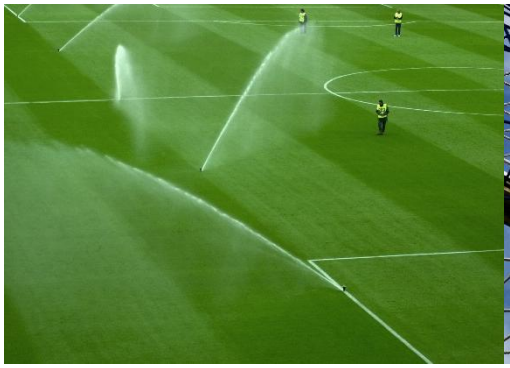
East Devon District Council

Assessment of potential playing field development sites in Honiton

Client Name:	East Devon District Council
Prepared By:	James Westwood
Date:	23 May 2016



If you have any queries with regard to this report please call +44 (0)1274 565131 or email info@stri.co.uk

Contents

Report Title: Proposed Winter Pitch Developments in Honiton (Revision C)

Client: East Devon District Council

Date of Visit: 2nd March 2016

Prepared by: James Westwood Date: 23/05/2016

1.0 Introduction

The STRI has been engaged to carry out a series of topographical surveys at various locations within the town of Honiton. The areas investigated included both existing playing fields and parcels of agricultural land which East Devon District Council is considering either upgrading or developing as new winter games playing areas to be used by local community teams.

The topographical surveys took place on the 2nd March and were completed by James Westwood of STRI Ltd.

In addition to the onsite surveys carried out, assessments of other sites in Honiton were also made, these being based upon existing topographical survey information provided by East Devon District Council, as well as satellite imagery of the sites concerned.

As part of the assessment for each site, indicative pitch layouts have been provided, these being based on the number and size of pitches which have been identified by the Council.

2.0 Proposed Developments – Surveyed Sites

At each surveyed location, a topographical survey has been provided showing the existing ground contouring over the areas under consideration. In addition, a CAD modelling exercise has been undertaken at each location, this being based on the number and size of pitches which may ultimately be required.

The designs for each site included the development of graded platforms to accommodate either single or blocks of pitches.

At each of locations surveyed, the layouts provided illustrate how the land could be utilised and the likely impact of the associated level adjustment works on the existing topography. However, it must be appreciated that these are purely indicative and each design would need further refinement once the precise mix of pitches has been finalised, as well as the extent of any associated facilities such as clubhouses, access roads and car parking.

As part of the assessment, it has been assumed that the dimensions of the pitches shown correspond with FA/Sport England and RFU guidelines, these being appropriate for the different age group of teams potentially using the facilities. In addition, the gradients of the playing surfaces are also compliant with Sport England/FA Guidelines for pitch slopes, i.e. the pitches should not exceed a slope of 1:80(1.25%) along the line of play and across the line of play the maximum gradient should be 1:50(2%)

2.1 Former Showground (H.4)

2.1.1 Existing Topography

The former showground lies on the north-eastern outskirts of Honiton and is situated between the A30 Bypass Road and Longford Road.

The total area of the showground field is considerable, this covering approximately 7.5 ha.

The main feature of the site is the pronounced fall across it in a north-westerly direction. Indeed, the survey indicated that overall, there is a general fall of around 15 m from the top of the site which borders the A30 down to the edge of the Langford Road, this being the equivalent of a slope of 1:15.

Another feature of the site is the presence of an electricity pylon which is situated on the south-eastern boundary of the field, approximately 120 m to the east of the western most boundary.

There are currently two access points onto the field, the first of these being a gateway within the hedge along its eastern most corner of the field where a track runs parallel to the A30 and eventually joins a minor road which links to the Langford Road to the north. There is a second gateway on the north-western boundary of the field which allows access directly off the Langford Road.

The existing topographical survey information of the former showground site is shown on Drawing DE105617-07-001.

2.1.2 Pitch Layouts

This site is to provide up to 3 senior rugby pitches together with 5 mini/midi rugby pitches, together with associated car parking and Clubhouse/changing room facilities.

A provisional arrangement of the required facilities has been provided by the Council (H.4 Potential) which shows the existing access of Longford Road being retained with an access track being provided running around to the western end of the field where the car parking and clubhouse facilities would be located. Two senior rugby pitches are also shown, these having north-west/south-east easterly orientations, together with three midi rugby pitches and a further senior pitch which is overlaid with smaller midi pitches. However, this layout does not take into account the level adjustment works which would be needed to establish the pitches and provide acceptable gradients on them.

