GROUNDS MANAGEMENT ASSOCIATION

Making sport possible

SPECIFICATION RELATING TO WORKS TO CONSTRUCT A NEW FOOTBALL PITCH AREA AT HEADLEY PLAYING FIELDS, MILL LANE, HEADLEY

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SPECIFICATION

The Invitation to Tender, Preliminaries, Specification Document and the Schedule of Rates should be read in conjunction with the Conditions of Contract, the Design Drawings and other information in the procurement package.

The site address is Headley Playing Fields, Mill Lane, Headley, Bordon, GU35 0PB. Grid Reference: 481944, 136010; What 3 Words: drifters.expired.tugging

The main elements of the Works required will consist of the following: -

- Mark out development area within the site and flail mow / clear the existing vegetation to dispose off site. Apply total herbicide, strip vegetation, strip topsoil to 200 mm and take to temporary store. Grade subsoil to design levels using balanced cut and fill techniques, rip formation layer and trim, topsoil replacement, laser grading to final design levels, stone burying / picking. Seeding, fertilisation, establishment, reinstate easement areas and seed, maintenance to handover including temporary irrigation. Install rabbit proof fencing around the site boundary with 8 simple stiles to allow access over the fence for ball retrieval. Repair / infill existing hedges and plant new hedge along the southern site boundary.

Item 1.0 Summary of preliminaries

The full preliminaries should be read in conjunction with this specification. Where any ambiguities may occur between the preliminary summary in the specification and the full preliminaries, the full preliminaries take precedence.

The contractor must, before quoting, ascertain the nature of the site, the extent and nature of the types of work required and all local conditions and restrictions likely to affect the execution of the work.

The contractor should ensure an assessment is made of any vehicle size limitations, which may affect access to the site or operation within the site to deliver materials, plant and equipment or limit in any way the execution of the works. The contractor is to take account of this assessment when submitting the Tender. The entrance to the site is via the main site entrance off Mill Lane. **There is a car park on both sides of the access road part of which may be used as a site compound though the access road is shared with a local farm and must be kept clear at all times. The site access road has a width restriction of 4.0m when cars are parked.**

The contractor **must** satisfy themselves as to the accuracy of all dimensions, levels and dimensions contained within the contractors' documents and any variation be forwarded to the CA before any works commence or any plant is placed on site.

No claims or increases in cost will be considered on the grounds of lack of knowledge of site conditions, site access, and the nature of the site, the required construction works and risks to property, workforce and general public.

Important Notes: The works are within an open public area with multiple points of public access. The development area and site compound must be secured to prevent public access as far as possible. The access route will need to be located and secured to minimise any conflicts with other site users. The site is not secure and carries a risk of vandalism.

Deliveries into the site must not coincide with busy periods of use (typically weekends and evenings) Though outside the development area, the site contains several protected trees adjacent to the development area and these must be protected with fenced Root Protection Zones to the satisfaction of the client and the Tree Protection Officer. The hedgerows must be protected and repaired where gaps occur using native woody species such as Hawthorne, Blackthorne, Holly, crab apple and other suitable species already present within the existing hedgerows.

Item 1.1 General

The Contractor shall provide all labour, plant, tools, vehicles and materials necessary to complete the execution of the works, which shall conform to this specification and the design drawings provided by the CA and any subsequent revisions notified by the CA.

The site shall not be used for any purpose other than carrying out the works. There will be no advertising boards allowed near to, or on site that may attract vandals or other unwanted visitors.

Any vandalism or malicious damage to contractor's plant or equipment will be covered by the contractor's own insurance.

The site will need to be fenced off from all public access using HERAS or similar fencing.

Item 1.2 Nuisance

The contractor is expected to show due consideration to the local residents, users of the existing sports facilities, neighbours and general public at all times.

The contractor will take all necessary precautions to protect against noise, dust, rubbish and pollution. All waste material will be removed off site on completion of the works to the satisfaction of the CA and there will be no burning of any residues on site.

Item 1.3 Protection

The contractor and its suppliers shall protect against damage to existing boundaries including fencing, gates, gate posts, trees, road and car park surfaces and hedge lines. Particular attention should be paid to the site access route and the hedges around the development area. Damage to existing kerbs and surfacing shall be made good by the contractor to the satisfaction of the CA. Where tracked plant is likely to permanently mark existing surfaces or iron work the contractor is, at his own expense, to use protection boards and or road plates to protect the surfaces either permanently for the duration of the works or for temporary access periods as required.

