

PROPOSED PLAYING PITCH & ANCILLARY DEVELOPMENTS

NEW HUTTE NEIGHBOURHOOD CENTRE HALEWOOD

PREPARED FOR



Knowsley Council

SUMMARY DOCUMENT PROPOSED LAYOUT



OCTOBER 2025

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1 INTRODUCTION

- 1.1. New Hutte Neighbourhood Centre (NHNC) is located to the south of Halewood, in the Borough of Knowsley, Merseyside. The site comprises multiple, inter-connected single storey buildings which in the past have been a local primary school and are now used by the Neighbourhood Centre which provides social outreach services to the local community, including a nursery and a food bank.
- 1.2. The site is accessed from Lichfield Road onto a primary car park to the west of the buildings, with a connecting internal road to a secondary car park to the south.
- 1.3. There is a substantial grassed area to the rear (east) of NHNC, originally playing fields for the primary school, which is now under-used green space.
- 1.4. This commission focuses on proposed developments at the NHNC site, including the creation of a new, positively-drained football pitch to satisfy Sport England requirements as replacement provision for a pitch which will be lost to proposed developments at Grace Park approximately 500m to the north-east.
- 1.5. In addition, the Council wishes to explore the feasibility and budget costing for the creation of a new and/or improved access to site from Lichfield Road, as well as external WC facilities for parents and spectators adjacent the proposed grass playing pitch, and the creation of an overspill car park adjacent the existing secondary car park in order to satisfy increased usage when bringing these developments on line.
- 1.6. In addition to these proposals, but on the same site, is the Council's intention to work with the Football Foundation in installing a Play Zone facility in the form of a macadam-surfaced multi-use games area (MUGA). This installation will be shown on all plans appended to this document but sit outside the scope of this commission.



2 RATIONALE

- 2.1. Knowsley Council is facilitating significant upgrades to their Grace Park site in Halewood (currently known as Wood Road Park). This development will include a new full sized, fenced, floodlit artificial grass pitch (AGP), as well as a fenced mini soccer pitch and a single storey pavilion. These proposals are part of a wider re-development of the entire Grace Park site in connecting the eastern and western sides of Halewood town.
- 2.2. The provision of a new 9v9 pitch at NHNC is in response to Sport England's request for mitigation of the loss of grass playing pitch space at Grace Park.
- 2.3. As part of its consultation with Sport England, Knowsley Council has identified land at the NHNC site in Halewood as a suitable alternate site for the development of a replacement pitch.
- 2.4. This NHNC site is just 0.5km south-west of the Grace Park site, and recent agronomy reports, commissioned on both the existing playing pitch at Grace Park and the area of the proposed alternate pitch, provide context on the current condition of both sites, as summarised below (full reports appended to this document).

Grace Park Playing Pitch Area

- Agronomic condition of the playing field area = poor
- Existing soils = “poor drainage qualities”
- Topography = within Sport England gradient guidelines

NHNC Playing Pitch Area

- Agronomic condition of the playing field area = moderate
- Existing soils = “slowly permeable seasonally wet”
- Topography = within Sport England gradient guidelines

- 2.5. While both the existing and proposed sites would require investment to provide good quality, free-draining grass playing pitches, given the underlying soil conditions and current status of each, the NHNC site presents an opportunity for Knowsley Council to introduce a better standard grass playing pitch for the town.

3 NHNC SITE

- 3.1. In addition to the above, and outside the scope of this commission, the Council is also looking to install a Football Foundation funded Play Zone at the NHNC site. This is to be the subject of a separate planning application (by others).
- 3.2. In addition to the proposed Play Zone and new grass playing pitch, Knowsley Council plans to add ancillary improvements to the site in order that it can sufficiently cater for its increased use. These infrastructure improvements include the re-modelling / addition of a new highway access to the site from Lichfield Road, the development of a formalised overflow parking area to the south of the site (adjacent the existing metalled parking) and the installation of a modular WC block for use by players and spectators.

4 PROPOSED LAYOUT



- A Proposed 9v9 grass playing pitch
- B Proposed overflow car park area
- C Proposed modular WC block
- D Proposed new highway access (TBC by others)
- E Proposed Play Zone (by others)

4.1. New 9v9 Playing Pitch

- 4.1.1. The proposed 9v9 pitch is to be positioned in the eastern section of the existing playing field area. A comprehensive primary and secondary drainage system, connected to an existing outfall on site, is to be installed, and a new grass sward developed.

4.2. Car Park Overflow

- 4.2.1. A new, formalised overflow parking area is to be installed adjacent to the existing parking provision in this area of the site. This will be a cell pave construction, infilled with gravel and bound on all sides by concrete perimeter kerbs.
- 4.2.2. Dimensions to be 22.5m x 16m, offering 360m² of additional parking, providing 18 new car parking spaces.

4.3. Modular WC Block

- 4.3.1. A 6m x 2.4m modular WC block is to be installed on site, providing 2no WC cubicles and one DDA Compliant WC cubicle with baby change facility.
- 4.3.2. The WC block is to sit on a purpose-made concrete raft, with overall dimensions of 6.5m x 3.8m, to provide 1m width hardstanding to the front of the unit for ease of access.

4.4. New Site Access

- 4.4.1. A new highway access to the site is proposed to enable easier and safer ingress and egress to and from the site onto Lichfield Road (design by others).

4.5. Play Zone (by others)

- 4.5.1. Knowsley Council has already committed to locating a Football Foundation-funded Play Zone on the NHNC site. This installation is the subject of a separate planning application and sits outside the scope of this commission.

APPENDICES

- A 250218 STRI SITE ASSESSMENT : GRACE PARK**
- B 250630 STRI SITE ASSESSMENT : NHNC**
- C TOPOGRAPHIC SURVEY**
- D PROPOSED LAYOUT**
- E PRE-TENDER ESTIMATE : PROPOSED WORKS AT NHNC**

APPENDIX A

250218 STRI SITE ASSESSMENT : GRACE PARK

Site Appraisal

Client: Knowsley Council

Project: Grace Park – Halewood Junior Football Club

Location: Halewood, Knowsley, Merseyside

Report date: 27/11/2024

Consultant: Joe Woodcock

Revision: C

CONTENTS

ISSUE INFORMATION	3
REVISION RECORD.....	3
1.0 INTRODUCTION.....	4
2.0 DESK-BASED STUDY.....	6
3.0 ON-SITE APPRAISAL	10
4.0 DISCUSSION	14
5.0 RECOMMENDATIONS.....	15
6.0 INDICATIVE COSTS.....	21
7.0 HEALTH AND SAFETY.....	21
8.0 RECORD OF SITE CONDITIONS.....	22

ISSUE INFORMATION

This site appraisal report has been produced in good faith for exclusive use by Knowsley Council and other stakeholders in relation to the development of Grace Park, Halewood, Merseyside. STRI accept no liability or responsibility whatsoever in respect of any use of this report beyond the scope of its application by any third party. The report is the property of STRI and may not be copied nor reproduced without prior written approval of STRI except for the purposes of dealing specifically with the management and implementation of this project.

Client:	Knowsley Council
Project:	Grace Park – Halewood Junior Football Club
Location:	Halewood, Merseyside
STRI Ref:	J007309
Doc Title:	Site Appriasal
Date of Inspection	13/11/2024

REVISION RECORD

Revision record (Revision '0' being the original)

Revision Record			
Revision Number	Date of Issue	Reason for Revision and Comments	
C	18/02/2025	Updated figure	
Author	Joe Woodcock	Checked By	Greg Whately
Date	26/11/2024	Date	26/11/2024

Signed



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1.0 INTRODUCTION

1.1 Appointment information

STRI have been appointed by Knowsley Council to carry a site assessment in relation to the development of two 3G artificial pitches within the existing Halewood Junior Football Club site. The report requires an assessment of the existing natural turf surfaces to understand the quality and limitations of the current surfaces along with any constraints identified during the site visit that could impact the development of the artificial pitches.

1.2 Context to site appraisal report

A recent application for levelling up funding by Knowsley Council has been successful therefore works have been identified to take place as part of the redevelopment of the Grace Park site with the eastern portion of Grace Park occupied by Halewood Town Junior Football Club.