It is clear from the topographical survey of the site that extensive level adjustment works will be required in order to produce playing surfaces with an acceptable gradient across them. In view of the main slope being in a north-westerly direction, the pitches should ideally have a south-west to north-easterly orientation so that on completion of the grading works, the pitches will be level along the line of play and will have the maximum permitted gradient across their width of 1:50 (2%). To illustrate this, a design for a single platform has been prepared for this site which incorporates two full sized rugby pitches as well as three junior size pitches catering for up to U11/U12 age group teams. The senior pitches have dimensions of 100 m x 70 with a 10 m in-goal area, whilst the junior pitches measure 60 m x 43 m plus 5 m in-goal areas.

Even with a maximum gradient of 1:50 across the platform, there is still substantial cut and fill taking place with the total adjustment varying between 4 m and 6 m resulting in a large cut embankment along the south-eastern edge of the platform with a corresponding fill embankment on its north-western edge. Consequently, embankments with their 1:3 grade extend up to 20 m in places. The total quantity of cut/fill adjustment required to achieve the platform shown is in the region of 44,000 m^3 which is a substantial amount for a playing field development.

An alternative approach would be to create a series of individual platforms with the same cross falls which would lessen the visual impact of the redevelopment on the landscape, although this would be subject to further detailed design. However, a drawback of this approach would be that this would generate a greater number of cut/fill embankments and on the senior pitches, these would still be around 1.8 m in height based on a 1:50 cross fall. In addition, whilst separate platforms could be created

for the two senior pitches, the space needed for the additional embankments means that there may be insufficient land remaining for the development of the adjoining junior pitch.

The visa impact of the graded platforms on the landscape could be reduced if the finished grade across each pitch platform was increased from the recommended 1:50 to 1:30. If this was implemented over one of the senior rugby pitches, then the amount of cut/fill adjustment required would be reduced to around 1.3 m and the quantity of earthworks reduced by around 25%. However, the finished surfaces would be non-compliant with current Sport England guidelines.

A further restricting factor on the existing field is the presence of the pylon which means that there is no scope for carrying out any level adjustment and formation of cut embankments in its immediate vicinity and therefore the provision of an additional pitch here is prevented.

The visual impact caused by the various embankments associated with the earthworks could be softened by planting these out with trees appropriate to the locality and indicative areas of planting are shown on the proposed layout drawing.

The proposed platform and pitch layout is shown on drawing number DE105617-07-002Rev A.

2.2 St Rita's Site (H.1, H.9 and H.B)

2.2.1 Existing Topography

The proposed pitch developments works are based on parcels of land adjoining or close to the St Rita's Retreat and Conference Centre located on the north-western outskirts of the town. The land in question lies between the A30 Bypass and the original roman road running through the centre of the town. The Conference Centre is surrounded on three sides by various parcels of land, although these are not all currently used for recreational purposes.

Immediately to the south-east of the Conference Centre, there is a large irregular shaped open field just over 2 ha in size, this having the Council reference of H.1. Overall, the field slopes in a north-westerly direction and over its south-eastern half, the gradient is in the region of 1:35, but over the south-western half, this eases out slightly to around 1:50.

To the south-west of the Conference Centre, there is a long narrow rectangular field which also forms part of the H.1 area of the site. The north-western half of the field has a general fall of around 1:50 in a north-westerly direction. However, over the south-eastern half of the field the direction of fall swings round more to a south-westerly direction, this varying between 1:70 and 1:40.

The south-western boundary of the rectangular field within area H.1 is defined by a hedgerow interspersed with a mixture of mature deciduous trees. On the south western side of the hedge there is a further parcel of land which is already used for football and accommodates several pitches of varying dimensions. The Council site number for this area is H.B. Here, the general land fall continues in a south-westerly direction and where the existing larger pitch is located with the ground slope being approximately 1:70. However, the slope increases over the south-eastern part of the field to around 1:50. There is a further change in direction and severity of slope over the southern quadrant of the field where the ground drops more steeply towards the southern boundary with a gradient of around 1:16.

Along the south-eastern edge of the larger pitch, there is a smaller and narrower youth pitch, the southernmost corner of which extends over the most steeply sloping part of the site and thereby far exceeds current recommended guidelines for pitch slopes.

Another feature of this part of the site is the presence of a large pipe which emerges from the ground where it is supported on a series of pillars which as it leaves the site across its southern boundary.