Where plant crosses internal roadways within the site the roadways must be protected and crossing points well fenced. Any damage to the roadways, car park area, turning areas, passing bays, hedges, fencing or trees shall be made good by the contractor to the satisfaction of the Client.

Any site damage however caused by the contractor or its suppliers will be rectified at the contractors' own expense to the satisfaction of the Client. Access must be agreed with the client and be in accordance with all the site requirements.

Works should be done in dry conditions with works stopped should the soil become too wet to handle without it smearing.

Item 1.4 Temporary Works and Services

Permanent paths and roads near the site are to be used provided that they are adequately maintained as thoroughfares with any nuisance or site clearance restrictions applied.

Provision of alternative routes into and out of the site, including turning restrictions onto and off Mill Lane is to be in accordance with Chapter 8 of the Road Traffic Signs Manual or otherwise agreed with the CA.

The contractor shall thoroughly clean and make good all roads and paths after use and leave in an unimpaired condition at the end of each working day.

The contractor is to liaise with the council staff, the client and the CA on an appropriate basis with regards to vehicular movement on site to avoid clashes with peak traffic periods into and out of the estate.

No deliveries or plant movement is to be made before 8.00 am or after 6.00 pm Mon to Fri and before 9.00 am or after 12.00 midday on Saturday. There shall be no working or deliveries on Sundays.

The Contractor shall at his own expense be responsible for the erection and maintenance of fencing to secure the works in accordance with CDM regulations. The Contractor has responsibility to ensure that all groundworks are protected from the public using suitable safety fencing approved by the CA.

Item 1.5 ***Site Clearance***

The contractor is responsible for the clear up and removal from site, on a day-to-day basis and at the end of the contract of all debris and excavated material not forming part of the works, leaving the area around the works clean and safe at the end of each working day.

No mud should be left on ANY footpaths or roads within the proximity of the development area with particular attention given to the car park, access road and Mill Lane. The contractor shall at his own expense provide a road sweeper to maintain a clean site access route and adjoining roads if requested to do so by the CA.

Item 1.6 ***Utility Services***

In the event of damage to any utility services during the course and execution of the works, the Contractor is to notify the CA and the appropriate Service Authority immediately and make arrangements for the damage to be repaired and made good without delay to the satisfaction of the Service Authority. **The contractor shall allow for a services search as part of the mobilisation costings and must not begin works on site until such a search has been completed and displayed on site. Any damages to services will be at the contractors cost and strict liability will belong to the contractor.**

New underground electricity cables will be installed along two sides of the area in the next few months The utility company have been asked to put them as close to the field boundary as possible. These cables will need to be found and marked ahead of works commencing.

Item 1.7 ***Setting out***

The working area shall be clearly marked on site using suitable temporary markers such as posts, tape and temporary spray paints. Access routes onto and off the site shall be clearly marked and fenced and sensitive working areas close to hedges, retained trees, buildings and fencing shall be marked as appropriate and fenced to protect them. The marked out works area shall be approved by the CA and Client ahead of works commencing.

Works

Item 2.0 Site clearance and preparation of site

Item 2.1 ***General clearance***

The Contractor shall collect and remove to the Contractor's tip off site all rubbish, debris, rubble, fly-tipped material from the site. Any cleared vegetation produced during part of the works must also be disposed of off-site at a suitably licensed waste facility.

Before starting work the Contractor shall verify with the CA, which site features are to be removed that will include but not be limited to:

• Existing scrub and small shrubs within the development area

The development area shall be marked out and agreed ahead of works starting. All retained trees and the surrounding hedges must be protected by temporary fencing. This applies to the sports, car park and entrance road areas.

Item 2.2 ***Mowing***

Any vegetation within the development area shall be mown as short as possible using a flail mower or other suitable machine. The arisings shall be gathered and disposed of off-site at a suitably licensed waste facility.