1.3 Proposed development

The proposed development would involve the construction of one full size senior 3G artificial pitch and one mini 5v5 3G artificial pitch. Both pitches would be located towards the north of the current site with the senior 3G pitch proposed to be an east-west orientation whereas the smaller 5v5 3G pitch would be a north-south orientation. The proposed site plan can be seen below within Figure 1.



Figure 1 – Proposed site plan

1.4 Aims and objectives

The site appraisal shall combine a series of desk-based and on-site appraisals aimed at assessing the technical and practical issues associated with the proposed development, and to provide recommendations for the scope of the works required.

The objectives of the site appraisal were as follows:

- To determine any technical constraints to the proposed development.
- To determine any practical constraints to the proposed development.
- To provide recommendations for further investigation.
- To provide recommendations for the works required.
- To provide guidance on the timescales associated with the recommended works.

2.0 DESK-BASED STUDY

2.1 Site Location

Site address:	Leathers Lane, Merseyside, Liverpool
Site postcode:	L26 0TX
Site grid reference:	SJ 44756 85242
Local authority area:	Knowsley Council



Figure 2 - Aerial photo of site

Hereafter, the area within the scope of this report as illustrated in Figure 2 shall be referred to as 'the site'.

The site demarcated within the red line above was bound to the north, east and south by residential housing with the main Grace Park site located within the west. The site was accessed to the east directly off Leathers Lane through a gated entrance. An electrical substation was located to the east of the site along with a small pavilion area which is used by the club.

2.2 Site information

The following information has been obtained from publicly available sources including aerial photography, historical mapping, and Defra MAGICMap.

Existing land use:	Used by Halewood Town Junior Football Club	
Existing sports facilities :	At the time of the visit, two youth football pitches were marked out with a training area noted in the south of the site. One youth football pitch was marked out in a north-south orientation with the other pitch marked out in an east-west orientation. The total playing field area is approximately 19,850 square metres.	
Historic land use:	Historical Google images showed a school had been situated in the area where the current Halewood Town Junior Football Club pitches are located. It is believed that the school was demolished circa. 13 years ago.	
Land based designations:	Area of outstanding natural beauty	No
	Local nature reserve	No
	National nature reserve	No
	Moorland line	No
	National park	No
	RAMSAR site	No
	Proposed RAMSAR site	No
	SSSI	No
	Special area of conservation	No
	Special protection area	No
	Biosphere reserve	No
	Nitrate vulnerable zone (NVZ)	No
	World heritage site	No
	Registered battlefield	No
	Registered parks and gardens	No

2.3 Site access

The site can be accessed directly off Leathers Lane to the east of the site.

2.4 Climate

The following information has been obtained from the Met office website using data from Crosby, the nearest official Met Office climate station, approx. 13 miles from the site, covering the period from 1991 – 2020.

2.4.1 Annual rainfall (mm)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
69	57	53	50	52	64	65	72	77	90	82	92	824
England average												870

2.5 Flood risk

The following information has been obtained from Environment Agency Flood Risk Maps (see Figure 3). The site is located within Flood zone 1 therefore there is a low probability of flooding.

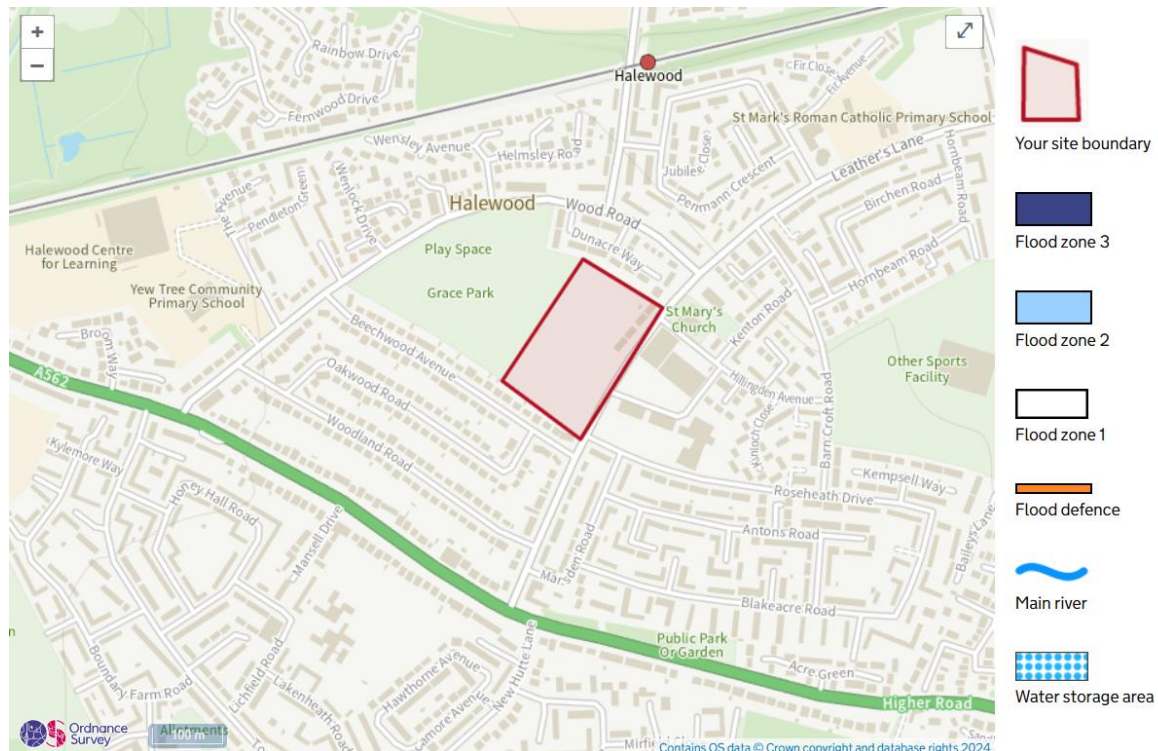


Figure 3 – Flood risk for planning maps

2.6 Previous ground investigations

No previous ground investigations have been made available to STRI.

2.7 Geology

The following information has been obtained from the British Geological Survey (BGS) online Geology Viewer.

2.7.1 Made Ground

A school has previously been located within the Halewood Town Junior football club site however has been restored to playing pitches.

2.7.2 Superficial deposits

The BGS mapping indicates that Till, Devensian deposits are present.

2.7.3 Bedrock

The BGS mapping indicates that Etruria formation is located across the entire site.

2.8 Hydrology

The following information has been obtained from publicly available sources including aerial photography, the WWF Rivers Map, and the Environment Agency Statutory Main River Map.

Main rivers:	No main rivers are located within or close to the site boundary.
Water bodies near site:	No water bodies are located close to the site.
Water bodies within site boundary :	No water courses were observed when attending the site.
Distance to coastline:	N/A

2.9 Topography

The existing site levels and gradients were assessed by reviewing topographic survey data made available to STRI.

The highest spot levels were recorded to be circa 24 m which were located in the south of the site with the lowest spot levels recorded in the north of the site and were recorded to be circa 23 m.

The overall gradient was calculated to be circa 1:100 in both an east-west direction and a north-south direction therefore no significant gradient was present which would aid shedding of surface water.

Sport England guidelines states that playing surfaces should be no steeper than 1:80 – 1:100 along the line of play and 1:40 – 1:50 across the line of play.

2.10 Contaminated land appraisal

STRI understand that the site has had a school previously located to the south therefore this could be considered an area of brownfield land however this has been returned to green space for football pitches and used Halewood Town Junior Football Club.

No previous ground investigation information has been provided to STRI.

2.11 Proposed usage levels

The proposed usage of the proposed 3G artificial pitches is unknown at this point.

3.0 ON-SITE APPRAISAL

3.1 Surface Levels

3.1.1 Surface gradients

In addition to the desk-based appraisal of the topographic survey information provided, general surface levels were assessed visually during the on-site appraisal for the existing football pitches within the Halewood Town Junior Football Club site.

