contractor's access needs and works must be maintained at all times.

The Contractor shall remove from the surface of any public or private road any earth or other materials deposited by vehicles passing to or from the site.

The Contractor shall take adequate precautions to prevent the spilling of oil, petrol or diesel fuel from vehicles, plant, storage drums or tanks on any access road or the Site in general. Any spillage shall be immediately cleared and the damage made good. The Contractor shall be responsible for avoiding any infringements of local traffic regulations.

11.0 Maintenance of Public and Private Roads, Etc.

The Contractor shall be responsible for keeping clean all public roads, parking areas, pavements, verges, etc and shall allow for all costs incurred in the maintenance of same and for making good at his own expense any damage thereto when carrying out the Works.

12.0 Delivery of Plant and Materials

All off-loading of materials and plant is to take place WITHIN the boundaries of the site, unless by specific agreement with the Engineer.

13.0 Site Restrictions

The Contractor shall confine operations to the area of the site allocated for use to be defined on the Drawings, i.e. the pitch area(s) to be worked on, compound and storage zones only. Traffic shall be confined to designated site roads.

No traffic shall be allowed within the area of the cricket square and a 1-metre margin unless protective boards are placed on the square.

The Contractor shall take all precautions to prevent damage in accessing works and shall not use the site for any other purpose other than carrying out the works.

14.0 Weekend Working will not be permitted without the approval of the Engineer. Such approval shall be requested and given in writing and this ruling applies equally to nominated sub-contractors and other operatives for whom the Contractor is responsible.

15.0 Hours of Work – to be agreed with the Engineer prior to commencement of work.

16.0 Off-Site Trespass

Allow for all measures and precautions necessary to prevent any trespass upon adjoining land or property, and to preclude any rubbish, materials, etc. from being deposited thereon.

17.0 Boundary Protection

The Contractor shall allow for protecting & avoiding damage to adjoining owners' boundaries.

18.0 Restriction of Advertising

The Contractor shall not use nor let the Site or any part thereof for any advertising purposes save only that he may exhibit their own name and address together with those of sub-contractors and suppliers. The board shall also display the title of the Works.

19.0 Programme of Works

Progress charts shall be prepared by the Contractor and submitted to the Engineer for

approval prior to the commencement of the Works to show how the Contractor intends to execute the Works within the time stated in the Form of Tender. In the event of extension of time being granted in accordance with the Conditions of Contract, the Contractor shall prepare and submit revised progress charts to the Engineer.

20.0 Staff Welfare Facilities

The Contractor shall provide and maintain adequate sanitary facilities and shelter accommodation for the use of all workmen. Their siting, maintenance and clearance on completion shall be to the satisfaction of the Engineer.

21.0 Surface and Ground Water Run-off

The Contractor shall make all necessary temporary provision for the run-off of surface and ground water from the areas of excavation during the period between the start of the Works and the final connection to the drainage outfall(s). All labour, materials and plant necessary for the purpose shall be provided by the Contractor and all costs shall be deemed to be included in their rates.

NB: de-silting of the off-site outfall ditch due to the works – the Contractor shall allow for desilting of the ditch on adjacent land as necessary to ensure a free flow of runoff. Access to the neighbouring site to be organised with OSMTC.

22.0 Temporary Works

The Contractor shall provide and maintain all temporary access roads, sleeper tracks, storage areas or any other temporary works required during the execution of the Contract, remove the same as required and make good on completion of the Works.

The Contractor will be deemed to have taken due account in his Tender of the total cost of all temporary works necessary for the proper execution and completion of the Contract.

23.0 Police Regulations

The Contractor shall allow for all costs incurred in complying with Police regulations.

24.0 National Insurances, Etc.

Allow for all payments and costs incurred by the Contractor in connection with National Insurances, contributions, levies, taxes and pensions for workers.

25.0 Allow for all Temporary Fencing, Planked Footways, Guard Rails, Lighting and the Like as may be necessary for protecting the public, and for the proper executing of the Works as may be required by the Engineer. The Contractor shall allow for all security measures deemed necessary in the light of the site position and environment.

During construction and drain trenching works, the Contractor shall also allow for full surround fencing to the MUGA using Heras or chestnut paling and stakes, on an area by area basis, unless all work will be finished, back-filled and made safe during each working day.

26.0 Clearing Site

The Contractor shall, upon completion of the Works, clear all plant, unused materials, etc., clean all roads, drains, etc. affected by the Works and leave the whole of the Site in a clean and tidy condition acceptable to the Engineer.

27.0 Health & Safety

The Contractor shall fully cover and allow for conforming to all statutory health and safety requirements. The Contractor shall inform the Engineer at the earliest stage if the works are to fall under the CDM Regulations and provide with his tender the necessary Safety Policy documentation.

28.0 CDM

Proof of conformity with CDM Regulations 2015 will be required prior to any work on site commencing.

29.0 Modern Slavery Act

The Contractor shall provide evidence that all workers employed on the project have the right to live and work in the UK. OSMTC must be provided with an overview of the be able to review the company's policies on the various HR issues.

The Contractor shall comply with all applicable laws, statutes, regulations and codes relating to modern slavery requirements, forced labour and human trafficking including but not limited to the UK Modern Slavery Act 2015 ("Modern Slavery Requirements"). The Contractor shall have and shall maintain in place throughout the term of the contract its own policies and procedures, including but not limited to adequate procedures to ensure compliance with the Modern Slavery Requirements. The Contractor must commit to all areas of this Modern Slavery Requirements for any services, or possible services in relation to the Contract.



Proposed MUGA site, grass area to the west of the Pavilion

B) TECHNICAL SPECIFICATION

1.0 PRELIMINARIES

1.1 General Items

- Include items covering overheads and expenses as listed in the Bills of Quantities.
- Supporting reports include a technical assessment produced by Hemstock Design on the soil and drainage aspects and a report on the electrical system for the site has produced by Halliday Lighting Ltd.
- Obtain up to date services plans for the area. Liaise with Ottery St Mary Town Council (OSMTC) on requirements for access, services and maintenance.

1.2 Access & Storage

- 1) The Contractor is to prepare a storage compound and access at an agreed point on site, expected to be on the pavilion end of the car-park and/or a stoned-up area of the grass pitch to the south of the MUGA (following topsoil strip in suitable conditions) through the Contract Period.
- 2) Locate and protect to prevent damage to the existing services, surfaces and structures.
- 3) Protect the pétanque terrain at all times from debris, wheelings and pedestrian traffic. Maintain access for the pétanque club members .
- 4) The access point and road shall be kept clean of mud at all times.

2.0 PREPARATORY WORK

2.1 Protection of the public areas

Mark-out and protect with Heras fencing the full working area and compound for the duration of the works.

2.2 Clearance

- 1) All items which may interfere with the work shall be removed from site to an off-site tip. Existing chain-link fencing is to be dismantled, posts grubbed-out for potential re-use to the revised boundary line approximately 5 metres further north than the existing. Cut a line using a circular saw, excavate and remove to tip the strip of existing macadam, concrete edging and stone base to the car-park situated within the marked-out extent of the MUGA.
- 2) Reposition the gully pot in the south-west corner of the car-park and reconnect to the drain outflow pipe. Install new 200mm x 50mm concrete path edging haunched in with cement along the new macadam edge.