Access to this site is gained by a gateway at its northern most corner and from here, a narrow track meanders back towards the main which runs down the north-eastern boundary of the Conference Centre.

The other parcel of land under consideration (H.9) comprises a long narrow mainly rectangular field which tapers towards it south-western end, this running parallel to the A30 Bypass. Over the north-eastern half of the field, there is a general fall across it in a west to south-westerly direction, this varying between 1:45 and 1:20. Across the south-western half of the field, the ground steepens and falls into a wide valley like formation where the gradient increases to around 1:15 and rises with a similar slope up towards the southwestern extremity of the field. There is an existing gateway entering the field approximately midway along its south-eastern boundary.

The existing topographical survey information is shown on Drawing DE105617-08-001.

2.2.2 Proposed Pitch Layout

In the field to the south-east of the Conference Centre, there is a requirement to accommodate two adult pitches within its boundaries. However, the overall shape of this field dictates that it would not be possible to have two full size football pitches here and their sizes would have to be restricted to U15/U16 11V11 sized pitches with dimensions of 91 m x 55 m plus a 3 m outer margin. On the proposed design layout, two separate pitch platforms have been shown, the north-eastern most of which is provided with a longitudinal gradient of 1:80, whilst the pitch to the south-west has a diagonal fall of 1:80, this being in a west to north-westerly direction.

As an alternative to the above, the field could accommodate a single full sized adult football pitch with dimensions of 100 m x 64 m with a 3 m outer margin. In this case, the pitch would have a north-east to south-westerly orientation with a fall across its width of around 1:80, the pitch being level along the line of play. This would take up most of the useable space within the field, although there would be scope for scope for extending the graded platform to incorporate up to two 5v5 mini soccer pitches. Any such variations could be explored as part of a more detailed design exercise.

On the narrow parcel of land to the southwest of the Conference Centre, this could accommodate quite comfortably two mini soccer pitches catering for U7/U8 5v5 teams playing on pitches with dimensions of 37 m x 27 m plus a 3 m outer margin. In this case, a single platform has been shown with an overall gradient of 1:80 in a north-westerly direction.

On the H.9 site, there is a requirement for up to three mini soccer pitches and the survey indicates that whilst these could be developed as U7/U8 5v5 pitches over the north-eastern half of the field, its relative narrowness means that it may not be possible to accommodate the 3 m outer margins in their entirety, taking into account the need for any associated cut/fill embankments. In the proposed design layout, the three pitches have been shown end to end with a 1:50 cross fall, the pitches being level along their line of play. However, the modelling indicates that the associated cut/fill embankments may well extend outside the boundary fence and therefore these may have to be steepened in order to accommodate them within the boundaries available. Alternatively the outer margins could be reduced slightly on a local basis, where necessary.

Over the south-western half of the H.9 field, there would also be scope for developing the required car parking and clubhouse facilities here.

On the existing playing field to the west (H.B), some regrading would be beneficial in order to provide more uniform playing surfaces, particularly along the south-eastern half of the field where the land falls away more steeply.

Under the proposed pitch layout, a single platform has been developed with an overall gradient of 1:80 in a south-westerly direction mirroring the existing fall. The platform is sufficiently wide to accommodate one youth team pitch catering for U15/16 11v11 teams, this having dimensions of 91 m x 55 m with a 3 m outer margin. Immediately to the south-east of this, a smaller pitch is shown, this being suitable for U13/U14 11v11 matches, with dimensions of 82 m x 50 m, again with a 3m outer margin. Immediately to the south-west of the larger pitch, the platform has been extended to incorporate two mini soccer pitches (U7/U8 5v5) with dimensions of 37 m x 27 m plus 3 m outer margins. However, before developing this part of the site, further investigation will be required in order to establish the precise routing and depth of the pipe which emerges from the ground near the southern corner of the site in order to establish whether this will be affected by the proposed earthworks.

Should the costs of regrading the pitch areas on the H.B area be considered too high, then any improvement works could be restricted to drainage works only, at least on the more level sections of the site. If the existing contouring is retained, then the benefits of any drainage on the more severely sloping southern sections of the site will be limited as there will be greater shedding of surface water here. The costs of installing pipe drainage only on the existing pitch areas would be in the region of £38,000 plus VAT and secondary drainage in the form of excavated sand bands would be around £23,000 plus VAT.

The proposed platform and pitch layout is shown on drawing number DE105617-08-002Rev A.