3.1.2 Surface evenness

Surface levels did appear to be in reasonable condition for the southern youth football pitch however the surface levels were poor to moderate for the northern youth football pitch. The most impacted area of the northern youth football pitch with regards to surface levels was noted to be within the south-east corner of the pitch. The uneven surface levels within the northern youth football pitch would impact ball roll and would allow for surface water to be captured in the low-lying areas.

3.2 Existing vegetation

General:	Existing vegetation was poor across the entire site and across the two existing youth football pitches with broadleaf weeds such as Clover (<i>Trifolium</i>), Daisy (<i>Bellis perennis</i>), Dandelion (<i>Taraxacum</i>) and Ribwort Plantain (<i>Plantago lanceolata</i>) present. The main grasses present included a mix of Annual meadow grass (<i>Poa annua</i>) and Perennial ryegrass (<i>Lolium perenne</i>) however the majority of vegetation cover was clover.
Agronomic condition:	The agronomic condition of the two youth football pitches was poor at the time of the visit with grass cover averaging approximately 5% within goalmouth areas and approximately 25% in other areas of the pitches. The poor grass cover is thought to be related to the high percentage of clover which is not a hard wearing type of vegetation along with wet surface conditions. At the time of the visit, it was also observed that the disease 'rust' was present within the Perennial ryegrass population which would indicate a lack of fertility within the Ryegrass population.
Invasive species:	There were no invasive species identified within the site at the time of the visit.

3.3 Trees

No trees were located within the site boundary or around the perimeter of the site that might impact development works.

3.4 Ground conditions

Sub-surface ground conditions were relatively dry at the time of the visit across the marked out football pitches however this is thought to be due to the limited rainfall received in the area over the past two weeks. Surface conditions were wet at the time of the visit particularly within the areas where grass cover was limited, i.e. within goalmouth areas. Any significant rainfall would result in poor ground conditions and poor playability for football.

At the time of the visit various areas appeared to be unused by the club due to poor ground conditions which has led to limited layout options for the club and limited usable space. The areas that are not used due to poor ground conditions can be seen within Figure 4 below demarcated within the red lines.



Figure 4 – Unusable areas by the club due to poor drainage and infrastructure (approximately 9000 sqm of unusable playing field)

3.5 Site soil conditions

3.5.1 Soil profiles

3.5.1.1 Visual assessment

A series of trial pits were excavated by hand at various locations (see Figure 5 below) to confirm the nature of the underlying soil profile. In summary, there was a consistent sandy loam topsoil across all three test pits excavated. The depth of topsoil was measured to be on average 260 mm and grass rooting extended to a

maximum of 190 mm with no large stones observed along with no contamination in the form of glass or pottery.

The brown sandy loam topsoil was overlaying a grey clay subgrade



Figure 5 – Trial pit locations

3.5.1.2 Laboratory soil analysis

One representative sample of topsoil was collected from the trial pits for particle size analysis to determine the mineral and organic matter composition of the indigenous topsoil. Full particle size analysis reports are included in Appendix 2.

Sample location:	Representative Soil Analysis
Laboratory reference number:	A20958/1
Soil texture:	Sandy Loam
Sand (%)	62 (17% very fine sand)
Silt (%)	23
Clay (%)	15

3.6 Drainage

3.6.1 Existing drainage features

A desktop study shows that no site wide drainage is thought to have been installed across the site at any time. An open ditch was located to the west of the football club site however no drainage was observed to

be in-letting into the ditch at the time of the visit and is thought to be there to aid surface water removal. This would therefore classify the two existing youth football pitches as Type 1 Sport England pitches.

3.6.2 Potential drainage outfalls

When observing the site plan, it is noted that a SUDS scheme will be proposed in the form of a basin or swale which should be modelled to take the drainage from both artificial pitches. It is imperative that full drainage calculations are completed to ensure drainage capacity and run-off rates meet requirements.

3.7 Existing structures

An electrical substation was located to the south of the site along with a small Clubhouse area for the football club however it was reported that these will be removed as part of the proposed redevelopment plans. The substation currently limits any pitches been marked out within the east of the playing field area along with the clubhouse area to the east.

3.8 Utilities

A full utilities search was not included as part of this feasibility study report.

4.0 DISCUSSION

The following points should be considered when analysing the quality of the existing football pitches at Halewood Town Junior Football Club and also for the proposed development of the 3G artificial pitches:

- Overall, the existing youth football pitches and entire playing field area were in poor condition at the time of the visit. Both marked out pitches and areas used for training purposes were dominated by broadleaf weeds in particular clover. Both pitches showed signs of excessive use given the current makeup of the pitches. The high presence of clover would also correlate with the poor grass cover observed in both football pitch areas with a maximum of 5% grass cover recorded in all goalmouth areas and a maximum of 25% grass cover recorded in other areas of both pitches.
- A representative sample of the existing topsoil was analysed as part of the assessment with the site topsoil noted to be in the sandy loam category. The high presence of fine particles (23% silt and 17% fine sand) within the topsoil would indicate that the existing site topsoil does have poor drainage properties therefore the absence of a site wide drainage system is inhibiting drainage potential and impacting surface quality.
- It is reported by the client that the current youth football pitches at Halewood Town Junior Football Club are used for approximately 8-10 hours per week. The current football pitches are of type 1 Sport England standard which means that the entire area is undrained with no comprehensive drainage system to take any excess water away from the pitch surface. The current Sport England guidelines show that a type 1 pitch can indicatively sustain no more than 2 hours of adult usage and more than 3 hours of junior usage (under 15) per week. The current over usage of the existing pitches given their construction type will also result in a deterioration of pitch conditions with regards to grass cover and drainage due to compaction.
- The two youth football pitches on the site did hold some surface water within the top 10 mm of the pitch profile however this is thought to be linked to the poor drainage properties of the existing topsoil and the poor grass coverage in high wearing areas which has caused the surface to become sealed. When observing the site, it was noted that more agronomic practices such as Verti-Draining, topdressing, fertilising, scarification and potential site wide drainage scheme would improve the condition of the football pitches and surrounding areas however this this would only increase the usage capacity by a small percentage compared to that of the proposed artificial pitches. The indicative maximum usage of what is currently existing (type 1 pitches) at Halewood Town Junior Football Club and what is proposed (two 3G artificial pitches) can be seen below in a comparison table.

Pitch location	Maximum theoretical hours of usage (weekly)	Existing hours of usage (weekly)
Northern natural grass junior football pitch	3	8-10
Southern natural grass junior football pitch	3	8-10
Proposed full size 3G artificial pitch	60	N/A
Proposed min 5v5 artificial pitch	60	N/A

- For the proposed 3G artificial pitches it should be noted that a large volume of topsoil will be generated and will need to be removed from site or used as part of the wider development at Grace Park.
- Soakaway testing should be carried out to BRE 365 standards to understand the size and scope of the proposed SUDs system to the north of the site which would seem the most logical option for taking drainage water from both 3G artificial pitches.
- The proposed 3G artificial pitches would require floodlighting therefore a well-designed floodlighting system to meet the requirements of ILP guidance and zone E2 requirements however an impact assessment would be required due to the close proximity to housing in the east and north of the site.
- Ecology surveys should be undertaken to assess the current site. Floodlighting may be problematic if bats are found to use or forage in parts of the site.
- A suitable level of ongoing maintenance will be critical for the proposed artificial pitches to ensure player safety, suitable playing performance and to ensure the longevity of the surfaces.

5.0 RECOMMENDATIONS

5.1 Development works for the 2 proposed 3G artificial pitches

The following section provides high-level recommendations for the construction works required to develop the sports surfaces within the site. This section deals only with the construction works required to develop the sports surfaces and does not include recommendations in relation to the development of any ancillary features such as a pavilion, car park or access road.

The exact pitch construction type, size and position will be largely dependent on the ground conditions, impact of coal mining activities, ecological impacts, the budget available and the surface water management strategy.

Recommended Construction Methodology

5.1.2 Initial site setup

In advance of the works, the existing vegetation should be cut as short as possible using suitable grass cutting machinery, ideally removing the clippings in the same operation. Should the long dense vegetation be deemed to be too strong for general maintenance equipment, agricultural type mowers and a baler should be utilised to cut and bale the material before removing it off-site.

Thereafter, a total non-residual herbicide should be applied to the entire working area using a tractor mounted sprayer or similar.