2.3 Identify and connect to existing drainage system

- 1) Check levels for the MUGA drainage inverts and excavate a trench accordingly for the twin-wall main drain running to the existing outfall headwall (situated off-site). Liaise with the Engineer on access to the adjacent land to make a connection to the headwall.
- 2) Securely install an approved non-return flap valve to the MUGA outfall pipe, sealed at the joint.

PROVISIONAL

2.4 Trenching for cabling

A trench is to be dug for 100mm pvc ducting for the floodlighting armoured cable and other services from the rear, east side of the pavilion distribution board to the north-east corner of the new MUGA, for future connection. Install the ducting and backfill, capping-off the ends of the duct.

2.5 Spraying for Weeds

In accordance with manufacturer's recommendations, apply a broad-spectrum translocated herbicide to the grassed area of the proposed MUGA 3 weeks before rotivating and excavating.

PROVISIONAL

3.0 EARTHWORKS

3.1 Topsoil Handling

- 1) The topsoil and subsoil overlying the MUGA position is to be stripped and mounded ready for loading by the Contractor into vehicles provided by a local subcontractor contact of OSMTC. Timing to be arranged with OSMTC to ensure efficient and rapid removal of materials from site.
- 2) Topsoil depth is estimated at 200mm, this to be stripped separately for loading, to be carted off site by the above OSMTC sub-contractor. Topsoil is to be stripped from the MUGA and access track between the MUGA area and Pavilion access ramp, noted on plan as Phase 1 (Ambulance Access Track), an area of approximately 160-200 sq.m.

- 3) In addition, the MUGA topsoil strip area is approximately 1,336 sq.m, off the drawing.
- 4) Topsoil over the Phase 2 parking extension area is to be stripped and mounded temporarily along the southern edge of this area to allow stoning-up for a compound area if required.

The temporary stone base used is to be removed from this area on completion of the works and the topsoil re-laid to the original depth.

3.2 Subsoil Handling

- 1) As in Item 3.1, excavate and mound ready for loading all excess subsoil to the formation subgrade level.
- 2) Subsoil is to be loaded by the Contractor into the OSMTC subcontractor vehicles for them to remove from site.
- 3) Prepare the MUGA sub-grade by levelling and compacting. Compact the formation to a +/-25mm even grade. Proof roll and test the formation to give a CBR of minimum 5%, tested on 6 evenly spaced points over the MUGA formation.
- 4) Regrade the zone between the bowling club hedge and MUGA perimeter to form a gully to allow runoff southwards to the grassed area. The intention is to pick-up this runoff in Phase 3 of the works.

4.0 PIPE DRAINAGE

Intent - The Contractor shall liaise with the Engineer on the layout and levels worked to for the connection to the existing outfall point and pipe gradients. A new drainage system of 160mm main with 80mm lateral pipes at 5m spacing is to be installed on the MUGA area in accordance with the drainage layout drawing:

HDL_OSMTC_MUGA_30-11-23_DRAINAGE

Treatment of any existing drainage system is to be agreed with the Engineer as trenching progresses. Existing pipes will be either broken-up and sealed from the new system, or formally connected if this is deemed preferred.

NB – the geotextile layer is to be laid over the subgrade and lining the drain trenches, before laying the pipes and backfilling.

4.1 Drainage Installation

4.1.1 Main Drain; Sealed

From the identified outfall headwall, lay a sealed uPVC 160mm main drain as shown on the drainage proposal drawing. Use twin-wall corrugated HDPE plastic pipe to EN 13476-3:2009. The pipes shall be laid at a minimum depth of cover of 550 mm, true to grade, and with a minimum fall of 1 in 250. Backfill with 6-10mm clean crushed stone to the surface, pending finishing with the access track materials. Connect to the silt chamber and seal the joint with cement mortar haunching.

4.1.2 New Silt Chambers

Excavate for and construct silt chambers in the position shown on the drainage proposal drawing with inside measurements of 900 mm x 600 mm and providing a silt-trap depth of minimum 300 mm below the outlet pipe.

The silt chambers shall be set on 150 mm thick concrete base and shall be constructed with purpose made reinforced pre-cast concrete units to BS 1994: Part 200: 1989. Each unit bedded and pointed in cement mortar. Silt chamber to be fitted with Grade B cast iron covers to BS EN 124: Part 1 the frames to be bedded on and haunched in cement mortar, with the cover set 25 mm below finished ground level.

Allowance shall be made for building-in inlet and outlet pipes and for pointing and sealing around all units and pipes to ensure efficient waterproofing.

Surplus subsoil from excavations shall be disposed of as specified for drain trenches.

4.1.3 **Main Drain; Perforated**

Supply and lay a perforated uPVC 160mm main drain as shown on the drainage proposal drawing, connecting to the MUGA north-east corner silt chamber. Use perforated corrugated plastic pipe to BS 4660 : 1989 (or equivalent European EN standard). The pipes shall be laid at a minimum depth of cover of 550 mm, true to grade, and with a minimum fall of 1 in 250. Backfill as in section 3.2.

4.1.4 **Lateral Drains**

Supply and lay a perforated uPVC 80mm lateral drains as shown on the drainage proposal drawing at 5-metre centres. Use perforated corrugated plastic pipe to BS 4660 : 1989 (or equivalent European EN standard).

The pipes shall be laid at a minimum depth of cover of 550 mm, true to grade, and with a minimum fall of 1 in 250 and at a spacing of 5m. Backfill as described in section 3.1.4

4.2 **Geotextile Layer**

Following a releveling and cleaning operation after trenching work has been completed, supply and lay a Terram 100 or equivalent geotextile layer over the subgrade and lining the drain trenches, overlapping rolls by a minimum 300mm.

4.3 **Drain Laying & Back-filling**

1) Excavate spoil using an approved tracked chain-trencher or digging-wheel type of excavator to form drain trenches to required depth and width, or a mini-digger narrow bucket.

The spoil shall be loaded directly via elevators or bucket into low ground pressure dumpers and carted away as work proceeds to an agreed point on site. All tractors, trailers and dumpers must be fitted with wide, lgp turf-tread tyres.

Lay drainpipes of specified sizes as described in the above sections. Backfill drain trenches of perforated drains up to formation ground level using an approved 6-10 mm gauge **clean hard non-calcareous stone** or gravel chippings, conforming to the grading curve given in the Appendix, grading curve 4. Adequately and evenly firm, leaving the surface flat.

All filling shall be carried out carefully to avoid displacement or damage of pipes.

2) Connect the lateral and main drains using only proprietary purpose-made snap-fit junctions fitted securely and sealed to the pipe. Fit purpose-made end-caps to all pipe open ends.

4.4 **Disposal of Spoil**

All arisings from trenching and silt chambers to be stored temporarily on site for loading into the OSMTC subcontractor vehicles to be cared off site.

5.0 MUGA Construction

- **Performance** to BS 7044-4 - Class: Sport England MUGA, Construction of Multi Use Games Areas. Priority of activities: 1. Netball, 2. Tennis, 3. Soccer. Two options requested for a Type 2 and Type 9 surface, currently favoured for the netball priority use.

