DRAYTON PARISH COUNCIL

SPECIFICATION

for the

GRASS SPORTS PITCHES

at

WALNUT MEADOWS PLAYING FIELD

Hemstock Design Ltd

June 2024

Ref: DPC_WMPF_6-6-24

ISSUE FOR TENDERING

hemstock design

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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.

Offers shall be open for acceptance for 60 days from the closing date 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 tender is to be returned to the DPC Clerk:

clerk@draytonpc.org

To arrange a site visit:

Jon Fowler, Programme Manager, Drayton Parish Council

jon.fowler@draytonpc.org

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 the 15th July 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.

There shall be strictly no access onto the tumulus area to the north-west of the playing field site.

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 Summary description of the work to be carried out under the Contract:

Installation of a new pipe drainage system with sand-slits and a sand rootzone carpet to two sports pitches with synthetic turf cricket pitch. Associated main drain and ditch grading works.

The works are to provide a good quality turf pitch playing surface to IoG (GMA) performance standards for the ‘basic’ level grading, suitable for playing soccer throughout the winter months and capable of maintenance by standard methods and equipment.

The pitches are to be seeded by the 27th September 2024, with sands-slitting and the cricket pitch installed in early 2025 as soon as ground conditions permit.

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): 3rd April, 2022

6. Period for completion (Clause 4.2): 6 weeks

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 – A previously levelled site is located in the central area of a new housing development. The project is to form two sports pitches and outfield over this graded and topsoiled site. The imported topsoil has a high stone content and needs to be de-stoned prior to applying the sand rootzone carpet and seeding.

The work includes the installation of a new pipe drainage system with seeding and sand slitting. Ancillary work includes the formation of an attenuation bund and installation of a synthetic turf cricket pitch.

The Contractor will be responsible for a 12-month maintenance period to bring the pitches up to IoG/GMA Performance Quality Standards Table; Basic Level.

The work under this specification consists of:

- Securing the site.
- Regrading the off-site ditch
- Installing a new off-site 225mm main drain
- Install new silt chambers to the set invert levels
- Install 160mm main pipes
- Install 80mm lateral pipes at 5-metre centres
- Sand-slit installation
- Attenuation bund shaping and topsoiling, seeding.
- Stone picking, gathering and burying operations
- Decompaction of the upper 250mm profile
- Laying an 100mm sand rootzone carpet
- Cultivation and seeding, outfield and pitches.
- Hydroseeding of drain-lines – Provisional Item
- Renovation works
- Aftercare period
- Synthetic cricket pitch installation

Client Responsibility:

- Irrigation system installation
- Provision of services information.

ii) Location & Access - The site is located off the end of Chestnut Drive, where there is an existing concrete hard standing area. Address:

Chestnut Drive
Walnut Meadows
off Abingdon Road,
Drayton
Oxfordshire
(nearest post code OX14 4FW)

(Grid Ref: N: 447810, E: 195028)

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 15th July 2024.
- Award Contract - 8th July 2024
- Construction work to start – 15th July 2024 if feasible
- Practical completion – 30th September 2024

3) General Requirements

1.0 Assistance to the Engineer

Drayton Parish 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, 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).

The adjacent watercourse outfall must be protected from and kept free of siltation arising from the site works. 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.

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.

The Contractor shall also allow for full surround fencing to the pitches, using chestnut paling and stakes, on a pitch by pitch basis, unless all trenching and similar risk-associated 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.

B) TECHNICAL SPECIFICATION

1.0 PRELIMINARIES

1.1 *Items covering overheads and expenses as listed in the Bills of Quantities.*

1.2 **Access & Storage**

- The Contractor shall prepare a secure access and compound on the existing hard standing area throughout the Contract Period with measures to prevent damage to the existing services, surfaces and structures.

- The access point and external road system shall be kept clean at all times. A compound and storage area shall be established within an agreed area on site.

- Obtain up to date services plans for the area. Liaise with Drayton Parish Council (DPC) on requirements for access, services and maintenance.

2.0 DRAINAGE

Intent *- The Contractor shall liaise with the Engineer on the layout and levels worked to for connection to the existing outfall point and pipe gradients back onto the playing field. Estimated invert levels for the new main 160mm pipe are shown on the drainage drawings. A new drainage system of 160mm main pipes with 80mm lateral pipes at 5m spacing and sand-slits is to be installed prior to sand carpet laying and seeding.*

Lateral pipes are to be backfilled with a clean stone, blinding where required, and an approved coarse sand finishing layer. 160mm mains are to be sealed pipes backfilled with selected soil. The system will be completed with the sand rootzone carpet layer, specification and analyses of the proposed material to be sent in with the tender.