2.3 King's Arms Farm (H.7)

2.3.1 Existing Topography

The proposed development area here straddles two adjoining fields located on the western outskirts of the town immediately to the north-west of the A30 bypass. There is an additional section of road between the bypass and the fields which is presumably the original main road, adjoining which there is a raised lay-by area where access to the site can be gained by a gateway also located here.

A potential development area has been allocated over the south-eastern portion of the two fields, this extending approximately 100 m to the northwest of the south-eastern boundary hedge lines.

The two fields are separated by two lines of post and wire fence which run along the edge of an open ditch channel extending from the south-eastern boundary of the field, this emerging from a large culvert pipe located approximately 95 m from the access gate. The ditch continues in a north-westerly direction and eventually connects with the banks of the River Otter which forms the north-western boundary of the fields. Indeed, it is understood that the lower parts of the fields form part of the floodplain for the river and hence the area surveyed concentrated on the more elevated ground on the southern part of the site outside the main floodplain.

Again a feature of the chosen site is the pronounced fall across it as the ground drops away from the south-eastern boundary quite steeply with a gradient of around 1:15 in a north-west to northerly direction. Over the final 30 m or so the slope eases out slightly to around 1:45.

On the section of field to the east of the ditch channel, there is again a steeper gradient from the boundary hedge adjoining the road, this being in the region of 1:30 in a north-westerly direction which then eases out to around 1:80 over the north-western third of the field.

The existing topographical survey information is shown on Drawing DE105617-09-001.

2.3.2 Proposed Pitch Layout

The requirement here is for a range of adult and junior football and/or rugby pitches plus a clubhouse car parking and access.

The marked slope across the south-eastern half of the site means that extensive level adjustment will be required to form graded platforms for the various pitches.

On the western field, a proposed layout is shown, this comprising a single graded platform running across the south-western half of the field, this being formed with a slope of 1:80 in a north-easterly direction mirroring the existing direction of fall. The graded platform shown incorporates a senior 11v11 pitch with dimensions of 100 m x 64 m plus a 3 m outer margin at the north-eastern end of which there are two further pitches, the middle one catering for U9/U10 7v7 teams with dimensions of 55 m x 37 m and a plus a 3m outer margin. A mini soccer pitch has also been incorporated at the north-eastern end of the platform, this being used by U7/U8 5v5 teams having dimensions of 37 m x 27 m plus outer margin.

In the eastern most field, there would be room for only one pitch, in this case one catering for U15/U16 11v11 teams with dimensions of 82 m x 50 m plus a 3m outer margin. On the proposed plan, a platform has been produced with a gradient of 1:100 along the line of play i.e. in a north-westerly direction. This results in the formation of a cut embankment approximately 1.5 m deep along the south-eastern end of the platform with a slightly less pronounced fill embankment along its north-western extremity.

It is assumed that the existing entrance to the field could be retained, this coming off the lay-by area and a new access road created running across the slope down to the north-eastern end of the larger field with the car parking being located on the more level ground to the north-east of the mini soccer pitch. However, the Clubhouse building could be built on the slightly more elevated ground to the south, ideally above the potential maximum flood level.

The proposed platforms and pitch layouts are shown on drawing number DE105617-09-002.

If there is a requirement to extend the playing facilities onto the adjoining land to the north, then potentially, up to two full sized senior pitches and between two to three 11v11 youth team pitches could be accommodated here, although these would be susceptible to flooding whenever the River Otter breaks its banks. The existing ground levels here are reasonably smooth and uniform, so the development of any pitches on this part of the site would only involve surface cultivations and levelling, rather than more major earthworks.

2.4 Additional Factors

2.4.1 Drainage

In view of the generally heavy nature of the indigenous soils on the proposed development areas, any works carried out here will also require the provision of primary drainage systems in the form of an intensive system of pipe drains comprising main collecting drains with lateral drains running across each pitch area, ideally at intervals of 4 m. Other drainage improvements including secondary drainage in

the form of sand bands or gravel/sand filled slit drains should also be considered in conjunction with amelioration of the upper topsoil profile with suitable quantities of a fine to medium sand.

Before any drainage systems are installed, a positive outfall would need to be established at each location into which water collected by the systems can be discharged. Ideally, this would take the form of an existing watercourse or surface water system, although appropriate permissions would need to be gained from bodies such as the Environment Agency, the Council Drainage Division and/or Local Drainage Board. At some locations there may be a possibility of providing soakaways to accommodate any water collected by the pitch drainage systems, although in order to establish the suitability of the underlying sub-strata, further ground investigations and infiltration testing would be required to confirm whether this is a viable option.