The Contractor may offer in addition a Type 3 MUGA option for consideration by the client stakeholder groups in the finalisation process.

- **Type 2 – High grip open textured porous macadam with pigmented finish and acrylic non-slip painted lines. To be certified to England Netball requirements.**
 - **Type 9 - Needle-punch carpet with sand dressing laid on macadam. To be certified to England Netball requirements.**
- **The MUGA** is to be checked by the Engineer at key stages in accordance with the SAPCA Code of Practice, Table 4. Notification of the timing of completion of key stages must be given well in advance to the Engineer, with updates on any time slippages.
 - **Supporting Documentation** - For all types of surfacing, provide the following:
 - *Name and contact details of installer.*
 - *Date of installation.*
 - *Name and contact details of manufacturer.*
 - *Type/ description/ reference of all products used.*
 - *Manufacturer's recommended inspection and maintenance procedures to maintain safety and impact absorbing performance.*
 - *Manufacturer's recommended cleaning and maintenance methods, where relevant.*
 - *Guarantee details*
 - *Recommended sinking fund requirement for replacement or resurfacing under standard wear conditions.*

5.1 MUGA Profile Build-up

- 1) **Concrete edging** – To the perimeter of the proposed MUGA, lay flat-topped PCC edging minimum height of 200mm x 50mm, well-haunched with concrete on both sides. Use hydraulically pressed concrete kerbs complying with BS EN 1339, laid to a true line and level with adequate up-stand for the subsequent fitting of the sports surfacing system and the retention of all infill materials.

Where the level difference between MUGA and surrounding ground exceeds this height (northern end of the MUGA), use an alternative but similar edging or kerbing to retain the MUGA profile and adjacent ground.

- 2) **Permeable stone layer** – Supply and lay a minimum settled depth of 200mm of DoT Type 3 stone in layers with last 50mm laser levelled to a tolerance of +/- 20mm. The aggregates to comply with the requirements of BSEN 13285 and the MCHW Series 800 (Clause 805 refers to 'Type 3' 'open -graded' Unbound Mixtures also termed Type 1X)
- 3) **Macadam** - Supply and lay 50mm thickness of open texture grade base or binder course 20mm macadam laid to a tolerance of +/- 10mm over a 3m straight-edge.

The macadam layer must comply with BS EN 13108-7, 0-10 or 1-14mm grade. The bitumen content should be between 3.4 and 4% and be in accordance with BS EN 12591.

- 4) **Durability** - To conform to appropriate categories of Resistance to Fragmentation (BS EN 13043-Clause 4.2.2, PD 6682-2 Clause 3.3.1) and durability (BS EN 13043 Clause 4.2.9, PD 6682-2 Clause 3.3.8), resistance to weathering measured by the magnesium sulphate soundness test and it is recommended that the soundness value category of the coarse aggregate should be MS25 when tested by the method given in BS EN 1367-2, if it does not conform to the water absorption category WA242 in accordance with BS EN 13043, Clause 4.2.9.1.
- 5) **Wearing Course** - Supply and lay a wearing course of 25mm open textured 6mm aggregate conforming to BS7044-4. A hard angular aggregate (granite) is required to form the porous asphalt surface, ensuring a durable slip-resistant surface is provided.
- 6) **Pigmented Porous macadam** – Provide an extra-over price for a single colour pigmented macadam wearing course.

PROVISIONAL

- 7) **Infiltration Rate** - The macadam layers must allow the percolation of water at a rate of more than 500 mm/h when testing in accordance with BS EN 12616.
- 8) **Post-construction phase** – provide aftercare advice on timing of first use and precautions that may be necessary until the surface has fully settled in, particularly with the use of wheelchairs during the first year.
- 9) **Surface Finishing** – Two options to be fully priced

6a) Option 1 - Type 2 MUGA, *High grip open textured porous macadam with acrylic non-slip paint or pigmented*. To be certified to England Netball requirements – Netball Performance Standards for Outdoor Courts (Class 3 and 4).

Acrylic non-slip finish containing silica and additional aluminium oxide to achieve 75 TRRL slip test for netball. Colour to be confirmed, currently intended to be mid-green for the playing area and margins, if painted.

6b) Option 2 - Type 9 MUGA, Needle-punch carpet with sand dressing laid on macadam, to conform to BS EN 15330-2 (2008) "Surfaces for Sports Areas – Needle Punched Carpets primarily designed for outdoor use – specifications for needle punch carpets" and BS EN 14877 (2006) "Surfaces for Sports Areas – Specifications for Synthetic Surfaces (multiuse)". High-grip characteristics to be certified to England Netball requirements – Netball Performance Standards for Outdoor Courts (Class 3 and 4).

- Supply and lay a certified and approved sand-dressed polymeric needle punch type of carpet suitable for netball use, such as Playrite Matchplay 2 with a 10mm grade or similar approved equivalent shock-pad and infill, in accordance with the manufacturer's instructions.
- There should be no significant height difference or separation at joints with an allowable tolerance by FIFA/FA of a maximum of 2 mm under a 3m straight edge (shockpad and carpet). Ensure strong adhesive bonds between the back of the carpet and the seam jointing tape conforming to the joint strength specifications for soccer use.

Use the correct quality and width of jointing tape and positioning of seam joint centrally along tape with application of adequate pressure to the bonded seam whilst adhesive curing takes place

- Weather conditions – when installing check the limitations of the adhesive for use in adverse conditions.
- The shockpad and carpet materials delivered to site must be checked by the Contractor against the reference samples for:
 - **Shockpad:**
 - Tensile Strength
 - Density
 - Thickness
 - **Carpet:**
 - Fibre type and Dtex
 - Pile length. This should match the nominal value to ± 1 mm when tested using the appropriate test method.
 - Pile density in terms of tufts per square cm
 - Total weight per unit area
 - Tuft withdrawal force
 - Quality of backing materials
 - Pile filling materials
 - Seams and Line Markings
 - Peel in the case of adhesive bonded seams
 - Tensile strength in the case of stitched or lap bonded seams
- **Colour** – to be confirmed, currently intended to be mid-green for the playing area with red margins.
- **Ignitability** - The surface, when tested to BS 4790, must not be ignited or damaged enough to cause a ball to deviate from its true path.

- 10) a) **Line Markings to Macadam Surface** – to be a non-slip material with lines of 50mm width. Thermoplastic paint not to be used. On the accompanying drawing, lines are currently shown in a drawing colour with the as-installed colour alongside. As a rule of thumb, the most frequently used sport should be marked out in white, the second most played sport in yellow, followed by blue, and red. To be fixed prior to letting the contract:

Line-marking Key on the drawing:

Red - netball (community)

Blue - netball 'international' margins, lines on the ground to be yellow

Green - tennis, lines on the ground to be white

Magenta - soccer, lines on the ground to be orange or other TBA.

- b) For Option 6b, Synthetic carpet, preference is for the synthetic grass lines to be tufted-in during manufacture rather than cut-in when installing the surface.