Excavate spoil using an approved tracked chain-trencher or digging-wheel type of excavator to form drain trenches to required depth and width. The spoil shall be loaded directly via elevators into low ground pressure dumpers as it is excavated and carted away as work proceeds to an agreed point on site.

All tractors, trailers and dumpers must be fitted with suitable tyres as agreed with the Engineer.

2.1 **Ditch regrading** - eastern bridleway. Form an even gradient from road culvert invert to proposed northern outfall invert, depositing spoil on the playing field site at an agreed location. Form ditch banks of 1-in-2 or lesser slope.

2.2 **Main Drain; Sealed 225mm twin-wall**
From the adjacent watercourse, lay a sealed uPVC 225mm main drain as shown on Drainage Proposal drawing

Use sealed 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 selected stone-free soil material finished with a minimum of 150mm of topsoil.

2.3 **Main Drain; Sealed 160mm twin-wall**
Trench and lay a sealed uPVC 160mm main drain as shown on Drainage Proposal drawing, as a secondary outfall point. To include breaking-through a hedgerow.

Use sealed 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 selected stone-free soil material finished with a minimum of 150mm of topsoil.

Provisional Item

2. 4 **Main Drain; Perforated 160mm**

Supply and lay a perforated uPVC 160mm main drain as shown on Drainage Proposal drawing. 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 drain trenches up to 150mm of 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.

Following this, layer a 50mm layer of **approved coarse sand or fine grit blinding**, to grading curve 3, finished to 25mm proud of the surface with 100mm minimum of approved **medium fine sand rootzone** (with up to 20% organic matter included), conforming to the grading curve 2 in the Appendix.

All filling shall be carried out carefully to avoid displacement or damage of pipes. Approved permeable fill shall be carefully & accurately introduced by chute.

2.5 **Lateral Drains**

As for the items 3.1.2 but supply and install 80mm perforated lateral drainpipes. Lateral pipes within the site shall be laid at a minimum depth of 450 mm of cover unless otherwise agreed and to a minimum fall of 1 in 250, and at a spacing of 4m.

Backfill drain trenches up to 50mm of 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.

Following this, layer a 50mm layer of **approved coarse sand or fine grit blinding**, to Grading Curve 3, finished to 10mm proud of the surface, ready for the sand carpet layer.

2.6 **Sub-mains 110mm**

As Item 2.5 but fit 110mm diameter perforated uPVC pipes.

Provisional Item

2.7 **Junctions**

Connect the lateral and main drains using only purpose-made junctions fitted securely and sealed to the pipe.

2.8 **End-caps**

Fit purpose-made end-caps for all pipe open ends, sealed to the pipe

2.9 **Ditch Outfall Headwall**

Supply and install a GRC or similar approved pre-cast headwall suitable for the 225mm main pipe, with built-in wing-walls and splash-plate.

2.10 **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. The silt chamber shall 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 for silt pits shall be disposed of as specified for drain trenches.

2.11 **Filter-wrapping of lateral and sub-main pipes**
Should unstable ground conditions be exposed on trenching, allow for wrapping all 80mm perforated pipes with an approved geotextile, coir or other filter.

2.12 **Sand-slits**
Install sand -slits using a KORO Topdrain or equivalent, 0.2 x 0.05m slits @ 0.5m centres filled with washed coarse sand 20mm proud of surface. Sand to conform to Grading Curve 2 in the Appendices.

2.13 **Bund Formation**
Form a bund of 0.6m height (64.6m top level AOD, 0.5m top width, 3.5m minimum bottom width) using trench arisings. Spread sand-slit arisings over the attenuation bund.

Any excess spoil to be deposited to the northwest corner, behind the proposed MUGA site.

2.14 **Hydrobrake**
Supply & install hydrobrake to the Hydrologists specification to the outfall chamber connecting to the first section of 225mm main pipe. PC Sum.