5.1.3 Topsoil stripping

The site topsoil should be stripped across the entire working area. Where possible the soils shall be kept on site and re-used as part of a soft landscaping scheme to meet biodiversity net gain requirements.

5.1.4 Level adjustments

A balanced cut and fill earthworks operation should be carried out to achieve the desired formation surface for the artificial pitches.

The entire formation surface should be consolidated and lightly graded using laser-guided or GPS controlled equipment to smooth out irregularities and achieve a smooth formation surface free of dips and hollows, marrying in with the adjacent land prior to drainage installation.

The formation should provide a level, stable base to enable the construction of the sports pitches. Typically, a minimum 5% CBR should be achieved. If the CBR values are lower the formation would need to be stabilised, or the sub-base would need to be designed to accommodate CBR values between 2-5% through incorporation of a geogrid, subject to full design calculations.

5.1.5 Drainage Installation

The ground investigation will confirm the permeability of the soils. This will dictate the drainage strategy. The playing surface and subsequent sub-base materials typically have high rates of permeability which enables play during and following heavy rainfall events. Where possible the drainage will infiltrate to ground but where this is not possible owing to ground conditions it would need to connect into the local ditch system and into the local water course features or discharge into the proposed SUDS scheme.

Typically, the drainage installation will feature 80 mm lateral pipes beneath the playing surface at 10 m centres, connecting to perimeter main drains. A drainage outfall will connect to a soakaway or the wider drainage scheme.

It is possible to use the voids within the sub-base materials to attenuate during storm events via a controlled outflow. A full drainage design should be undertaken to determine the depth of sub-base construction required to enable the 1 in 100 year +40% storm event to be controlled.

5.1.6 Sub-base Installation

Typically, a 300 mm layer of MOT Type 3 aggregate will be spread over a geotextile membrane (Terram 1000 or similar). Above the aggregate layer a 40 mm asphalt layer consisting of 10 mm sized aggregate will be installed across the development area of each pitch.

5.1.7 Artificial Turf System Installation

A FIFA Quality approved artificial turf system (carpet only or carpet and shockpad) should be installed onto the complete asphalt sub-base. The completed installation should be tested so that the facility will be placed on the FAs 3G Pitch Register, enabling FA affiliated matches to take place.

Typically, 3G pitches in the UK are filled with sand and SBR rubber infill. The EU have placed a ban on microplastics, of which SBR infill is affected. SBR infill is typically granulated from vehicular tyres and is a recycled product. There are other forms of polymer infill from virgin sources but these are typically more expensive and would still be considered a microplastic. There is currently a transition period before microplastics will not be available on the marketplace, and alternatives, commonly organic infills or biodegradable polymers are used and being developed. Non-infill artificial turf systems do not meet the current FIFA requirements and therefore cannot be used however with technological advancements this may be possible in the future.

SBR infill is the most economical solution which meets the durability and ball / player surface performance characteristics but organic infills are beginning to be used at more sites around the country. As organic infill is more expensive, it is typical for football only fields to incorporate a shockpad which reduces the quantity of infill required and facilitates a 40-45 mm pile carpet instead of a typical 60mm carpet without a shockpad.

It is recommended that RMMs are adopted to prevent the wider spread of microplastics into the environment.

The infill type to be used would be a client choice and to be determined as the project progresses.

5.1.8 Fencing

The proposed type of fencing should be consistent with the FAs technical requirements for artificial grass pitches. The perimeter fence should be 4.5 m high and with open mesh rigid panels formed from steel and

powder coated, typically dark green or black. The mesh used is 50 mm x 200 mm, with the lower 1.2 m consisting of super rebound panels which are 50 mm x 66 mm. Twin horizontal 8 mm thick wires are combined with single 6 mm gauge steel for the vertical wires.

It is common for RMMs to consist of 0.2 m to 0.5 m high barriers at the base of the fence line to prevent infill splash into the wider environment.



Figures 6 & 7- Left; 50 x 200 mm mesh fence panel in dark green. Right; 1.2 m high spectator handrail fence with super rebound mesh (50 x 66 mm).

5.1.9 Pitch Access / Egress

A 3G facility should allow access for users on to the surface through single leaf gates, 1.2 m wide, and allow vehicular access for maintenance equipment and emergency vehicles on the surface via 3 m wide by 3 m high gates. Boot wipers and decontamination grates should be installed to all entrances into the field of play.

Access to the pitch should be in accordance with DDA requirements under Part M: Vol 2 of the Building Regulations.

It is common to provide a 4 m wide hard landscaped area along one side of the pitch to provide an area for parents/carers to safely watch youth matches and for users to congregate in a safe area before sessions begin on the surface. This area helps maintain a 3 m clear area around the pitches which is free of people, bags, jumpers and drinks bottles etc. Typically, double pitch facilities would have a wider section between adjacent pitches, up to 8 m, to allow a 4.5 m fence line to separate the facility while allowing spectators to view each pitch without being struck by balls from opposing pitches.

5.1.10 Goal Storage

Goal storage is provided around the edges of the facility so that when not in use, no goals are stored on the carpet. This is to maintain a clear unobstructed three metre run-off from the pitch and assist when maintaining the surface. The size and position of the goal storage areas are dictated to an extent from the line markings to be used on the surface. The exact position of the goal storage can also move depending on site constraints such as retaining walls, site boundaries, access routes etc.

5.1.11 Line Markings

A good quality 3G pitch can support in excess of 60 hours of usage per week, and this allows pitches to contain a full sized pitch with additional junior sized pitches. In contrast to natural turf pitches where it is best to have dedicated pitch areas for individual pitches. The below plan is the standard design as recommended by Football Foundation and The FA as this allows adult and junior match play to recognised pitches sizes. This line marking arrangement can support;

- 1no. 11v11 Pitch 100m x 64m plus 3m run offs suitable for adults.
- 2no. 9v9 Pitches 64m x 46m suitable for u-11 to u12 age category*.
- 2no. 7v7 Pitches 55m x 37m suitable for u9 to u10 age category.
- 4no. 5v5 Pitches 37m x 27m suitable for u7 to u8 age category.

*Smaller than the FA recommended size for a 9v9 pitch (73x46m) but accepted by the FA for use in affiliated youth matches and competitions.

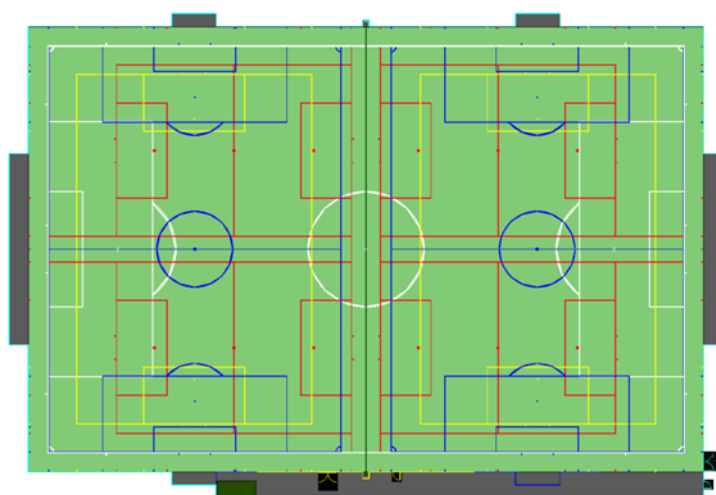


Figure 8 - Typical line marking arrangement when including adult and youth sized pitches

Typically, the white 11v11 adult pitch for adults is stitched into the carpet using white fibres and is permeant and the remaining lines are over marked and painted on an annual basis. This offers the site flexibility if certain age categories are not required or future requirements change. Should the site look to an anchor tenant who have a thriving youth programme, this line marking arrangement is recommended. If the site is to partner with an outside organisation who specialise in lettings to adult leagues, then removing the youth pitches and providing three cross pitches may be preferable. We would recommend that the site discuss with local leagues and prospective users of the site to formulate a line marking plan for the site.