Item 2.3 ***Herbicide application***

The ground within the development area shall be prepared by the application of a suitable total herbicide. The treatment for total herbicide control shall kill all treated growth including their root systems. The rates of application of herbicide shall be appropriate to the density of vegetation to be controlled and shall not be below the minimum nor above the maximum specified by the manufacturer. Spraying should be carried out in accordance with the manufacturers' instruction by suitably qualified and certified staff carrying the relevant tickets, copies of which should be kept in the site office for inspection. Spraying should be done in accordance with a risk assessment for the site.

Spraying should be done when conditions are calm and still to minimise the risk of drift. The Contractor shall take precautions against spray or vapour drift on to adjacent hedgerows, land or private property, or the leaching of chemicals transversely into drainage channels, watercourses or other areas. This is particularly important when working close to the existing hedges and trees. Any damage caused by spray drift shall be immediately notified to the CA and made good at the contractors' expense.

Unless otherwise agreed by the CA, the Contractor shall not commence any excavation or cultivation of the areas where herbicide has been applied until the vegetation has been effectively controlled.

Item 3.0 Topsoil strip, subsoil cut and fill, grading, ripping and topsoil replacement

The site has an excessive slope with gentle undulations within the overall falls. The design seeks to create an even surface with FA recommended gradients for football pitches by grading the area into a distinct plateau, maximising the usable space for football.

Item 3.1 Cultivation and topsoil strip – (DN GMA 0930.19-1 Rev 2 Proposed and Existing levels)

Item 3.1.1 Strip upper 10 mm of vegetation and thatch to dispose off site at a suitable facility.

The upper 10 mm of vegetation and thatch shall be uniformly stripped from the development area and disposed of off-site at a suitably licensed waste facility.

Item 3.1.2 topsoil strip

The upper 200 mm of true topsoil shall be stripped and taken to temporary stockpiles which shall be made weatherproof in accordance with best practice. This should include shaping the top of the piles to ensure water will shed off the soil rather than infiltrate, typically with sloping sides no shallower than 1:5. The height of the stockpiles shall be no greater than 3m. The locations of the stockpiles shall be confirmed ahead of works commencing.

Item 3.2 Subsoil cut and fill works to create and even fall to design levels – (DN GMA 0930.19-1 Rev 2)

Item 3.2.1 Subsoil cut and fill and formation layer preparation

The subsoil shall be loosened and graded to achieve the design levels as shown in Drawing Number GMA 0930.19-1 Rev 2 Proposed and Existing Levels. This shall create a formation layer that falls evenly within the design falls to enable pitches compliant with FA maximum slope recommendations to be achieved on the basis of the pitch layout shown on Drawing Number GMA 0930.19-1 Proposed and Existing Levels.

Item 3.2.2 Formation grading, ripping and firming

The formation shall be trimmed and graded using a laser grader or laser-controlled blade to achieve the desired levels. Once levels are achieved, the formation layer shall then be ripped using a subsoiler or similar to a depth of at least 300 mm to fracture and loosen the formation layer. The surface shall then be firmed back to formation level. The final finished surface shall be level such that there is no deviation in excess of 50 mm under a 3m straight edge.

Item 3.3 Topsoil replacement and grading to design levels – (DN GMA 0930.19-1 Rev 2 Proposed and Existing Levels)

Item 3.3.1 Topsoil replacement

Once the formation layer has been completed to design specification and levels confirmed, the topsoil shall be replaced including on batter and cut slopes. The topsoil shall be placed in layers, firmed and graded then each layer shall be roughened to allow the next layer to key into the one below. The aim is to produce a surface which is firm to minimise future settlement but not overly compacted so as to exacerbate drainage issues. An ideal final dry bulk density through the topsoil should be between 1.2 and 1.3 Mg m^3. Penetration resistance as measured by a hand-held penetrometer should not be in excess of 170 psi anywhere within the upper 280 mm at any point. The topsoil should be laser graded to final design levels.

Item 3.3.2 Stone burying and picking

The surface shall then be stone picked and buried until there are no stones or foreign matter larger than 25 mm in the upper 50 mm of the soil. All stones collected shall be disposed of on-site as directed by the client.

Item 3.3.3 Final grading

The surface should then be graded to produce an even surface within the general fall of the site. The surface should have no deviations greater than 15 mm under a 2m straight edge.

Item 4.0 Supply and spread specified rootzone, with seeding and reinstatement

Item 4.1 Decompaction and loosening works

The graded area shall be decompacted using either a linear decompaction machine such as an earthquake or tine-based machine and then the surface shall be very gently scratched / loosened with a power-rake or Koro machine to provide a rough surface for the rootzone layer to key into.