There may be a requirement for some form of attenuation to hold back any water before this is discharged into existing watercourses or surface water systems and this could take the form of attenuation ponds or underground storage systems, although in the case of the latter, these could be expensive to install.

2.4.2 Bedrock

At each of the locations proposed pitch layouts have been provided and it is anticipated that extensive level adjustment operations will be required in order to produce graded platforms which provide the appropriate slopes over the playing surfaces conforming to Sport England/FA Guidelines.

In some cases, there will be significant cut taking place of several metres and at these locations, further ground investigation works will be required involving the excavation of trial holes with a JCB type machine in order to ascertain whether there is any bedrock within the depth of the proposed cut, as this could interfere with the overall costs of the regrading works, particularly if the bedrock is of a hard nature rather than in a fractured condition.

2.4.3 Underground Services

Again, in view of the extensive level adjustment works required at each location, appropriate searches should be made for any underground utilities which may be disturbed by the works should they go ahead. If any are located, then this may necessitate their diversion in order to accommodate the pitches or alternatively the layout of the facilities may have to be redesigned to avoid coming into contact with any services present.

2.5 Cost Estimates

Based on the proposed pitch layouts and platforms formed at each location, estimates of the total costs (excluding VAT) of developing the facilities shown on the drawings are set out for each site below.

These all include the associated earthworks, primary drainage systems with laterals at 4 m centres, cultivations, sand amelioration, secondary drainage in the form of excavated sand bands, seed bed preparation and seeding, as well as initial maintenance. A 10% contingency allowance has also been included.

The cost estimates are based on rates which would typically be charged by specialist sportsground contractors.

- Former Showground (H.4) £475,000
- St Rita's Site (H.1) £157,000*
- St Rita's Site (H.9) £55,500
- St Rita's Site (H.B) £148,000
- Kings Arms Farm (H.7) £205,000

*The costs of developing the two larger pitches alone, would be approximately £130K.

The above costings do not cover extra items such as the removal of spoil excavated from drain trenches which on some of the larger sites could be considerable, as well as any costs associated with the removal of or diversion of existing services, either above or below ground. The costs of removing spoil off site will vary with each project, as this will be dependent on the haulage distances involved and whether or not the spoil can be used as fill material on other local projects or has to go to tip. However, on a typical sports ground drainage project, the costs of disposing of the spoil could range between £10-30K.

It has also been assumed that a positive drainage outfall can be established on site as the above figures do not include any attenuation requirements, SUDs systems etc.

Design and consultancy fees relating to each development would also be in addition to the above estimates.

The costs of constructing a clubhouse/changing room facilities will be dependent upon the size and of type of building required. However, some indicative costs (excluding VAT) are provided for the following sites which include a clubhouse with changing rooms and social facilities as well as associated car parking.

- Former Showground (H.4) £650,000
- St Rita's Site (H.9) £200,000
- Kings Arms Farm (H.7) £350,000

3.0 Proposed Developments – Non-surveyed Sites

3.1 Former Manor House School (H.5)

The playing field which belonged to the former Manor House School lie remotely on the outer edges of Honiton just off the A34 Axminster Road. This consists of a single large field some 200 m in length and its width varies between 120 m and 180 m, occupying a total area of around 2.8 ha. On the north-western edge of the field there is a small pavilion and associated car parking area, access to which is gained via a narrow track leading off Cuckoo Down Lane at the south-western most corner of the field.

Satellite imagery shows the presence of an existing cricket square located approximately 50 m to the south-east of the frontage of the pavilion building.

If this site is to be brought back into usage, the brief here was to look at accommodating a range of football, cricket and rugby pitches on site and that the field would allow for the development of an eight wicket square with either football or rugby overmarking the outfield on each side.

Whilst the playing field is of a generous size, the layout of pitches over this is limited to some extent as the field tapers slightly towards a south-western end.

An eight wicket cricket square and outfield could be accommodated comfortably within the centre of the playing field, this being provided with a minimum recommended boundary length of 45.72 m. However, as the outfield is also to accommodate senior rugby or football pitches, the position of the square would need to be shifted slightly to the south-west and consequently this will not be directly in line with the frontage of the existing pavilion, as with the previous arrangement.

By moving the square to the south-west, this would provide sufficient area on the north-eastern half of the field to accommodate a full sized rugby pitch with dimensions of 100 m x 70 m complete with 6-m in-goal areas, this having a north-west to south-easterly orientation.