3.0 CULTIVATIONS & SEEDING

Intent: *The pre-contract letting work includes an operation to subsoil loosen the playing field area and control weeds using a local Contractor/Farmer employed by the Client. If for some reason this is not carried-out, the Sports Pitch Contractor will be asked to provide a price for the use of approved subsoiler equipment, such as a winged subsoiler, HEVA, McConnel Shakearator, etc. to be used at the earliest stage in the work programme.*

The programming of cultivations, *sequencing of operations and final fine levelling prior to sand rootzone laying must be discussed and agreed based on ground conditions at the time. Options will include to cultivate and level the soil surface before and/or after drainage works, and to sand-slit before or after sand rootzone laying. The preference is to install slits into the soil prior to sand carpet laying, if the sand surface can remain open for infiltration following any final surface 'smoothing' work.*

3.1 **Stone picking**
i) Prior to the drainage works, collect and remove all large stones, debris, etc and cart to the nominated tip area on site.

ii) Stone gathering using a Saga-Dan or equivalent equipment. Following a light cultivation to break-down clods ,carry out a stone gathering operation to remove stones from 18mm size up, in the top 100mm of the topsoil. Change grill size as necessary, allowing for two passes over the whole playing field area.

3.2 **Cultivations**

Prior to the drainage work and using a combination of harrows, rollers, etc form a reasonably broken-down tilth (not powdery) finish to the existing topsoil. Carry out a stone-burying operation if required, as agreed with the Engineer.

Similarly, following drainage and before laying the sand rootzone layer, carefully fine-level to +/- 15mm over a 2-metre straight edge avoiding mixing soil with the sand and permeable fill surfaces of the drains and slits. To be discussed before carrying out.

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3.3 **Sand Rootzone Layer**

Supply & accurately spread an 100mm minimum, settled depth of an approved sand rootzone material to the playing areas plus 3-metre margin. The sand rootzone is to conform to Grading Curve 1 in the Appendices, with a Hydraulic Conductivity (Ksat) of minimum 100mm/hour. A full USGA-type analysis (recommend to be via ETL, European Turf Laboratories for this testing) must be presented for approval, together with physical samples of 5kg.

The sand rootzone is to be laid to a settled depth of 100mm following a final grading of the surface to remove track marks, etc. Following laying, grade-out with a Smithco or Sand-Pro Bunker Rake machine with York-rake type of equipment, then track over the surface to leave a dimpled finish.

3.4 **Seeding**

Seeding - seed the whole pitch and outfield area using an approved and calibrated precision seeder and sportsfield Perennial Ryegrass, of:

100 %	*Wear tolerant fine-leaved ryegrass: 2 varieties of certified seed of an approved wear tolerant cultivar, taken from the top level of the BSPB Turfgrass Seed list, 2024*

Seeding shall be carried out during suitable weather conditions. The total quantity of seed shall be divided in half, each half being sown evenly with an approved distributor in transverse directions to provide a total sowing rate of minimum 350 kg /ha.

3.5 **Bund Seeding**

Cultivate the attenuation bund by hand-work if necessary to produce a suitable tilth to tsow an approved clay-soil type of wild flora mix at 25g/sq.m (or as recommended by the supplier). Seed mixes to be presented for approval by the Engineer prior to seeding.

3.6 **Hydroseeding**

Provide a price for hydroseeding the whole playing field area, using an approved paper or wood-based mulch and the seed mix approved from item 3.4. The spraying method is to produce an even and full cover over the drain lines.

The mixture shall be prepared by mixing the mulch, seed, 15:15:15 or equivalent fertiliser content at the required unit/g/sq.m application rate, green biodegradable non-toxic pigment and water in the required proportions. The mulch shall be manufactured in such a manner that, when thoroughly mixed with seed and fertiliser in the specified proportions, it forms a homogenous slurry capable of being sprayed through a purpose-made machine nozzle.

Hydroseeding mix shall be applied using mobile plant with tank(s) having a built-in continuous agitator and recirculation system of sufficient operating capacity to produce and maintain a homogenous mix. The discharge system shall be capable of spraying the slurry continuously and uniformly.

Provisional

3.7 **Liming**
Supply and spread the required tonnage of lime to correct the soil pH up to neutral readings. Allow for an application of 3t/ha of lime, to be confirmed.

Provisional

3.8 **Fertiliser**
On completion of the seed bed preparation and shortly before seeding is carried out, supply and evenly apply 500kg/ha of a granular fertiliser containing 10% nitrogen: 15% phosphoric acid: 10% potash. Lightly harrow into the immediate surface.

3.9 **Decompaction**
Decompact the pitch and outfield area with a 'Vertidrain' or 'Groundbreaker' type of operation, the tines to be set at the maximum lift and minimum 200mm depth of working, on a 100mm grid of large diameter tines. Allow for two transverse passes in the same treatment.

4.0 Renovation & Maintenance Work

4.1 **Renovation**
Clear the site of all waste, debris, equipment and excess materials.

4.2 **Rolling**
Following any stone/debris removal required, carefully roll under suitable conditions using a flat roller.