- 11) **Corrective / Remedial Action to surfaces** - Minor areas assessed for non-compliance on performance and suitability for purpose to be given the appropriate remedial action. Where remedial works are required, the repaired surface should match adjoining areas in colour, texture and levels and should be replaced to the nearest play lines or construction joints. Joints should be neat, straight and unobtrusive.

5.2 Fencing & Fixtures

- 1) **Fencing** – Supply and install a durable green-finished weldmesh cladding with anti-vibration clamp fitting method to give a low-noise rebound fence, with rebound boards or perimeter kickboards. The perimeter fencing is to consist of:
 - Western side of the MUGA, boundary with the Bowling Club – Is to have a 4.5 to 5m high ball-stop fence.
 - Other three sides to be a 3m high fence, minimum 80mm square posts of 3mm minimum steel.
 - To be manufactured using 6mm vertical and 2no 8mm horizontal wires welded at each intersection, mesh aperture of a 200 x 50mm mesh spacing or similar alternative.
 - 1 x single (1.2m wide) and 1 x double gates (3m wide) with removable lintel panel above for ease of access with soccer goals. Gate thresholds should be level or slightly ramped (i.e. not stepped).
- 2) **Gate locking mechanism** – The Contractor is to present options with the tender for a PIN controlled locking system or similar to allow timed access to the court.
- 3) **Kickboards** - are to be 200mm high and close-fitting to the MUGA surface to retain infill in the case of the STP option, low noise options to be presented.
- 4) **Divider netting** – supply and fit a retractable divider net for the MUGA to be used as two tennis courts or 2 x 5-a-side soccer pitches, with fence posts to be increased in duty to support a 36.5m ball-stop netting. Options to be presented with the tender, considering safety aspects in use, i.e trip hazard and cushioning protection of the posts for players.
- 5) **Cricket Ball-stop Netting** – Supply and fit a cricket ball netting to the boundary of the grass field and bowling green, 30 linear metres with 5 posts fitted with a HTPP UV stabilised black mesh netting of 4.5 to 5m high supported by a coated galvanised steel wire.

Posts to be durable green coated set permanently into the ground with a raise and lower pulley system.

PROVISIONAL

6) **Goal/netting Posts & Sockets:**

- Netball - Removable netball goal posts are to be supplied and fitted with sockets to have a safety capping fitting when posts are removed To cater for young people's Netball (High Five Netball) and Wheelchair Netball, goal posts shall have adjustable net ring heights of 3.05 m, and 2.44 m. Netball goal posts to be supplied with protective post pads in accordance with AENA requirements.
- Tennis - 2 x Nets are intended to be non-socketed, fixed by weighted posts only. Tennis posts and nets should comply with BS EN 1510. The Contractor is to provide options and prices for these nets.
- Soccer - To supply two pairs of Five-a-side or small-sided football plastic goals complying with PAS 36-2.

- 7) **Boot cleaning facilities** - to be installed to prevent contamination of the playing surface with mud and material from outside the playing area at both entry points.
- 8) **Microfibre silt trap** – Provide technical data sheets on a two-stage filter system to be set into the ground prior to intercept and filter runoff outflowing into the main silt chamber.

PROVISIONAL

5.3 Floodlighting

INTENT: To be treated as a two-stage item, with mast foundations, ducting and cabling to be installed with masts and lamps to be fitted potentially as a 'Phase 2' item. Design shall be compliant for netball, tennis and soccer with the lighting level proposed at an average of 400 lux.

A 3-phase supply is present in the Pavilion, currently being used as a single-phase supply, capable of powering the floodlights and an EV point.

- 1) Floodlighting Design – To be installed in accordance with the layout drawing Halliday Lighting proposal drawing HLS 5079, four lighting masts positioned as shown on the accompanying drawings, avoiding interference with the ambulance track.
- 2) Contractor to provide a structural design for the masts on excavation of the foundation points.
- 3) Install a new power supply cable and ducting from the MUGA to the Pavilion distribution board, to be connected at a later date.
- 4) Floodlighting Equipment – Supply and install:
 - 4 x 8m Masts (M1-M4)
 - Each carrying the following Floodlights :-
 - M1-M4
 - 2 x SITECO/FL11 2 MODULE
 - **Illuminance Levels:**
 - Initial -(100hrs) E.i.ave = 546Lux
 - Maintained -(4000hrs) E.i.ave = 491Lux
 - Uniformity Emin/Eave = 0.72
 - Grid values in Lux(initial).
 - Grid interval = 5m.
 - Contour values in Lux (initial).
 - Contours: 5, 15, 25, 50 Lux.
 - Maintenance Factor = 0.90
 - **Options for an automatic timing switch** on off system to be provided by the Contractor.

PROVISIONAL

6.0 Access & Parking Items

- 1) **Car-Park additional lighting, Pavilion area** – Contractor to supply and fit a Siteco SL31 LED or similar, with SITECO PIR sensor for auto on/off when motion is detected.

PROVISIONAL

- 2) **EV Point for electric maintenance equipment charging** - Contractor to provide a standard 3.6kW standard single charge unit to the point shown on the General Layout drawing, at the disabled parking space point

PROVISIONAL

- 3) **Ambulance Access Track** – Following levelling compaction of the subgrade after construction of the MUGA is completed and heavy traffic has ceased, supply and lay a reinforced grass surface, details of options to be forwarded by the Contractor with prices for the 160 sq.m extent. Preferred solutions include:

- *Brett Ltd 'Sigma' block*
- *Tobermore Tufstone*
- *GrassGuard*
- *Grasscrete*
- *Cellpave*
- *Grassblock or Grassroad by GC Group*

- The grass reinforcing blocks are to finished flush with the adjacent MUGA edging and Pavilion path, to be bedded on 50mm of medium fine sand and filled with a 80/20% medium-fine sand and organic matter rootzone with a minimum hydraulic conductivity of 100mm/hour.

- Seeding is to be carried out using a mixture composed of:

- *30% Hard Fescue*
- *20% Chewings Fescue*
- *20% Slender Creeping Red Fescue*
- *25% Strong Creeping Red Fescue*
- *5% Browntop Bent*

Sown at a rate of 30g/sq.m, with a 15:15:15 granular fertiliser applied at the same rate.

- 4) **Cycle Racks** – Supply and fix in the position shown on the accompanying drawing 'Access and Parking Detail', Broxap 'Sheffield' senior-sized 12-cycle rack with 800mm spaced stands root-fixed into the ground with concrete foundation.

Stands to be manufactured from Stainless Steel Grade 304.

7.0 MUGA Testing

- 1) **On completion of the works**, the Contractor is to arrange for testing of the playing surface to England Netball Standards. An England Netball accredited test laboratory shall survey and test the facility to ensure compliance with the Court Requirements.
- 2) Values shall be measured on the playing surface. Measurements shall be made on a 5 m grid over the court area. Following the survey the Contractor is to forward the laboratory report to the Client

PROVISIONAL

8.0 Renovation & Maintenance Work

8.1 Renovation of the grassed area

- 1) Tidy, grade-out, cultivate and re-seed all haul route and storage areas. Clear the site of all waste, debris, equipment and excess materials. Cultivate, grade level, and seed spoil mounds and renovation areas.
- 2) **Decompaction** - At a time to be agreed with the Engineer, decompact the area with a 'Vertidrain' or 'Groundbreaker' type of operation, the tines to be set at the maximum lift without causing undue damage to the turf surface, and 200mm depth of working, on a 100mm grid of large diameter tines. Allow for two transverse passes in the same treatment.
- 3) **Fertiliser** - supply and evenly apply 50g/sq.m of a granular fertiliser containing 10% nitrogen: 15% phosphoric acid: 10% potash. Lightly rake into the immediate seeded surface.