Item 4.2 Rootzone supply and spread

The formation surface shall be checked and any debris or stones over 25 mm in size shall be removed. A suitable sports rootzone material complying to the following specification shall be supplied and spread over the formation layer sufficient to ensure there is a minimum of 10 mm cover over any part of the surface. The rootzone shall be:

- A medium sports sand mixed with a sandy soil typically at an 80:20 ratio.
- The rootzone should have a minimum infiltration rate of 100 mm hr when at maximum compaction and tested at 20 cm tension.
- The rootzone shall have a minimum 15% air-filled porosity when tested at 20 cm tension and maximum compaction.

The rootzone material shall be spread evenly and to design falls. It shall be spread such that it runs evenly onto surrounding boundaries leaving no step or change in levels between existing boundaries and the development area greater than 5 mm under a 3 m straight edge. The material shall be compacted gently as it is spread to provide a firm final surface suitable for seeding into. The final surface shall be level such that there is no deviation greater than 10mm under a 2 m straight edge anywhere on the development area.

Item 4.3 Pre-seeding fertiliser (including batter and cut slopes)

Ahead of seeding the area should be fertilised with a suitable pre-seeding fertiliser at the manufacturers recommended rate. This should be applied evenly over the area.

Item 4.4 Seeding (including batter and cut slopes)

The area shall be sown in three directions using a suitable high-quality dwarf ryegrass seed mix designed for winter sports pitches. This should include high ranking cultivars for wear tolerance and sward density. This can include one tetraploid variety. The overall seeding rate should be 50 g m^2. The contractor should send details of the seed to be used ahead of the works commencing for approval by the CA. The seed mix shall have a germination certification of over 95% and certified purity of not less than 98%.

Item 4.5 Temporary irrigation

The contractor shall supply and use temporary irrigation to ensure the seed establishes. To minimise the use of temporary irrigation, seeding should be done at a time when there is a favourable weather forecast, ideally in early autumn but this will depend on the timing of the works in general.

Item 4.6 Reinstatement of access route

The route into the site from the access road should be reinstated following the works to grass. This will require removing any remaining spoil or materials to disposal off site and decompacting the route by subsoiling, firming, cultivating and seeding.

Item 5.0 Installation of rabbit proof fencing, and the repair / infilling of native species hedgerow to match the existing on site.

Item 5.1 Rabbit proof fencing

A galvanised chicken wire rabbit proof fence shall be erected using 75 mm diameter soft wood timber posts spaced every 2m. Every 20m on straight runs and at every corner or change in direction there shall be a double staked 100 mm diameter post.

The posts should be driven into the soil. All timber is to be sawn softwood. All ironmongery is to be galvanised.

All timber should be pressure treated with a minimum 15-year performance guarantee.

Between the posts a hot-dipped galvanised rabbit wire mesh fence shall be hung. The mesh shall be 19 gauge with 31 mm diameter holes. The fence shall be secured and tightened using a 2.5 mm diameter hot-dipped galvanised straining wire running along the top of the chicken wire mesh.

The fence should be 1.0 m high above the ground with the bottom 200 mm of the galvanised fence dug into the soil, angled slightly out away from the pitches to the surrounding land to minimise the risk of burrowing beneath by rabbits. The mesh shall then be buried and the surface made good by seeding over the disturbed ground with the same seed mix as used in 4.2.3.

A 3.6m wide machinery access gap should be left at the main access to the field from the access road.

Item 5.2 Native hedgerow

The existing hedgerows should be repaired / infilled where needed using a mix of the following species:

- Hawthorne (35%)
- Blackthorn (30%)
- Field Maple (10%)
- Guelder Rose (10%)
- Holly (5%)
- Wild Crab Apple (5%)
- Dog Rose (5%)

The best time for planting is late autumn, between mid- October and March provided the ground is not frozen.