4.3 **Initial Cut**
When the grass is no more than 60 mm long the initial mowing shall be carried out by the Contractor using sharp hydraulic gang mowers, mounted on low ground pressure turf-tread tyres. No more than 25 mm of the foliage shall be removed in this cut.

4.4 **Decompaction**
The whole area is to be treated with a Vertidrain 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.

PROVISIONAL

4.5 **Herbicide Application**
The whole pitch area is to be treated with an agreed broad-spectrum herbicide spray against broad-leaved weeds.

PROVISIONAL

4.6 **Fertiliser application**
Supply and spread a slow-release fertiliser of 16:6:6 applied at 350kg/ha.

4.7 **Maintenance Period, 12-months**
Provide 12 months full playing field area maintenance from the date of practical completion of the works. To include a minimum 26 cuts with a hydraulic reel mower, strimming as required, 2 x fertiliser application, rolling, overseeding as necessary.

The requirement is to achieve the below Institute of Groundsmanship (IoG)/GMA performance quality standards, 'basic' level. and Sport England quality standards for natural turf on handover. These are set-out in the SE document; 'Towards a level playing field: A guide to the production of playing pitch strategies'; specifically *Appendix 'A', construction/upgrade performance quality standard,* & Design Guidance Note; Natural Turf for Sport (ISBN 1 86078 103 9)a.

4.10 **Synthetic Cricket Pitch**

1) Supply and install an approved club-level synthetic pitch of 30 x 2.74m with dynamic base and timber edgings. Accurately locate the pitch and mark out the excavation area of size 29.8m x 2.7m. Evenly excavate the base depth of 150mm and consolidate with a vibrating plate or roller. Lay Terram 1000 or similar geotextile membrane into the base and sides.

2) Install 25mm x 150mm nominal treated timber edging boards secured with 50mm x 50mm x 300mm treated timber pegs at max. 1.5m centres to the perimeter of the excavation. The boards should be laid level along the length and allow a flush finish to the surrounding outfield. The pegs should be on the inside of the edging boards and the top of the peg set 50mm below the top of the edging board.

3) Import, spread, level, and consolidate 100mm of DoT Type 3x 10mm or similar with vibrating plate or roller.

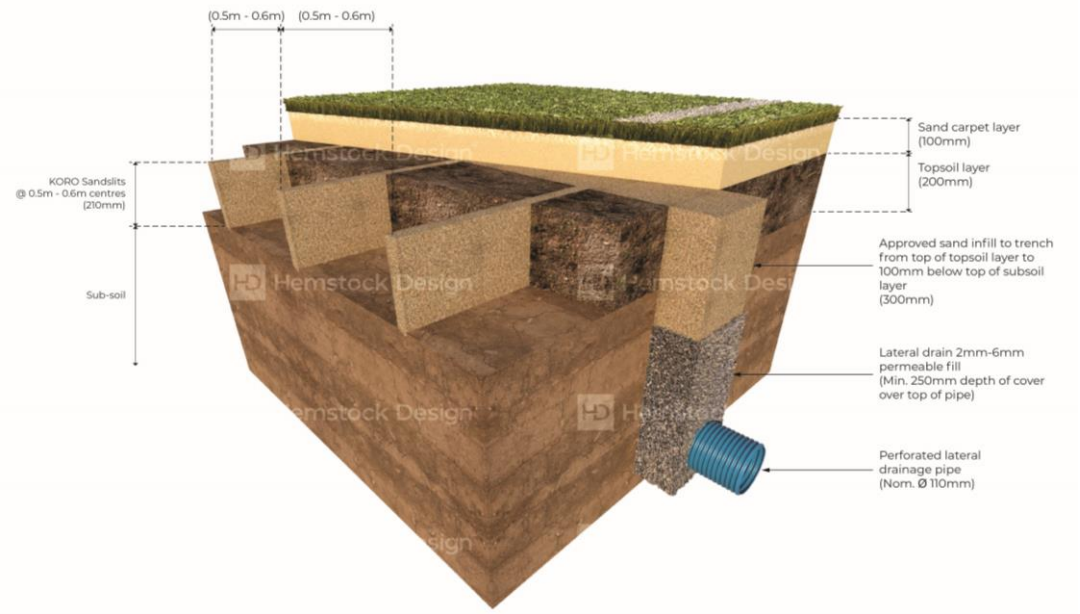
4) Import, spread, level, and consolidate 50mm of suitable graded hard porous aggregate as per manufacturer's recommendations with vibrating plate or roller, adding water as necessary to achieve a hard flat base.

5) Locate the position of stumps, excavate aggregate approx. 400mm x 100mm, and pack with heavy clay soil level with the top of the aggregate.