5.1.12 Floodlighting

As AGPs can support over 60 hours of use, with good maintenance, they should be installed with a floodlighting system to support community use outside of the school curriculum. Historically metal halide lights were used for floodlighting however LED lighting has reduced in cost in recent years such that it is now commonly installed on all new sports facilities. The lighting luminaires need to be supported on columns that are typically 15 m high, so that the peak intensity of light can reach the centre of the pitch with the recommended angle of between 60-70 degrees from the vertical alignment of the columns. Lower lighting columns require a higher tilt angle which can create more lighting spillage. A carefully designed floodlighting system will take into account neighbouring properties and nearby ecology. The lighting system should be designed in accordance with ILP GN01:21 The Reduction of Obtrusive Light and ILP GN08:18 Bats and artificial lighting in the UK as well as meeting the technical requirements for FA and FIFA. Once the pitch location is confirmed and the ecology surveys and any bat surveys have been completed the lighting design can be completed taking into account any findings and recommendations from these reports.

The floodlighting at Grace Park site will need to consider the depth of made ground from the upfill to initially create the plateau, historic landfill, and then coal mining features including shaft entrances, with regards to the placement and design for the foundations. Typically, foundations are mass poured concrete foundations

1m² to 2m² but can increase to 5m². Alternatively, floodlights would be supported with mini piles 3m deep, or longer to tie into the underlying bedrock as dictated by the ground conditions.

5.1.13 Construction timings

The pitch construction works would be best timed for drier ground conditions during the earthworks operation. Once the ground investigation has been completed it will inform the construction methodology and more detailed input can be given for construction programme and timeline.

A typical 3G artificial turf pitch would take approximately 14-16 weeks which would increase slightly to construct two pitches side by side. Allowing 18-24 weeks for the double pitch to be constructed would be achievable given favourable ground and weather conditions. To be updated once the scope of works is better understood.

5.2 Additional investigations and surveys

The following table summarises any further investigations required to fully assess the feasibility of the proposed development and to inform the next phases of the project.

Topographic survey	No	Topographic survey has been carried.
Flood Risk Assessment (FRA)	No	
Geotechnical investigation	Yes	For proposed artificial pitches.
Infiltration testing	Yes	Yes for the northern SUDS system.
Arborocultural survey	Yes	Required if level adjustments are to be carried out.
Ball strike risk assessment	No	
Utility plans	Yes	Required as the design develops.

5.3 Next steps

Will the proposed development require further design work?	Yes	A detailed design should be developed as part of the next stages of the works regardless of the finalised scope.
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5.4 Summary project risk register

The following information provides a summary of the project risks. The following does not constitute a designer risk register, instead it is intended for information purposes only to highlight potential risks and significant constraints to the project which should be considered at this early feasibility stage.

Low risk		Medium risk	High risk		
Risk No.	Risk Description	Detail	RAG	Notes	
1	Existing land use	Football use.			
2	Historic land use	Football use.			
3	Land designation	No land designation known.			
4	Site access	Acesss is currently gained to the east of the site.			
5	Climate	Below the England average rainfall.		Works should be carried out in dry periods.	
6	Flood risk	The proposed areas of development are located in Flood zone 1.			
8	Hydrology	No waterbodies located within the site.			
9	Topography	Earthworks required for the proposed artificial pitches.			
10	Ground conditions	Ground conditions were poor within isolated areas creating unusable playing field area.			
11	Contaminated land	No contaminated land.			
12	Proposed usage	Proposed usage levels unknown.			
13	Existing vegetation	Existing vegetation is very poor with few fine species present.			
14	Trees	No mature trees observed at the time of the visit towards the northern boundary.		Root protection areas required limiting the extent of earthworks.	
15	Site soil conditions	Sandy Loam.			
17	Existing structures	Substation located to the south along with cabins for the football club.			
18	Utilities	Presence of utilities unknown.		Utilities survey to be identified.	
19	Drainage discharge locations	Drainage outfall could be potentially the proposed SUD system to the north.			

6.0 INDICATIVE COSTS

It is assumed that the works would be undertaken by a specialist sports construction contractor who would have the necessary plant and experienced personnel to undertake the work. The indicative cost estimates for the works are based on the current rates for similar works carried out by specialist contractors. The following are indicative only and are intended to provide a rough estimate of project costs. Contractors' actual rates may vary and will fluctuate depending on material and labour costs at the time of pricing. Exact costs shall be determined by the scope of works and the finalised design, which has yet to be developed.

Based on costs received for similar projects, our indicative cost estimates for the various improvement works are set out below.

1 full size 3G artificial pitch and 1 mini 3G artificial pitch

Item	Indicative cost estimates
Development works for a full size 3G artificial pitch and a mini artificial 3G pitch (43m x 33m) with floodlighting to meet FIFA standards	£1,250,000.00
Sub -Total	£1,250,000.00

It should be noted that the above costs would be exclusive of VAT.

If any onsite soakaway testing is undertaken by a specialist company, then this would typically be approximately £3-4k to complete with a follow up report.

The above costs do not include the installation of any attenuation measures which would be subject to infiltration testing.

When tendering for such works, it is normal practice to allow for a 10% contingency sum to cover any unforeseen costs which may arise during the course of the works.

The above costs do not include for detailed design and formulation of specification of works and drawings.

7.0 HEALTH AND SAFETY

The following potential hazards are typical of sports development and maintenance works and have been identified during the site appraisal and in the preparation of this report.

- The presence of any underground and/or overhead services should be confirmed before commencing any pitch development works.
- Delivery and haulage of bulk materials on site.
- Movement of construction plant and maintenance machinery.
- Confined spaces.
- Dust.
- Excavations.

These hazards are common to most sports pitch development work, but this does not constitute a complete list, and any additional issues should be identified before commencing work. It is recommended that a Designer Risk Assessment is carried out as part of the next stage of the project.

8.0 RECORD OF SITE CONDITIONS



Photo 1: View looking north



Photo 2: Unusable area



Photo 3: Poor grass coverage in goalmouth



Photo 4: Example of broadleaf weed content



Photo 5: Existing drainage ditch



Photo 6: Evidence of damage from turning machinery



Photo 7: Poor grass coverage



Photo 8: Excavated test pit



Photo 9: Topsoil



Photo 10: Unusable area

Appendix 1 – Soil analysis results



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SOIL PARTICLE SIZE ANALYSIS

CLIENT:	KNOWSLEY COUNCIL - GRACE PARK PLAYING FIELDS	DATE :	21/11/24
		RESULTS TO :	JW
DESCRIPTION:	TOPSOIL	SAMPLE NO :	A20958/1

CATEGORY	DIAMETER mm	%
Stones	>8	6
Coarse gravel	8-4	3
Fine gravel	4-2	1

Particle size distribution of mineral matter smaller than 2mm

Very coarse sand	2-1	2
Coarse sand	1.0-0.5	4
Medium sand	0.50-0.25	16
Fine sand	0.250-0.125	23
Very fine sand	0.125-0.050	17
Silt	0.050-0.002	23
Clay	<0.002	15
Loss on ignition (% of oven-dry fine earth)		3.5
Calcium carbonate	%	/
SOIL TEXTURE		SANDY LOAM

T = TRACE

THESE RESULTS PERTAIN ONLY TO THE SAMPLE(S) SUBMITTED AND TESTED

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APPENDIX B

250630 STRI SITE ASSESSMENT : NHNC

Feasibility Study

Client: Knowsley Council

Project: New Hutte Neighbourhood Centre

Location: Halewood, Liverpool

Report date: 28/07/2025

Consultant: Joe Woodcock

Revision: 0

CONTENTS

ISSUE INFORMATION	3
REVISION RECORD.....	3
1.0 INTRODUCTION	4
2.0 DESK-BASED STUDY.....	5
3.0 ON-SITE APPRAISAL.....	9
4.0 DISCUSSION.....	12
5.0 RECOMMENDATIONS	14
6.0 OUTLINE MAINTENANCE OPERATIONS	16
7.0 INDICATIVE COSTS	17
8.0 HEALTH AND SAFETY	18
9.0 RECORD OF SITE CONDITIONS.....	19
APPENDIX 1 – PROPOSED SITE LAYOUT	24
APPENDIX 2 – SOIL ANALYSIS RESULTS	25

ISSUE INFORMATION

This feasibility study report has been produced in good faith for exclusive use by Knowsley Council and other stakeholders in relation to the potential improvement works of the New Hutte Neighbourhood Centre Playing Fields, Halewood. STRI accept no liability or responsibility whatsoever in respect of any use of this report beyond the scope of its application by any third party. The report is the property of STRI and may not be copied nor reproduced without prior written approval of STRI except for the purposes of dealing specifically with the management and implementation of this project.