- Create a 1m wide, weed free strip either by ploughing, digging or in limited cases, treating with a systemic herbicide where gaps are significant and there is space to do so without damaging the rest of the hedgerow.
- Ensure the bare roots of the plants do not dry out before planting.
- Plants should be supplied in accordance with the Horticultural Trade Association's National Plant specification and be sourced from a nursery that is a Member of the Horticultural Trades Association Nursery Certification Scheme.
- Plant in trenches large enough to take full spread of roots (20cm depth x 40cm width). Back fill with a previously prepared mixture of topsoil excavated from the pit, together with suitable compost and additional topsoil as required.
- Use 60-90cm high stock.
- Plant in a double staggered row approximately 30cm apart.

- Set out plants evenly.
- The base of the hedge should be mulched with a 50-75mm layer of composted bark to stop weed growth and retain moisture in the soil.
- Protect plants from damage and grazing by using protective tubes or spiral guards.
- If using bare root stock, ideally plant in late autumn after mid-November.
- Where gaps are small trees should be planted in staggered pairs to fill in the gap.

Item 5.3 Wooden stiles, bat and bird box

Two wooden step over stiles along each side of the rabbit fence should be installed adjacent to a support post to allow easy stepping over the fence to retrieve balls or maintain the hedge. The stiles should use treated softwood with a minimum 15 year guarantee.

One RSPB approved bat box and one RSPB approved bird box shall also be installed as directed by the client.

Item 6.0 Installation of access road and reinforced car park area.

Item 6.1 Ground preparation, fertilisation and seeding

Within the area designated for parking and the car park access road, the ground shall be cultivated to a depth of 200 mm and graded to an even surface within existing falls. It shall then be firmed by rolling with a Cambridge roller. The car park area shall then be fertilised with a suitable pre-seeding fertiliser and seeded at a rate of 50 g m^2, using the same seed as used for the pitch and surrounds. Once the grass has reached 50 mm length it shall be cut using a rotary mower to 30 mm. It shall then be maintained between 30 and 50 mm.

Item 6.2 Laying of ground reinforcement mesh

Once the grass has been mown 4 times and there is a total ground cover of over 90%, the car park area shall be covered with Terram GrassProtekta geotextile, in full accordance with the manufacturers' instructions. The mesh shall be secured as specified by the manufacturer and shall be laid as soon as possible after the 4th mowing as possible. Grass shall be allowed to grow through the mesh but should not be allowed to get longer than 50 mm.

Item 6.3 Installation of Bodpave 85 gravel access road and kerbing

Item 6.3.1 Access road general

In general the access road will be a flexible pavement and conform to the subsequent details regarding finished road width, construction profile, kerbing and grades. Finished road levels will in general follow the existing land profile with minor smoothing where required and conform to the centre line levels on the design drawing or as agreed with the CA.

Standards applied are the Specification for Highway Works (SHW) or British Standard (BS). All materials shall be kite-marked or produced within a defined quality assurance scheme approved by the client. All materials and products shall be approved by the CA before work commences and the Contractor shall supply any specification compliance documents, samples or materials testing as requested by the CA at its own expense.

The Surface Regularity of completed surfaces shall comply with the requirements of the table below.

Highway Layer	**Maximum deviation permitted under the appropriate straight edge**
Surface Course	Max 10 mm under 3m straight edge

The Contractor shall set all fixed surface features, boxes, ironwork in the carriageway or footway to coincide with the mean level of the immediately adjacent surface. Such fixing and adjustment shall not be done until the carriageway surface course layer is laid and then checked before final laying of the surface course.

The difference in level of a fixed surface feature and the immediately adjacent surface shall not exceed a tolerance of + or – 6mm except for those contained in the table below.

Tolerances for other fixed surface features

Kerb upstand	115mm +/- 5mm
Vehicular crossing kerb upstand	25mm +/- 3mm
Pedestrian kerb upstand	3mm to flush +/- 3mm Flush kerbs at channel +3mm +/- 3mm
Gullies	+5mm to +10mm
PCC channels	+3mm to +6mm

Iron work	+3mm to +8mm

The access road shall be constructed to true line and level.

6.3.2 Carriageway Foundation

The excavated formation shall be evenly prepared and shaped with defective areas, ditches and isolated deep pockets reinstated.

The formation shall be cleansed of loose mud, slurry and detritus prior to being compacted with a roller of suitable type and weight.

The finished surface shall have a uniform surface to level appropriate to the approved design thickness.

The formation shall be adequately protected from the weather and shall not be used by construction traffic and shall be covered as quickly as possible with sub-base.