6) Roll the base pad out over the aggregate and pin into the stone around the perimeter at 500mm centres with 100mm long galvanised clout nails. Cut out sections of pad over clay stump areas if applicable.

7) Roll out the playing surface and position squarely and centrally over the base. Tension the playing surface lengthways and pin carpet ends into the edging boards at 150mm centres with 50mm long galvanised clout nails. Slightly tension the playing surface widthways and pin carpet ends into the edging boards at 150mm centres with 50mm long galvanised clout nails. Loose ends of playing surface to be tucked down the sides of the boards before backfilling if required.

8) Backfill with topsoil around the perimeter and seed with the Sportsfield PRG mix.



Illustrative section of the proposed playing field profile. Sand-slitting may be carried out post-establishment depending on ground finishing conditions.

Performance Quality Standard Tables

1. Structural Quality

Performance Standard	Quality Standard		
	High	**Standard**	**Basic**
A. Herbage			
i) Length of herbage during the growing season	25 to 40mm	25 to 50mm	30 to 60mm
ii) Length of herbage during the non-growing season	20 to 40mm	20 to 60mm	20 to 70mm
iii) Bare area.	Max. 10%	Max. 15%	Max. 25%
iv) Total ground cover	Min. 90%	Min. 85%	Min. 75%
v) Desirable grass species	Min. 80%	Min. 70%	Min. 60%
vi) *Poa annua*	Max. 10%	Max. 20%	Max. 30%
vii) Other undesirable grass species	Nil	Max. 5%	Max. 10%
viii) Weeds - Large-leaved	Nil	Max. 2%	Max. 10%
ix) Weeds - Small-leaved	Nil	Max. 5%	Max. 5%
x) Moss	Nil	Nil	Max. 2%
xi) Algae and Lichen	Nil	Nil	Nil
B. Pests and Diseases			
i) Diseases	Nil	Max. 2%	Max. 2%
ii) Earthworms	Max. 1%	Max. 5%	Max. 10%
iii) Pests	Nil	Nil	Max. 2%
C. Profile			
i) Root depth	Min. 150mm	Min. 100mm	Min. 75mm
ii) Thatch depth	Max. 5mm	Max. 10mm	Max. 15mm
iii) Rootzone medium	Min. 200mm	Min. 150mm	Min. 100mm
iv) Rootzone silt &clay content	Max. 6%	Max.17%	Max. 25%
v) Infiltration rate (only measured during the autumn/winter period)	Min. 10mm/hr	Min. 5mm/hr	Min. 2mm/hr
vi) Evenness using a 2m straight edge	± 15mm	± 18mm	± 25 mm
vii) Evenness using a 0.5m straight edge	± 8mm	± 10mm	± 12mm
viii) Soil pH	6.0 - 7.0	5.8 - 7.5	5.8 - 7.5
ix) Soil nutrient level: P_2O_5	Index 2	Index 2	Index 2
x) Soil nutrient level: K_2O	Index 2	Index 2	Index 2
xi) Gradient: Length ways	Greater than 1:200	1:200 – 1:100	1:100 – 1:80
xii) Gradient: Across the pitch	1:150 – 1:100	1:100 – 1:80	1:80 – 1:50

2. Presentational Quality

Performance Standard	Quality Standard		
	High	**Standard**	**Basic**
i) Appearance	100% uniform texture	Min. 90% uniform texture	Min. 70% uniform texture
ii) Surface debris	Nil	Nil	Nil
iii) Sward colour	100% uniform	90% uniform	70% uniform
iv) Pitch line markings	Visible from a min. 60m	Visible from a min. 45m	Visible from a min. 30m
v) Goal posts (see note below)	a) Uprights b) Crossbars	a) Uprights b) Crossbars	a) Uprights b) Crossbars

Performance Quality Standards target – Football

Top - The site was at one point filled with rubble, this being largely removed and imported clay topspoil spread

Bottom – The layout of the full site

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.