To the south-west of the square, there would be insufficient width available across the field to accommodate a second full sized rugby pitch. However, a senior sized football pitch could be marked out here, this having dimensions of 100 m x 64 m with a 3 m outer margin. Alternatively, a reduced sized senior rugby pitch could be accommodated here, although in this case, its length would have to be reduced to the minimum recommended of 94m with a 6m in goal area.

If the standard of drainage needs to be improved on this site, then the costs of installing primary drainage on the two pitch areas and their immediate surrounds with lateral drains at 4 m centres would be in the region of £48,000 plus VAT. If secondary drainage was also introduced in the form of excavated sand bands together with sand top dressing, then this could cost a further £33,000 plus VAT, if undertaken by a specialist sportsground contactor. The drainage system will also require a positive outfall into which drainage water can be discharged.

In addition the costs of developing a new square would be in the region of £20,000 plus VAT, based on an imported cricket type soil being used to produce the new facility.

The existing pavilion is of a traditional wooden cricket type structure and may potentially struggle to accommodate enough changing space for up to four teams plus officials, though more detailed plans would be required to understand if this is the case or not. Therefore the pavilion may need to either be extended or replaced in order to meet the demand that would arise from the pitches shown in the plans. In addition, the car parking area would need to be increased in size, and the existing parking area could

be extended to the south-west of the pavilion building. However, the amount this area can be extended will be restricted by the presence of the football/rugby pitch located to the south-west of the square.

An alternative consideration would be to build a new changing room facility at the south-eastern corner of the playing field where there is already a separate entrance which comes directly off Cuckoo Down Lane which leads to a secondary car parking area. However, this would only be feasible if the necessary utilities can be provided at this location.

The proposed layout of the cricket square outfield and pitches is illustrated on drawing number DE105617-14-001.

3.2 All Hallows Recreation Ground (H.C)

The playing fields are situated on the northern outskirts of the town and lie to the south of the A30 bypass road and immediately to the west of Honiton Community College.

The existing playing fields are roughly triangular in outline and can accommodate up to two full sized winter games pitches. However, the playing field has a poor drainage history and during the winter months the ground lies saturated and soft, with evidence of poached ground conditions during the wettest times of the winter.

In order to improve the winter playability of the various pitches on these playing fields, consideration will need to be given to the introduction of primary drainage in the form of pipe drains with laterals at fairly close spacings of around 4 m centres. These drains could be supplemented by secondary drainage, either as gravel/sand filled slit drains or sand bands.

Before any drainage improvements can be considered for this location a positive outfall would need to be established, either in the form of an existing surface water drainage system or water course nearby.

The total area of the existing playing field is in the region of 2.2 ha and the cost of installing a primary drainage system with lateral drains at 4 m centres would be in the region of £60,000 plus VAT, assuming that the works were undertaken by a specialist sportsground contractor.

If secondary drainage was required together with sand topdressing then this would cost in the region of an additional £40,000 plus VAT, this being based on the use of excavated sand bands.

Whilst some savings could be made by restricting the drainage works to the pitch areas only (i.e. around 40%), the undrained sections would remain wet in the winter and early spring which would lead to logistical problems with accessing the pitches for players and maintenance vehicles.

3.3 Mountbatten Park (H.A)

This facility adjoins the St Rita's Retreat and Conference Centre on the north-western outskirts of the town and comprises a rectangular shaped field with overall dimensions of approximately 160 m by 100 m. There is a cricket square located centrally within the field and the outfield area is also used for accommodating football pitches during the winter months.

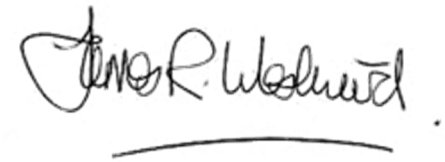
During the winter period, the pitches do tend to lie wet at the surface, although the pitches do not deteriorate to the same extent as experienced on those located at All Hallows recreation ground. However, if a higher standard of drainage was required for the winter games facilities at this site, consideration could be given to the installation of a primary drainage system at least, again with lateral drains being introduced at 4 m centres.

It is also assumed that a positive outfall can be provided on the site into which the water collected by the drainage system can be discharged.

The costs of installing a primary drainage system on the outfield and winter games areas (excluding the central cricket square) would be in the order of £45,000 plus VAT, based on a specialist sports ground contractor undertaking the work.

It is assumed that a secondary drainage system would not be required on these facilities, but the provision of the primary drainage should help raise the overall standard of playing surface provided here through the winter period.

Signed



James Westwood BSc (Hons)
Senior Design Consultant