The formation shall be treated with an approved residual weed killer before construction commences.

A separating membrane shall be laid on the prepared formation in accordance with the manufacturer's instructions and shall extend 300mm further than the kerb beam width and comply with the following requirements:

In general accordance with SHW specification Clause 609 subject to the 090 shall be greater than 50 and less than 200 (BS 6906 pt2: 1989) and the tensile strength in each direction shall be 6kN/m (EN ISO 10319:1996)

6.3.3 Access road sub-base

The depth of sub-base shall be calculated with regard to CBR tables, with the natural soil being a well drained Loamy Sand. Sub-base materials shall be spread evenly on the formation in layers of a depth of not more than 150mm compacted thickness and compacted in accordance with the Sub-base Compaction Table. The full thickness of the sub-base shall be continued for a distance of 200mm beyond the limits of the kerb beam. The sub-base will be undrained due to the high drainage rate of the subsoil.

Material: Granular Sub-base Material Low Fines DoT Type 3. The maximum particle size shall not exceed 70 mm.

The material shall comply with the full requirements of SHW Clause 803 including secondary and recycled aggregates; only with Client approval and subject to any independent material testing requested by Client at the Contractors expense.

Sub-base minimum thickness will be subject to CBR table values and should not be less than 200 mm.

6.3.4 Construction Layers General

Arisings will be disposed on site as directed by the client.

The surface layer shall be constructed using Terram Bodpave 85 in full accordance with the manufacturers' instructions and as detailed in the installation guide included in the tender documents.

The gravel use to infill the plastic geomembrane shall be in full accordance with the manufacturers' specification, filled to level with the surface with 4-15mm clean, angular aggregate (BSEN13242). The colour should be a buff brown.

6.3.5 Kerbs

The Contractors attention is drawn to the manual handling of pre cast concrete units, it is required that full risk assessments will be performed for all processes and mechanised laying is viewed as essential in accordance with the HSW 1974 – Kerb Handling Operations Local Authority Contracts, Manual Handling Operations Regulations 1992 and any amendments thereof.

Kerbing: Precast Concrete granite aggregate PCC to BS EN 1340:2003

- 150mm x 125mm BN Bull nosed – access road
- Special shapes: As applicable depending on radii if less than 15m, fit and drop kerbs
- Finish/colour: standard grey, smooth
- Cutting: Neatly and accurately with a masonry saw without spalling minimum permissible cut length 300mm
- Joints: dry butt jointed
- Bedding: Mix 1:3 Portland cement, Class 42.5: BS 882 sand, grading M or F; thickness 10mm minimum to 40mm maximum
- Lay: Laid upright to line and level bedded on mortar within 50mm of face of kerb beam.
- Backing: Type A/B ST1 concrete minimum thickness 150mm to within 50mm of the top of kerb
- Type C ST1 concrete minimum thickness 100mm to within 40mm of the top of kerb
- Other: Mortar bed may be omitted if units are bedded on a foundation that is plastic.

Keep exposed faces of units clean and free from concrete and mortar droppings.

Permission of the CA shall be sought where cut kerbs are proposed to achieve a smooth line on curves. Cut kerbs shall be of equal lengths between 450mm and 600mm and shall have suitably tapered cuts free of spalling to achieve a smooth front face of kerb line.

Drop kerbs to be used at transition with existing access road and at car park surface.

Item 7.0 Maintenance and minimum standards necessary for handover (allow to maintain for 6 months post practical completion though if the pitch meets handover requirements before this time it can be handed over as soon as those requirements are met, with the item sum adjusted accordingly).

The contractor shall maintain the surface until handover is expected. At the point of handover, the pitch area shall comply with the following minimum performance quality standards as measured at 6 points within the pitch:

Criteria	Basic Value
Length of sward	30mm - 40mm
Bare area	Max. 10%
Total ground cover	Min. 90%
Desirable grass species	Min. 95%
Annual Meadow Grass content	Max. 5%
Weeds	Max. 5%
Root depth	Min. 100 mm
Thatch depth	Max. 5 mm
Infiltration rate	Min. 5 mm / hr
Evenness using a 2m straight edge	Not in excess of 20mm
Stone content	No stone larger than 25 mm in any dimension in the upper 50 mm
Hardness	Between 35 and 200 g measured using a 0.5 kg Clegg Hammer