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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
- Blinding layer
- Drain Topping sand
- Sand topdressing layer

(Per tonne delivered)

4. Other

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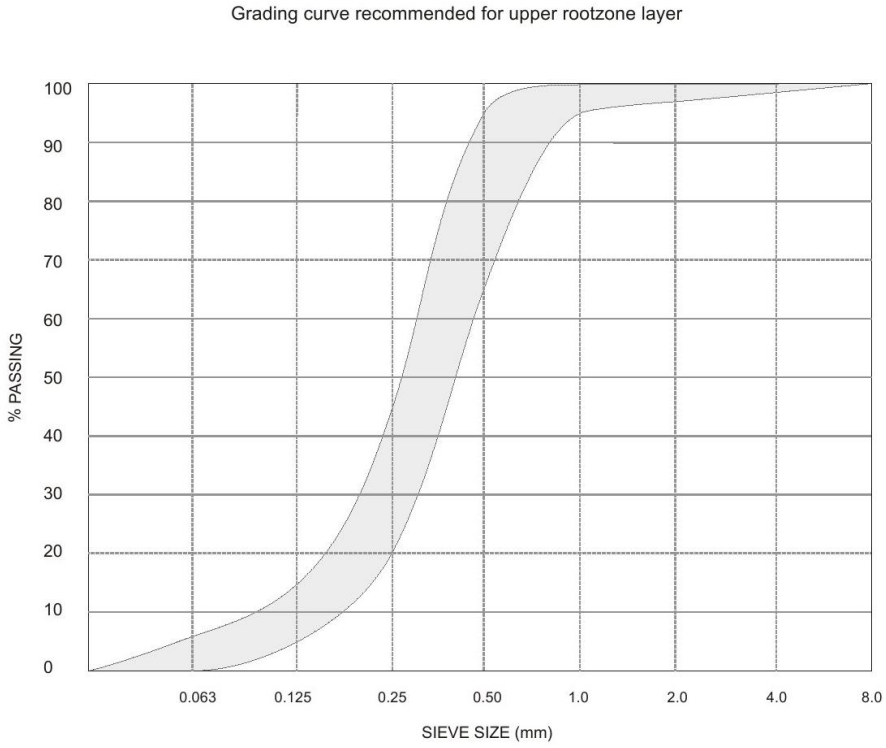
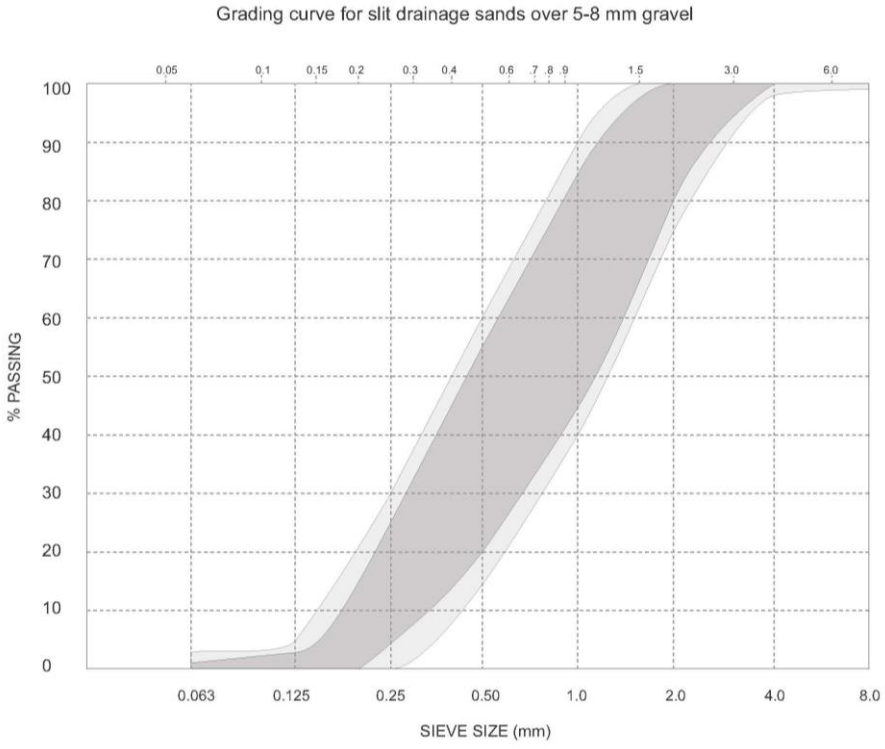
APPENDIX 1 – Grading Curves