PROVISIONAL

8.2 Maintenance Period

- 1) As part of their contractual obligations under the CDM construction design and management regulations 2015, the contractor must supply the client with full details of the required maintenance for all parts of the facility.
- 2) The Contractor is to provide a full maintenance service over 12 months from practical completion, including MUGA surface cleaning. Typical Maintenance Treatments:

Daily - at end of the days play:

- *Check fence, fixtures and fittings*
- *Make sure gates are operating correctly*
- *Check and top-up fill levels at high-wear areas. penalty spots (carpet only)*

Weekly:

- *Clear leaves and rubbish from the area, check cleanliness of access*
- *Remove or treat weeds, moss or algae*
- *Brush and clean the surface of the pitch*

[CLIENT]

Monthly:

- *Check infill levels (carpet only)*
- *Check fence, gate operation and fixtures*
- *Check wear on macadam painted surfaces and slip risks*
- *Check seams, inlaid lines, etc.*
- *Treat pitch with moss killer, algaecide, as required*
- *Check silt chambers and outfall ditch for sediment.*

Periodically - at least every six months:

- *Check thoroughly for moss and algae growth, soil, food stains, etc, and remedy as appropriate. Deep cleaning carried out if surface contamination is suspected.*
- *Power brushing to keep the infill mobile and the carpet fibres erect (carpet only)*

PROVISIONAL

C) BILLS of QUANTITIES
(Attached as an xls format file)

PREAMBLE

1. The Bill of Quantities includes this Preamble, the parts of the Bill of Quantities and the Summary.
2. In accordance with the Appendix to the Conditions of Contract, the measurement of the Bill of Quantities has been prepared as described in the Civil Engineering Standard Method of Measurement (CESMM) (3rd Edition 1991) and as modified herein. The various Clauses within the Preamble shall take precedence over the Civil Engineering Standard Method of Measurement (2nd Edition 1985) in the event of any dispute.
3. The prices and rates to be inserted in the Schedule of Rates are to be the full inclusive value of the work described under the several items, including all costs and expenses which may be required in and for the construction of the work described, together with all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is to be based.
4. Each item shall be priced independently of any other work scheduled in the Bills of Quantities. A price or rate is to be entered against each item in the Bills of Quantities, whether quantities are stated or not. Items against which no price is entered are to be considered as covered by other prices or rates in the Bills.
5. The Form of Contract, the Conditions of Contract, the Specifications and Drawings are to be read in conjunction with the Bills of Quantities.
6. General directions and descriptions of work and material given in the Specifications are not necessarily repeated in the Bills of Quantities. Reference is to be made to the Specifications for this information.
7. Dayworks shall be carried out in accordance with the rates and prices stated in the Daywork Schedule only when instructed by the Engineer.
8. No additional charge shall be made to the Employer in respect of carrying out the work in isolated sections, co-operation with any of the Statutory Undertakers or any sub-contractor, or of a break in the continuity of the Contractor's operations between one stage and another. Prices and rates are to include for the cost of all non-productive and temporary works and for overtime involved in carrying out and completing the Works.
9. The quantities given in these Bills of Quantities are estimated and are given for the purpose of enabling Contractors to make out their Tenders on an equal basis and to enable the Engineer to compare them, but they are not to be taken as a guarantee that the total quantities of work will be executed or will not be exceeded. All the work will be measured on completion and only the amount of work executed will be paid for at the rates given in the Bills of Quantities or at rates analogous thereto.

No claim made by the Contractor arising from any increase, reduction or omission in the Works will be considered by the Engineer.

10. The General Items shall be deemed to be spread over the whole of the period that the Contractor is on site, and the amount of the General Items to be paid in the monthly certificates shall be proportionately equal to the total time the Contractor has spent on site up to the date of submission of the certificate.

11. All Provisional Quantities or Provisional Sums of money are to be understood as being subject to deduction in whole or in part, at the discretion of the Engineer, from the amount of the Contract. The rates set out for such items, if any, shall be used for the valuation of works so ordered by the Engineer in writing, whether the quantities shown are used wholly or in part.

12. Amendments to Method of Measurement
 - (a) Contractors should note that in Class E8 (Landscaping), the unit of surface area is either hectares or square metres as appropriate.
 - (b) Where appropriate have been amalgamated in the Bills of Quantities and the rates entered against these amalgamated items shall include for each of the four functions.
 - (c) Contractors should note that method related charges have been deleted.

APPENDIX TO BILLS OF QUANTITIES

SCHEDULE OF RATES

General Instructions

The Contractor is requested to complete the schedule of rates below for works in accordance with the specification taking into account the quantities indicated in the Bills.

1. Equipment rates £/hour

All with Operator:

- 4wd Back-acter
- 3-tonne Mini-digger
- Dumper (give size)
- Transport to and from site, return trip

2. Labour - per hour;

- Supervisor
- Operative

3. Materials

- Permeable fill stone
- Sand dressing material

(Per tonne delivered)

4. Other

.....