This should include sufficient cuts to maintain the grass between 30 and 40 mm. Following establishment, the area shall be rolled and checked for stones. The first 2 cuts to be done ideally with a rotary mower in conditions when the ground is firm and will be unaffected by the machinery. The height of the first cut should be at 50 mm and the second should reduce the height of cut to 40 mm. In no instance should more than 1 third of the grass leaf be removed during mowing. Thereafter the grass shall be maintained between 30 and 40 mm in length as per Item 6.0. until handover. As a minimum the contractor should allow for at least 2 controlled release fertiliser applications and one conventional fertiliser application, 3 decompaction operations, regular brushing and at least one selective herbicide application. Water as needed to establish a strong sward. **This is a minimum – the contractor needs to do whatever is needed to ensure the handover standards are met.**

The replanted sections of hedge and infilled areas should be watered as required to establishment. Any planting that fails should be replaced with new plants at the contractors' expense for the first 12 months.

8.0 Completion

At completion, the contractor shall provide a complete set of as-built drawings to the client in both PDF and DWG format.

8.0 Schedule of rates

Item	Description	Unit	Number	£/unit	Cost (£)
1.0	Mobilisation and setting out	Item	1.00		
1.0	Services search	Item	1.00		
2.0	**Site clearance and preparation**				
2.1	Clearance of scrub and small trees within development area	Item	1.00		
2.2	Mowing and removing arisings	m^2	11,588.00		
2.3	Apply total herbicide	m^2	11,588.00		
3.0	**Topsoil strip, subsoil cut and fill, grading, ripping and topsoil replacement**				
3.1.1	Remove grass and upper 10 mm thatch	m^3	116.00		
3.1.2	Strip upper 200 mm of topsoil and remove to temporary store	m^3	2,052.00		
3.2.1	Subsoil cut and fill (cut 2043 m^3 and fill 2043 m^3 to balance)	m^3	2,043.00		
3.2.2	Formation layer grading, ripping and firming	m^2	10,261.00		
3.3.1	Topsoil replacement	m^3	2,052.00		
3.3.2	Stone pick and removal and stone bury	m^2	10,261.00		
3.3.3	Final laser grading of the formation layer	m^2	10,261.00		
4.0	**Agronomic works**				
4.1	Decompact the development area	m^2	9,916.00		
4.2	Supply and spread 10 mm layer of specified rootzone material	t	180.00		
4.3	Supply and apply pre-seeding fertiliser	m^2	10,261.00		
4.4	Supply and drill specified seed mix	m^2	10,261.00		
4.5	Supply and use temporary irrigation to establish the sward	Item	1.00		
4.6	Reinstate access route	Item	1.00		
5.0	**Hedging and rabbit fencing**				
5.1	Supply and install rabbit fencing	Lin m	540.00		
5.2	Supply and plant hedging, including supports and whip replacement and infill gaps in existing hedge	Lin m	206.00		
5.3	Supply and install wooden stiles, one bat box and one bird box	No	8.00		
6.0	**Access road and car park construction**				
6.1	Cultivate car park area to 200 mm and work to a fine tilth followed by Cambridge roll	m^2	1,327.00		

6.1	Fertilise with pre-seeding fertiliser	m^2	1,327.00		
6.1	Seed at 50 g m^2 using specified seed mix	m^2	1,327.00		
6.1	Establish grass and carry out first 4 cuts to maintain between 30 and 50 mm	m^2	1,327.00		
6.2	Supply and lay GrassProtecta geotextile	m^2	1,327.00		
6.3	Excavate sub-base for access road and dispose of arisings on site	m^3	11.00		
6.3	Supply and install specified geotextile on formation surface	m^2	53.00		
6.3	Supply and lay DoT Type 3 low-fines stone in accordance with specification	m^3	11.00		
6.3	Supply and install in accordance with specification Bodpave 85 including gravel infill	m^2	53.00		
6.3	Supply and install pre-cast concrete kerbing as specified	Lin m	38.00		
6.0	**Maintenance**				
6.1	Maintenance and minimum standards necessary for handover (6 months)	Item	1.00		
7.0	**Completion**				
7.1	Supply as built drawings	Item	1.00		
			Sub total		
			10% contingency		
			Total cost of contract		