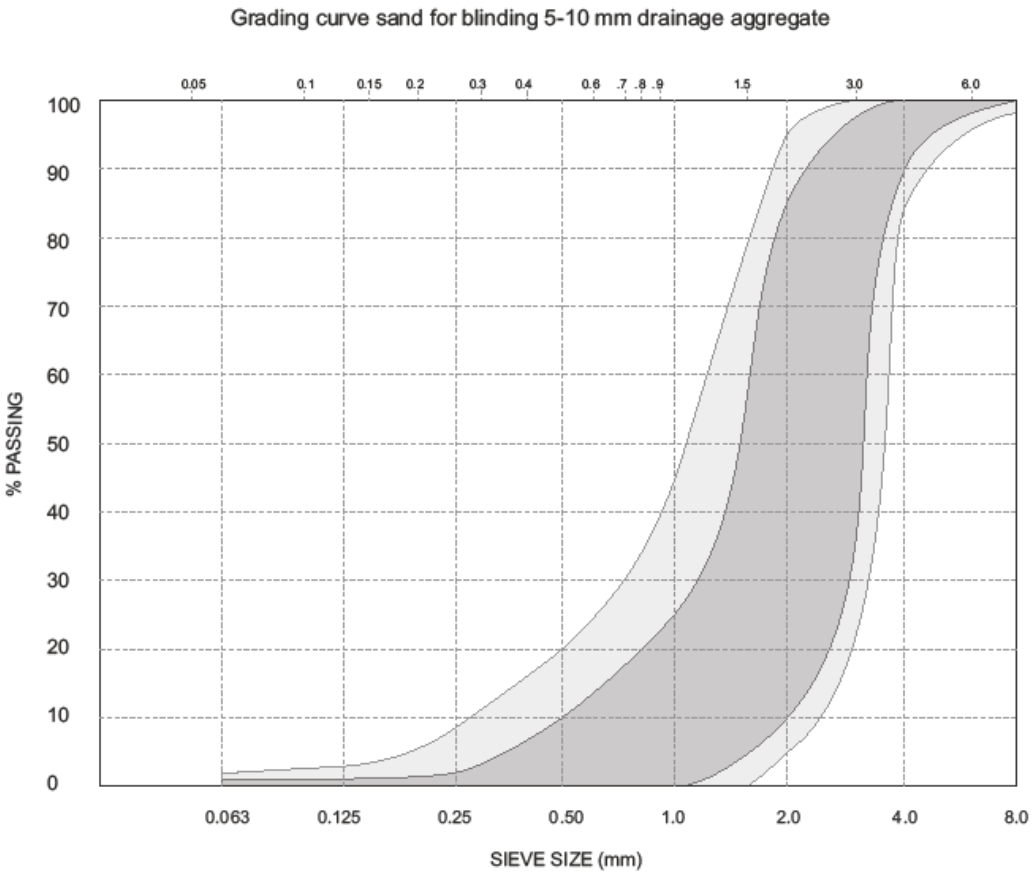
Grading Curve 1 – Sand Rootzone Layer



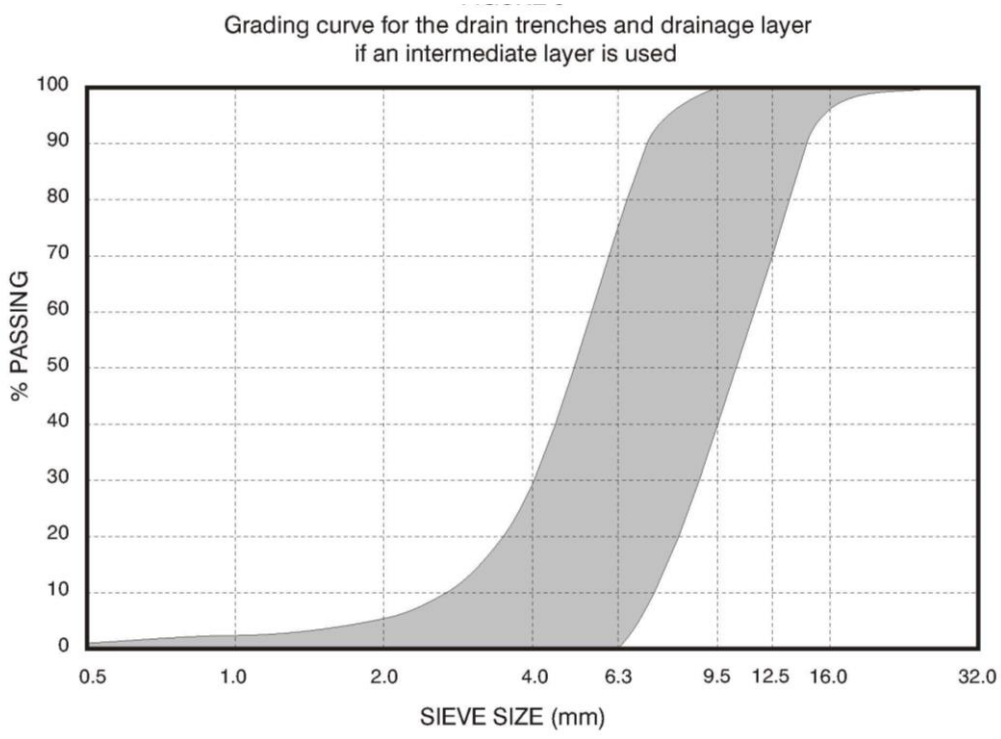
Grading Curve 2 – Slit drainage sand



Grading Curve 3 – blinding sand



Grading Curve 4 – Permeable fill