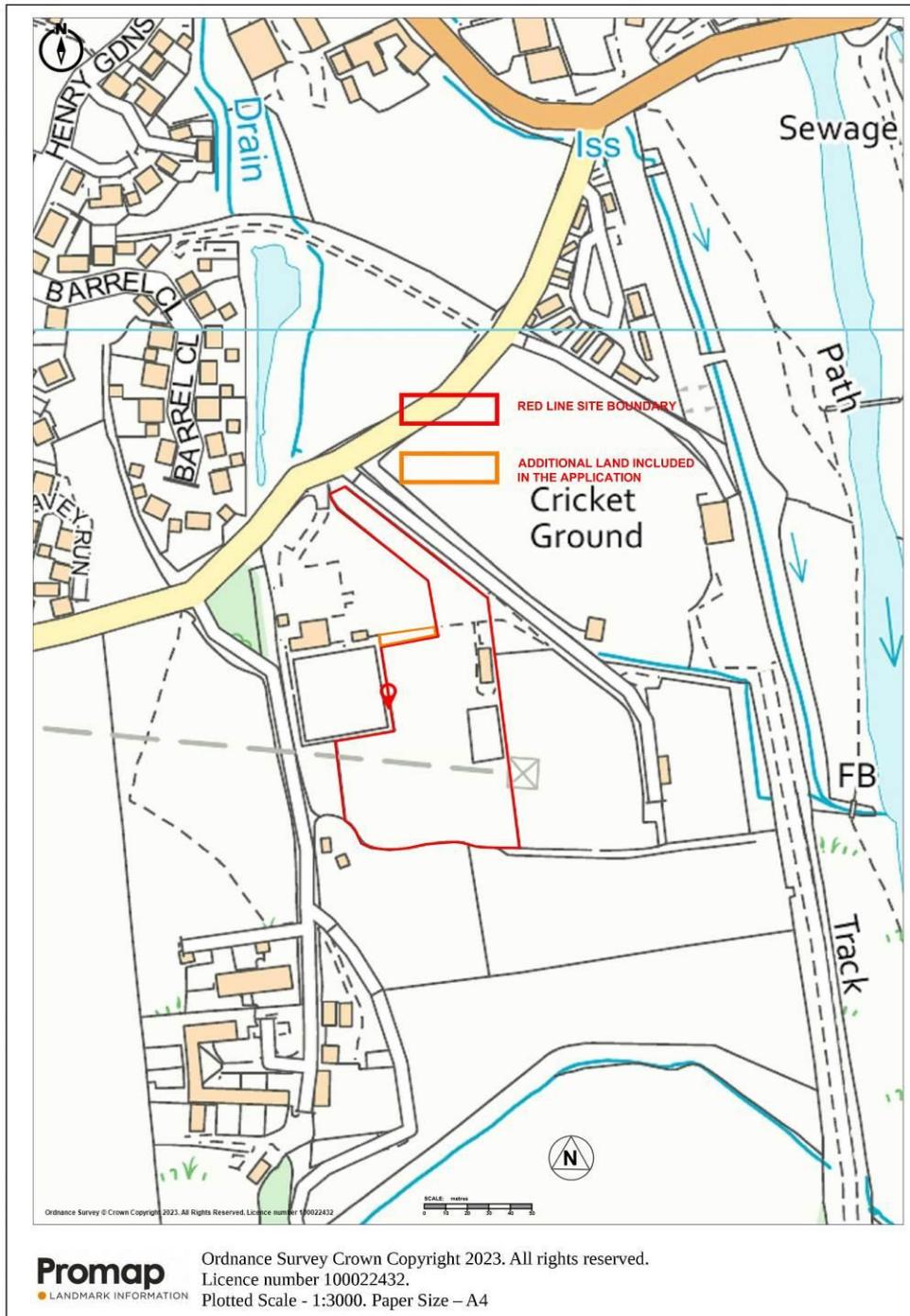
.....

.....

.....