Client:	Knowsley Council
Project:	Neighbourhood Centre Playing Fields
Location:	Halewood, Liverpool
STRI Ref:	J007674
Doc Title:	Feasibility Study
Date of Inspection	25/06/2025

REVISION RECORD

Revision record (Revision '0' being the original)

Revision Record			
Revision Number	Date of Issue	Reason for Revision and Comments	
0	28/07/2025	Original issue	
Author	Joe Woodcock	Checked By	Greg Whately
Date	24/07/2025	Date	25/07/2025

Signed



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1.0 INTRODUCTION

1.1 Appointment information

STRI have been appointed by Knowsley Council to carry out a feasibility study at the Neighbourhood Centre Playing Fields in Halewood, Liverpool.

1.2 Context to site appraisal report

STRI previously worked with Knowsley Council to undertake a site appraisal report in October 2024, concerning the proposed redevelopment of Grace Park, situated adjacent to the New Hutte Neighbourhood Centre. As part of the redevelopment, a retail unit is proposed on a section of the existing natural turf areas at Grace Park. Therefore, the New Hutte Neighbourhood Centre playing field area has been identified as a suitable site to mitigate the partial loss of natural turf playing fields at Grace Park.

1.3 Proposed improvement works

The New Hutte Neighbourhood Centre playing fields have been reportedly poorly draining during the winter months therefore this playing field area has been identified to be improved so the site can accommodate more winter sports usage during the winter months and improve the all-round usability.

1.4 Aims and objectives

The site appraisal shall combine a series of desk-based and on-site appraisals aimed at assessing the technical and practical issues associated with the proposed development, and to provide recommendations for the scope of the works required.

The objectives of the site appraisal were as follows:

- To determine any technical constraints to any proposed development works.
- To determine any practical constraints to any proposed development works.
- To provide recommendations for further investigation.
- To provide recommendations for the works required.
- To provide guidance on the timescales associated with the recommended works.

2.0 DESK-BASED STUDY

2.1 Site Location

Site address:	New Hutte Neighbourhood Centre
Site postcode:	L26 1TT
Site grid reference:	SJ 44467 84806
Local authority area:	Knowlsey Council



Figure 1 Aerial photo of site

2.2 General

Hereafter, the area within the scope of this report as illustrated in Figure 1 shall be referred to as 'the site'.

The site demarcated within the red line above was directly bound to the north and east by vegetation that was overgrown along with some mature trees particularly within the east of the site. Directly beyond these areas was residential housing.

Located directly south and west of the site was the New Hutte Neighbourhood Centre building along with some car parking. This car parking area was the only location in which the playing field could be accessed via car or foot traffic. The nearest road to access the site was located to the west (Lichfield Road).

2.3 Site information

The following information has been obtained from publicly available sources including aerial photography, historical mapping, and Defra MAGICMap.

Existing land use:	Playing field area	
Existing sports facilities :	No winter sports pitches were marked out at the time of the visit however an informal Cricket pitch was marked out at the time of the visit. No formally constructed square or artificial surface was observed.	
Historic land use:	Playing field area	
Land based designations:	Area of outstanding natural beauty	No
	Local nature reserve	No
	National nature reserve	No
	Moorland line	No
	National park	No
	RAMSAR site	No
	Proposed RAMSAR site	No
	SSSI	No
	Special area of conservation	No
	Special protection area	No
	Biosphere reserve	No
	Nitrate vulnerable zone (NVZ)	No
	World heritage site	No
	Registered battlefield	No
	Registered parks and gardens	No

2.4 Site access

The playing field area can be accessed via the car park located to the south of the site. This car park is subsequently accessed via the main site entrance located off Lichfield Road to the west.

2.5 Climate

The following information has been obtained from the Met office website using data from Keele, the nearest official Met Office climate station, approx. 4 miles from the site, covering the period from 1991 – 2020.

2.4.1 Annual rainfall (mm)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
69	57	53	50	52	64	65	72	76	90	82	92	824
England average												870

2.6 Flood risk

The following information has been obtained from Environment Agency Flood Risk Maps (see Figure 2). The site is located within Flood zone 1 therefore there is a low probability of flooding.

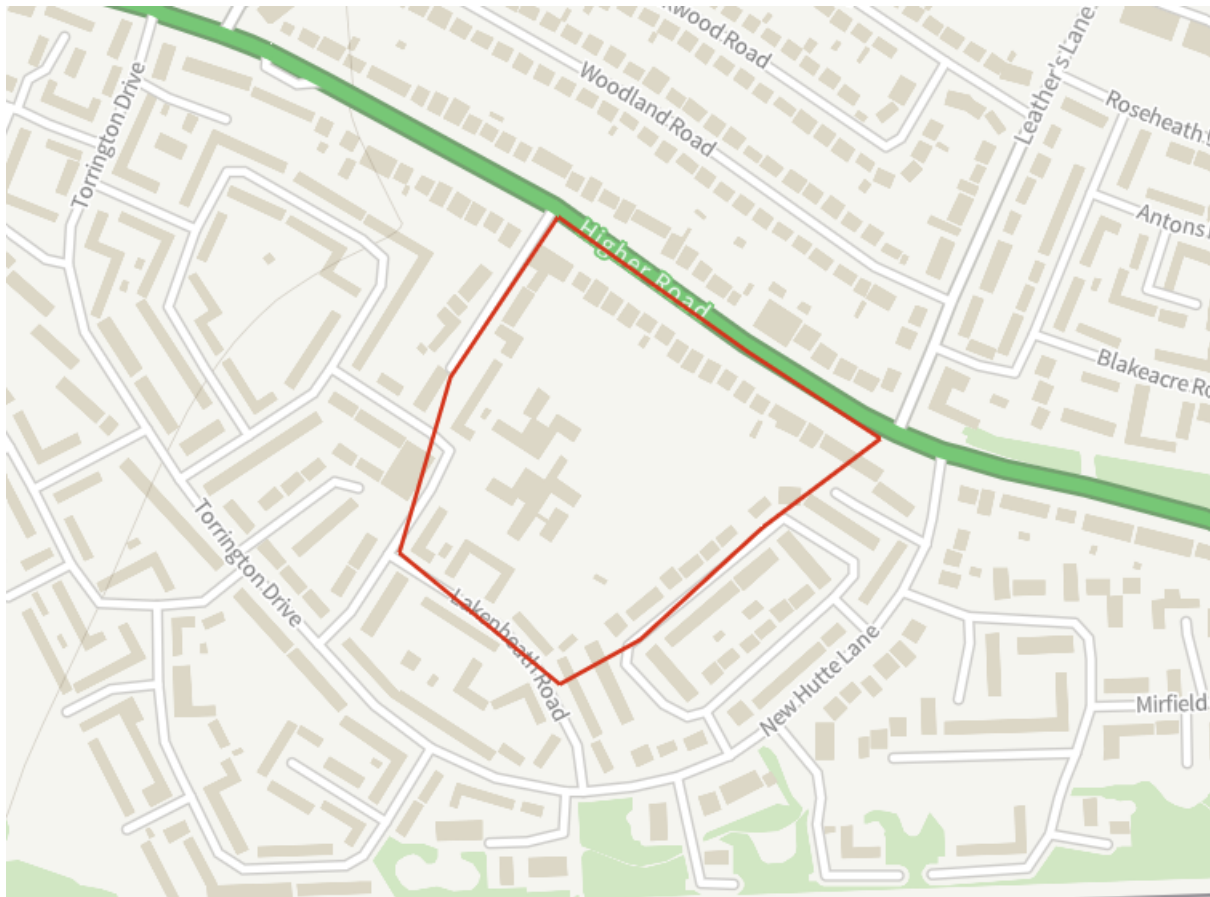


Figure 2 – Flood risk for planning maps

2.7 Previous ground investigations

No previous ground investigations have been made available to STRI.