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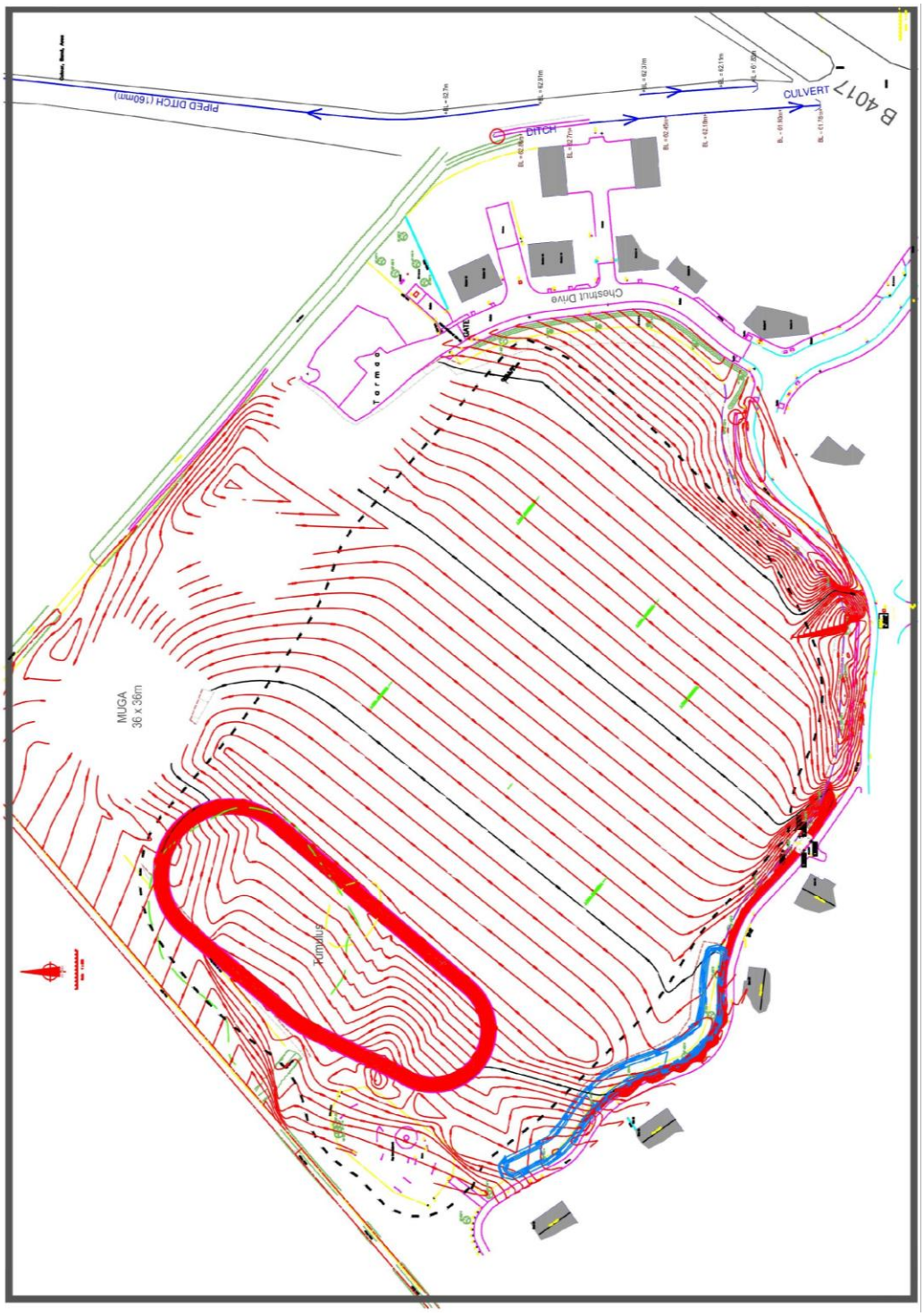
APPENDIX 2 – DRAWINGS

(PROVIDED SEPARATELY AND AS CAD FILES AS REQUESTED)

EXISTING SITE



PROPOSED DRAINAGE SYSTEM