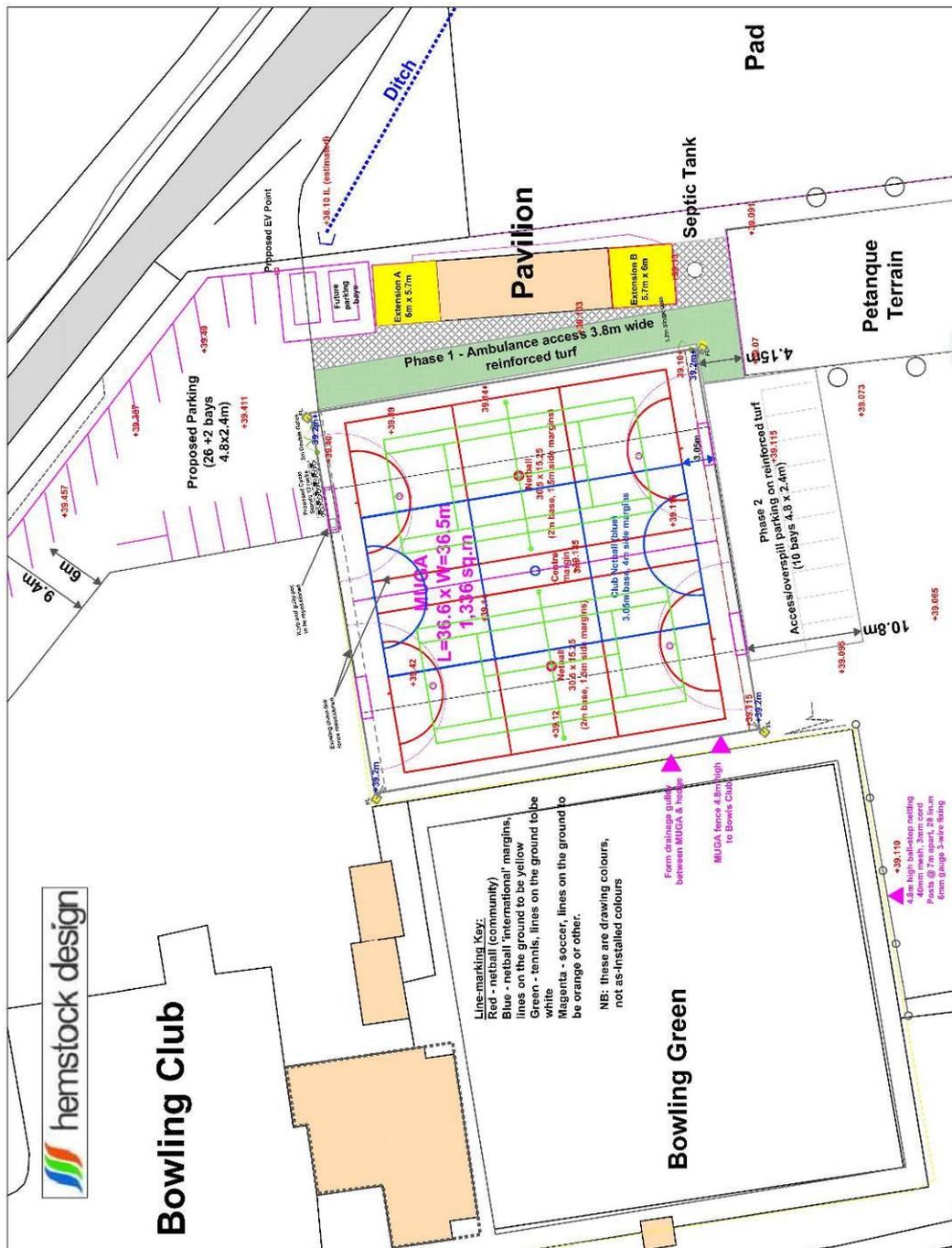
APPENDIX 1 – PLANS & DRAWINGS

EXISTING SITE



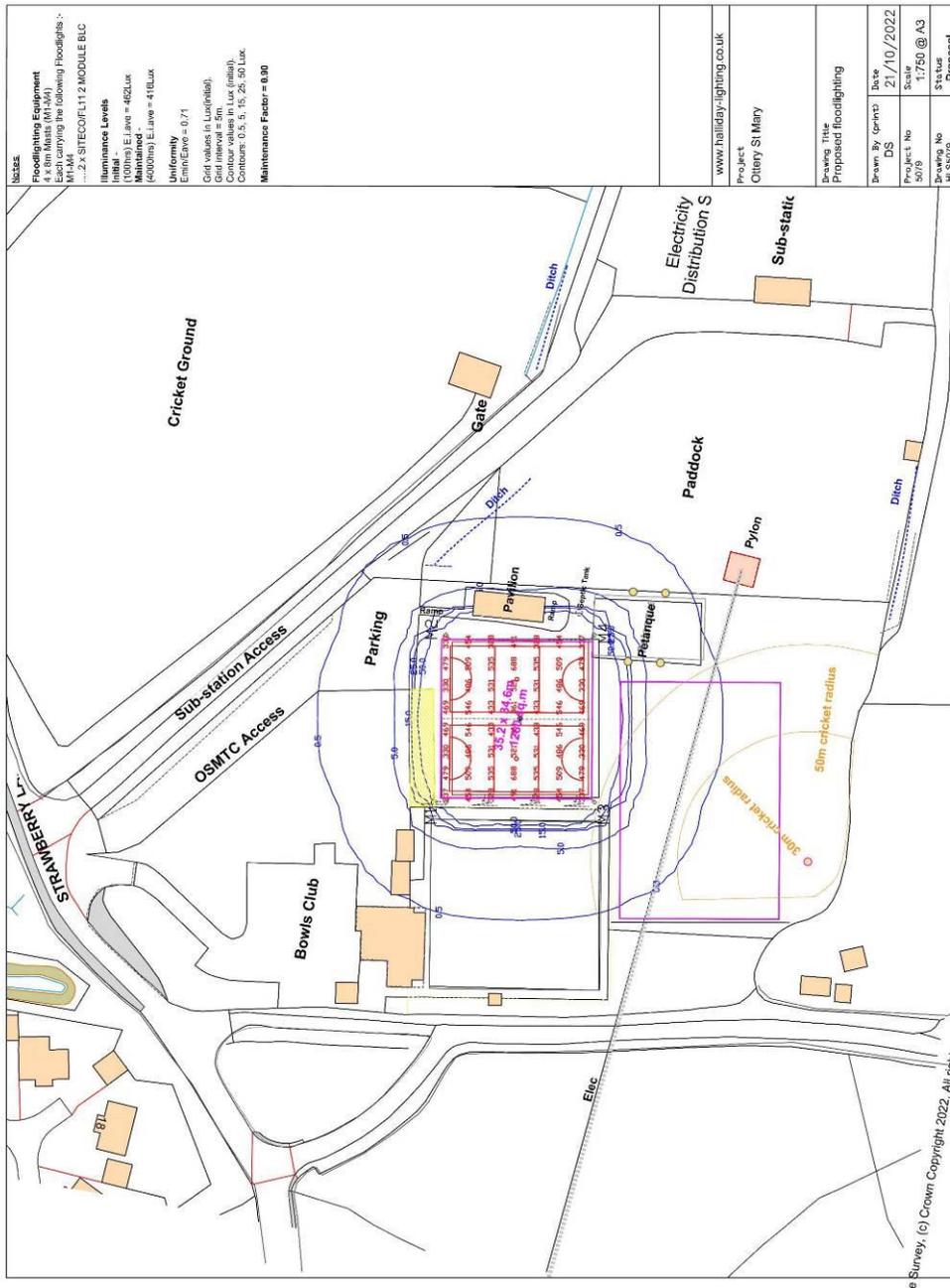
Boundary of the site off Strawberry Lane

PROPOSED LINE MARKING



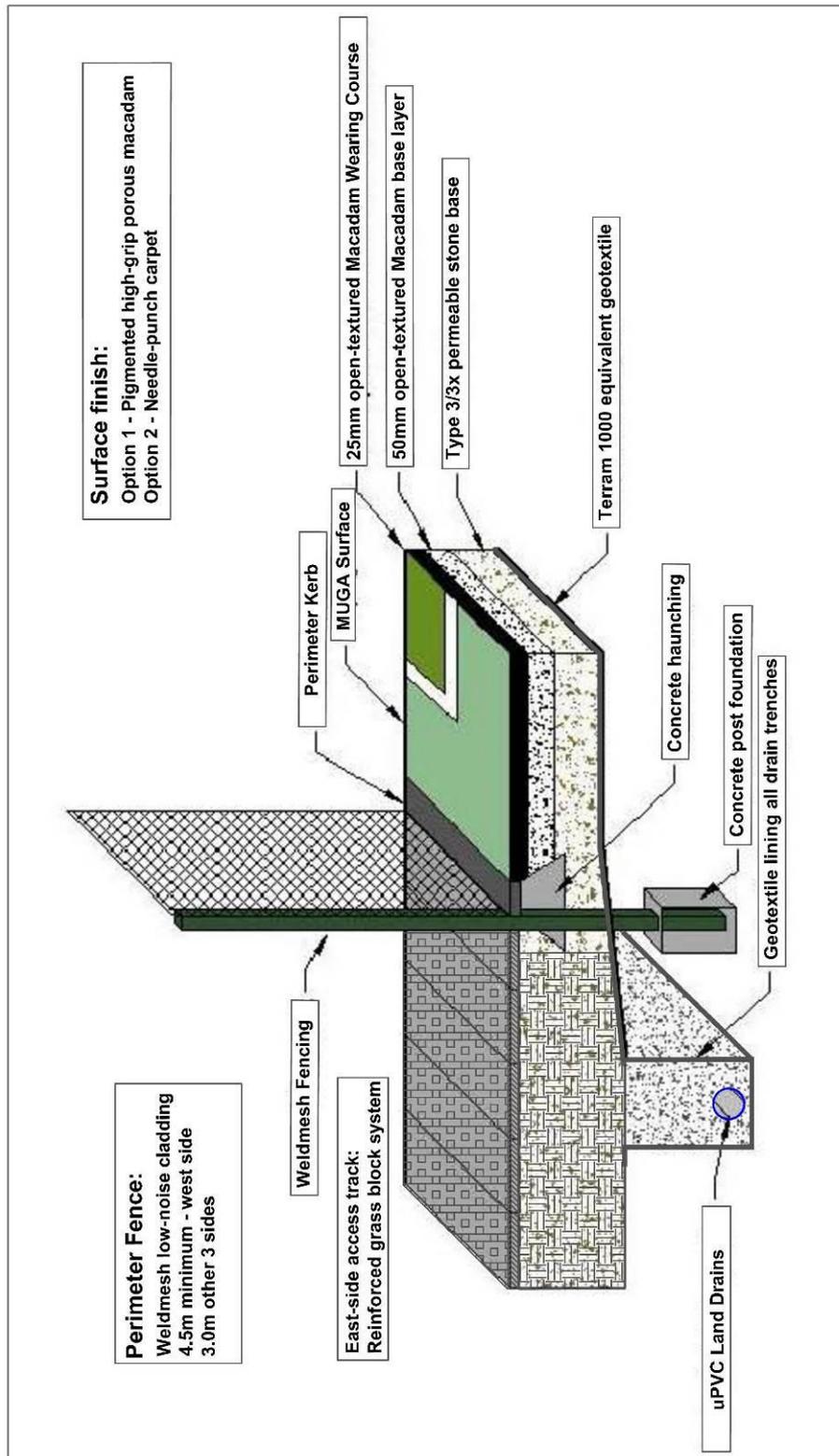
Line-marking proposal for Netball (community markings, x2 courts and club markings single central court), Tennis and 5-a-side

PROPOSED FLOODLIGHTING



© Survey, (c) Crown Copyright 2022. All rights reserved. Licence...