2.8 Geology

The following information has been obtained from the British Geological Survey (BGS) online Geology Viewer.

The LandIS Soils Vues Viewer indicates that the native topsoil on-site likely falls under Soilscape 18. This is classified as: "Slowly permeable, seasonally wet, slightly acid loamy and clayey soils".

2.8.1 Made Ground

The BGS mapping does not indicate any Made Ground on site.

2.8.2 Superficial deposits

The BGS mapping indicates that Till, Devensian deposits are present.

2.8.3 Bedrock

The BGS mapping indicates that Wilmslow Sandstone Formation is located across the entire site.

2.9 Hydrology

The following information has been obtained from publicly available sources including aerial photography, the WWF Rivers Map, and the Environment Agency Statutory Main River Map.

Main rivers:	No main rivers are located within or close to the site boundary.
Water bodies near site:	A pond has been identified with the BGS map viewer located to the east of the playing field area. No pond was observed at the time of the site visit due to restrictive access.
Water bodies within site boundary :	No watercourses were observed within the site boundary.
Distance to coastline:	N/A

2.10 Topography

The existing site levels and gradients were assessed by reviewing topographic survey data carried out by STRI.

The overall gradient of the playing field area was falling in a west-east direction and averaged between 1:100-1:200. The gradient was falling from west-east however consistency was lacking towards the eastern boundary of the site with one area falling north and another area falling south.

Sport England guidelines states that playing surfaces should be no steeper than 1:80 – 1:100 along the line of play and 1:40 – 1:50 across the line of play.

2.11 Contaminated land appraisal

STRI understand that the site is greenfield land, i.e., a piece of land which has not previously been built on. As such land contamination issues would not be anticipated.

2.12 Proposed usage levels

The exact usage levels of the site are unknown at this point. It is known however that the playing field area will look to accommodate junior football matches during the winter months.

3.0 ON-SITE APPRAISAL

3.1 Surface Levels

3.1.1 Surface gradients

In addition to the desk-based appraisal of the topographic survey information provided, general surface levels were assessed visually during the on-site appraisal across the entirety of the playing field area.

3.1.2 Surface evenness

Surface levels were good in all areas of the playing field area with no major deviations noted in any areas that could impact health and safety.

3.2 Existing vegetation

General:	Existing vegetation was noted to be mown playing field area with a variety of broadleaf weeds observed such as clover (<i>Trifolium</i>), Daisy (<i>Bellis perennis</i>) and Yorkshire fog (<i>Holcus lanatus</i>). Grass height was recorded to be approximately 40 mm and appears that the playing field area is regularly mown with no excess grass clippings observed.
Agronomic condition:	The agronomic condition of the playing field area was moderate with a high number of broad leaf weeds dominating the surface therefore indicating that little to no key maintenance practices are carried out such as aeration, sand topdressing, fertilising, scarifying and selective herbicide applications. This is to be expected though as the playing field area is only currently used on a recreational basis.
Invasive species:	There were no invasive species identified within the site at the time of the visit.

3.3 Trees

Some mature trees were located along the northern and eastern boundaries however was primarily overgrown vegetation along this boundary. A higher number of mature trees were located along the eastern boundary.

No trees were located within the area where the proposed improvement works were identified to take place.

3.4 Ground conditions

Ground conditions were very dry at the time however is important to state that the visit was carried out during the summer month of June where rainfall is naturally lower than other times of the year. It has been reported by the client that the ground conditions are soft during the winter months particularly within the eastern area of the playing field area.

3.5 Site soil conditions

3.5.1 Soil profiles

3.5.1.1 Visual assessment

A series of trial pits were excavated by hand at various locations (see Figure 3 below) to confirm the nature of the underlying soil profile. In summary, there was a consistent dark brown sandy loam topsoil across all three test pits excavated. The depth of topsoil was measured to be on average 200 mm and grass rooting extended to a maximum of 90 mm.

The dark brown sandy loam topsoil was overlaying an orange clay subgrade with a clear distinction apparent between the topsoil layer and subsoil layer. No waterlogging was noted in any of the test pits excavated and no contaminants were noted in the form of pottery or glass.



Figure 3 – Trial pit locations

3.5.1.2 Laboratory soil analysis

One representative sample of topsoil was collected from the trial pits for particle size analysis to determine the mineral and organic matter composition of the indigenous topsoil. Full particle size analysis reports are included in Appendix 2.

Sample location:	Representative Soil Analysis
Laboratory reference number:	A21232/1
Soil texture:	Sandy Loam
Sand (%)	57 (21% fine sand)
Silt (%)	28
Clay (%)	15

3.6 Drainage

3.6.1 Existing drainage features

Observations made through google time lapse showed that there are no indications of any existing drainage across the playing field area in the form of droughted turf lines. No observations were also made when attending the site that showed any drainage networks across the playing field area.

A 'French drain' was observed within the south of the playing field area located in the corner and measured approximately 10 – 15 metres running adjacent to the eastern boundary. This drain appeared to be backfilled with a large MOT aggregate material however it is unknown if any pipe work is underneath the aggregate material.

3.6.2 Potential drainage outfalls

As discussed within the table in Section 2.9, a pond was identified when looking at the BGS map viewer within the east of the site. This pond was not identified on site due to restrictions on access through fencing and overgrown vegetation. This area would need to be cleared to observe the depth of the pond and to understand its capacity for holding any water from any proposed pitch drainage system.

A 'French drain' was also located in the southern corner of the playing field area however it would need to be understood if any pipe work is located underneath the MOT aggregate material.

Manholes were discovered however not opened at the time of the site visit and are thought to be connected/related to the building within the south/west of the site. This wider scheme could also be used as a connection point however the relevant permissions would have to be sought before any connection can be made.

3.7 Existing structures

No existing structures were located within the site boundary however a main building was located to the south/west of the site.

3.8 Utilities

A full utilities search was not included as part of this feasibility study report.

4.0 DISCUSSION

The following points should be considered as part of any potential improvement works of the existing playing field area:

- The existing playing field area at New Hutte can accommodate a junior 9v9, 5v5 and 7v7 football pitches with the proposed layout seen within Appendix 1 of this report. However in order to accommodate the pitches the 7v7 junior pitch would have to be played within the 9v9 pitch as there is not sufficient space for 3 independent pitches within the playing field area. The proposed layout also avoids a potential clash with a proposed play park that could be located within the south of the playing field area.
- The site assessment has concluded that if the area is to be brought back into use for winter sports, it would be recommended that a network of primary drainage would be required to provide a drained playing field area. The LandIS Soilscales Viewer indicates that the existing soils are “Slowly permeable seasonally wet” which further increases the need for a primary drainage system to be implemented across the playing field area. A primary drainage system would mean that the playing field area will be able to sustain a high number of hours in relation to usage.
- The existing topsoil was tested by STRI and shows that a sandy loam material is present across the playing field area with a high number of fine particles present such as silt (21)%. The high number of fine particles shown in results show that drainage potential is limited particularly if winter sports are going to be played along with increasing the usage levels therefore further highlighting the need for a primary drainage system to support any increased usage of the playing field area. An orange clay subgrade was observed underlying the existing topsoil material further decreasing drainage potential.
- The topography of the playing field area was judged to be within Sport England gradient guidelines with no isolated areas noted to be steep or shallow in relation to topography. Surface evenness was good in all areas of the playing field area as well. This would mean that no major earthworks are required to bring any of the playing area within Sport England gradient guidelines. The majority of the playing field area did slope from west-east however there were some minor falls in different directions once closer to the eastern boundary of the site. Minor re-grading works may be required to create more of a consistent fall in a single direction if any primary pipe drainage is to be installed as part of any future works. The requirement for minor re-grading would be picked up at the detailed design stage.
- If a primary drainage system is to be implemented across the playing field area, a relevant connection point would need to be confirmed prior to any works commencing. As discussed within this report, the existing pond could potentially be used to the east of the site however this was overgrown at the time of the visit so further investigations would be required to understand if this pond is deep enough and has the capacity to hold any pitch drainage. A ‘French drain’ was also discovered in the south of the playing field area however further investigation would be required to understand if a pipe drain is located underneath the MOT aggregate material or the stone is simply there to act as a soakaway. Another potential option is to connect into the wider scheme connected to the building located within the south/west of the site with manholes discovered at the time of the visit however these were not opened.
- Before any works are to be carried out, the extent of the existing drainage infrastructure and potential outfall options would need to be determined.. It would be recommended that a primary drainage system is to be installed in particular the area demarcated by the red line in Figure 4 below. . This is because this is where the pitches will be marked out and is also historically the wettest part of the playing field area. A play park is also to be potentially developed within the area marked blue of the proposed layout seen within Appendix 1 of this report. The area of playing field area located directly adjacent to the south of the car park could be extended.