MUGA CROSS-SECTION





MUGA site from the pavilion



MUGA site and pavilion from the south



MUGA site from the pavilion, view to the south-west



Access on Strawberry Lane – OSMTTC Pavilion gate is central

APPENDIX 3

Netball Standards required for surface certification



Netball Performance Standards for Outdoor Courts (Class 3 and 4 Surfaces)

Construction and test verification criteria for certification

- The requirements for slip resistance, ball rebound, shock absorption and vertical deformation shall be satisfied in all reasonable conditions in which the court may be expected to be used (or in the conditions defined by the surface manufacturer);
- Verification tests should be undertaken in the positions shown on Figure 1 (below) plus any other areas of concern to the facility owner, the test institute or England Netball;
- Verification tests shall be undertaken under the prevailing conditions at the time within the range 5°C - 25°C.
- Slip resistance tests should be undertaken in both dry and wet conditions.
- These performance standards also apply to covered outdoor courts e.g. domes and airhalls.
- Line markings must conform to performance standards as they are an essential part of the playing surface.

General Description	Test Method	Class 3 Shock absorbing	Class 4 Non / low shock absorbing	Qualifications / Additional consistency requirements	
Slip resistance and consistency ¹	$\frac{\text{Dry}}{\text{Wet}^2}$	BS EN 13036-4 ²	≥75	As Class 3	All test positions shall give mean results within ±5 of the overall mean for the court
Rotational resistance	$\frac{\text{Dry}}{\text{Wet}^2}$	BS EN 15301-1 ⁴	15-45 Nm	As Class 3	Nm = Newton metres
Ball rebound and consistency	$\frac{\text{Dry}}{\text{Wet}^2}$	BS EN 12235 ⁵	≥ 80% (≥1.0m)	As Class 3	All test positions shall give mean results within ±5 of the overall mean for the court
Shock absorption	$\frac{\text{Dry}}{\text{Wet}^2}$	BS EN 14808	25-45%	No requirement	
Vertical deformation	$\frac{\text{Dry}}{\text{Wet}^2}$	BS EN 14809	≤ 4.0mm	No requirement	



www.Englandnetball.co.uk/make-the-game



MyGame

Surface regularity	BS EN 13036-7	No undulation greater than 6mm	Subject to the tolerance detailed in note 6 below
Water permeability	BS EN 12616	≥ 150 mm/h	
Gradients	Surveyors level	Permeable surfaces Recommended fall: 0.5% (1:200) Maximum fall: 0.83% (1:120)	Falls measured on a single plain
		Impermeable surfaces Minimum fall: 0.83% (1:120) Maximum fall: 1.0% (1:100)	
Accuracy of line markings	Steel tape or equivalent	All line markings shall be within ±15mm of their specified positions	

Notes:

1	Whilst it is recognised that the slip resistance of a playing surface will reduce with wear and some players will adjust to lower values, England Netball's experience is that the majority of players will find such courts unacceptable. It is therefore recommended that the maintenance and refurbishment of a playing surface is tailored to ensuring a slip resistance value of 75 throughout the life of the court.
2	Wet conditions shall be produced by saturating the surface and then allowing it to drain for 5 ± 0.5min. and testing within a further 15 minutes.
3	Using the CEN rubber slider as described in BS EN 13036-4
4	Using the smooth rubber test sole
5	Measured using a Mitre Venturi netball inflated to 10psi and giving a ball rebound of 1.25 ± 0.05m when dropped from 2.0m onto a concrete floor
6	A certain number of deviations (of up to 4mm) are permitted from the tolerances providing when measured under a 1m straightedge, the deviation does not exceed the tolerances stated above for the maximum gap beneath a 3m straightedge. Deviations over 1m in length are considered to be multiple deviations e.g. a 1.8m long ridge is considered to be two deviations.

Performance Verification Testing

Courts should be constructed to satisfy the requirements of England Netball and independently tested by an accredited test institute to verify whether the above specifications have been met.

Verification testing should be undertaken on completion of construction works, although it is recognised that some types of surfaces do not reach their normal playing performance until after the surface has settled down in which case testing should be undertaken a few weeks after completion.

Verification testing should be undertaken on each court at the locations as indicated below.

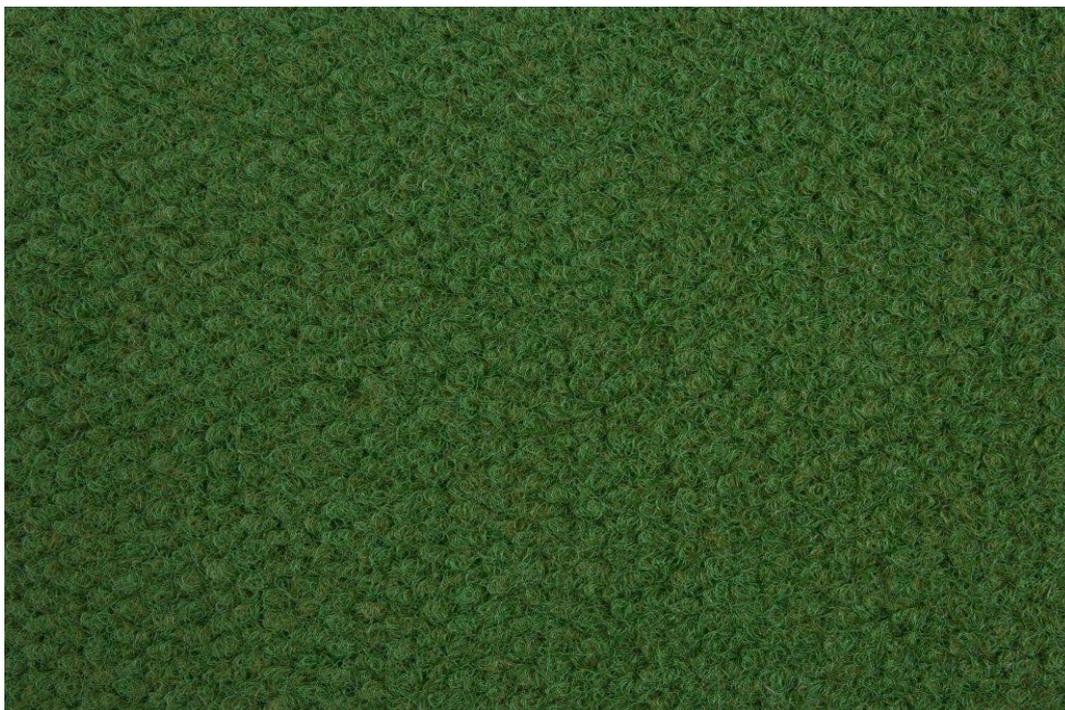


www.englishnetball.co.uk/make-the-game



APPENDIX 4

Surfaces & Fixtures images



Playrite Matchplay 2



Macadam with anti-slip surface (Centrecoat Anti-Slip Netball Court Paint)





**Harrod Sports Socketed netball goal
(removable, adjustable height)**



Broxap 'Sheffield' Cycle Racks



Harrod Pitch divider netting system



Grasscrete 'Grassblock' system