- A secondary drainage system may have to be implemented further down the line dependent on any increased usage levels however this can be done outside of any original scope of works.
- Any works access can be gained via Lichfield Road however it would need to be agreed with the council and the neighbourhood centre that the car park located to the back of the building would not be used by the public and closed for plant equipment and materials storage.
- It would be anticipated that the works would take approximately 1-2 weeks to complete dependent on suitable ground and weather conditions with the playing field recommended to be unused for approximately 8-10 weeks prior to completion of the works to allow appropriate seed establishment along the drain line areas.



Figure 4 – Priority area to be drained

5.0 RECOMMENDATIONS

5.1 Improvement works for the playing field area

The following recommendations have been based on Sport England guidance for the development of natural turf sports pitches.

The following recommendations are provided based on the information gathered during the site visit and provided by the Client. These recommendations do not form a specification of works and should not be used as such. The dimensions and depths of materials may be altered once the detailed design and specification of works is formulated. Minor re-grading may be required as part of the works and would be determined as part of any detailed design works.

5.1.1 Initial site works

The surface vegetation should be treated with a selective-based herbicide in line with current legislation and COSHH guidelines. This will treat any broadleaf weeds within the playing field area.

5.1.2 Pipe drainage installation

It is recommended that a primary pipe drainage system be installed comprising of a series of lateral drains running across each area. These would then connect into main carrier drains.

The lateral drains should be installed at specified intervals across the pitch areas to collect and discharge surface water.

Drain trenches would be formed using a chain trencher or tractor mounted wheel type trencher.

Lateral drains should connect into a network of main carrier drains to transport surface water to a suitable outfall location. All pipes should be connected using purpose made junctions.

Once the pipes have been laid and connected the trenches should be backfilled with a clean drainage aggregate.

The proposed drainage design should include the provision of silt chambers and inspection chambers at strategic locations along the line of the main carrier drains.

A sealed outlet drain would be installed, this extending from the final chamber to connect to the wider drainage scheme.

5.1.7 Seeding

Once a suitable level has been reached for drainage system, seed should be sown with a seed mixture containing hard wearing cultivars of Perennial ryegrass (*Lolium perenne*) along the drain line areas.

5.2 Additional investigations and surveys

The following table summarises any further investigations required to fully assess the feasibility of the proposed development and to inform the next phases of the project.

Topographic survey	No	Topographic survey carried out by STRI.
Flood Risk Assessment (FRA)	No	
Geotechnical investigation	No	
Infiltration testing	Yes	Yes if a soakaway is required.
Arborocultural survey	No	
Ball strike risk assessment	Yes	If any sports like Cricket are to be introduced to the site.
Utility plans	Yes	Required as the design develops.

5.4 Next steps

Will the proposed development require further design work?	Yes	A detailed design should be developed as part of the next stages of the works regardless of the finalised scope.
--	-----	--

5.3 Summary project risk register

The following information provides a summary of the project risks. The following does not constitute a designer risk register, instead it is intended for information purposes only to highlight potential risks and significant constraints to the project which should be considered at this early feasibility stage.

Low risk		Medium risk	High risk		
Risk No.	Risk Description	Detail	RAG	Notes	
1	Existing land use	Unused playing field area.			
2	Historic land use	Playing field area.			
3	Land designation	No land designation known.			
4	Site access	Access is currently gained to the west of the site.		Access off Norwich Road.	
5	Climate	Below the England average rainfall.		Works should be carried out in dry periods.	
6	Flood risk	The proposed areas of development are located in Flood zone 1.			
8	Hydrology	No waterbodies located within the site.			
9	Topography	Earthworks required in the south east corner of the site for the additional U13/14 youth pitch.			

10	Ground conditions	Ground conditions were saturated at the time of the visit.		Sports pitch drainage will be required.
11	Contaminated land	No contaminated land.		
12	Proposed usage	Proposed usage levels unknown.		
13	Existing vegetation	Existing vegetation is very poor with few fine species present.		Good level of maintenance should be carried out in the future.
14	Trees	Trees located along the eastern boundary.		Root protection areas required limiting the extent of earthworks.
15	Site soil conditions	Sandy Loam.		Orange clay subgrade limiting drainage potential.
17	Existing structures	No existing structures within the site boundary.		
18	Utilities	Presence of utilities unknown.		Utilities survey to be identified.
19	Drainage discharge locations	Drainage outfall unknown at this point.		

6.0 OUTLINE MAINTENANCE OPERATIONS

The following maintenance operations should be considered as part of an ongoing maintenance regime for the site. The timing of the maintenance operations is critical for the successful maintenance of natural turf pitches. Working in poor weather conditions can reduce the effectiveness of all treatments but particularly for soil aeration work which can result in an increase in soil compaction rather than alleviating the problem.

6.1 Mowing

Cut the grass frequently, maintain the height of cut within a reasonable height range. Avoid scalping the grass and allow the grass clippings to fly. This would typically require mowing once per week during the growing season. Do not allow the grass to grow too long and clippings should not be allowed to smother the grass. The grass should be cut with a well sharpened mower, correctly adjusted to achieve a uniform cut. No more than one third of the leaf blade should be removed in any one mowing operation.

6.2 Fertiliser

Maintain nutrient levels in the soil by the application of fertiliser suitable for the time of year using higher nitrogen products in the summer months and lower nitrogen in the autumn as the temperatures drop.

A minimum of 1 - 2 fertiliser applications is desirable during the spring and summer months. A single winter feed should also be applied. If the playing fields are used more frequently some additional fertiliser may be required to sustain the turf in good condition.

Fertilisers should generally be applied according to the manufacturers recommended rates, although this can be adjusted according to the nutrient status of the soil, preferably confirmed by soil analysis as well as the prevailing condition of the turf. The analysis of the fertilisers applied, and the rate of application can be adjusted according to the conditions at any given time.

It is essential that the fertiliser is applied evenly over the whole of the surface with an appropriate spreader, preferably during showery weather to break down and wash the fertiliser into the soil.

6.3 Soil Aeration

Soil aeration work will help to alleviate soil compaction and also maintain good infiltration.

Verti-Draining should be carried out when the soil is just moist enough to allow the tines to penetrate and to achieve the optimum soil shattering or loosening.

A number of treatments may be required to deal with excessive soil compaction. The depth of the aeration work can be varied, starting with shallower treatments and gradually increasing the depth to reduce compaction and to improve water movement through the full depth of topsoil. A minimum of 2 – 3 Verti-Drain treatments per year is recommended, concentrating on the late spring and late autumn months.

6.4 Sand Topdressing

It is important to apply medium fine top-dressing sand evenly over the whole playing surface to ensure good porosity in the upper layer of the topsoil. Over time this topdressing will build up and create a drier surface which will improve overall performance of the pitch. Regular sand top dressing is also critical in ensuring the primary and secondary drainage systems continue to perform as designed and prevent them from capping over.

6.5 Overseeding

Overseeding should take place at the end of the season in May using a disc or dimple type seeder using 100% *Lolium perenne* grass seed mix. High wear areas should be overseeded with the same seed mix during the playing season if required.

6.6 Weed Control

Apply a selective herbicide to control any broad-leaved weeds as required during the growing season. This should be applied in accordance with current legislation and COSHH regulations.

7.0 INDICATIVE COSTS

It is assumed that the works would be undertaken by a specialist sports ground contractor who would have the necessary plant and experienced personnel to undertake the work. The indicative cost estimates for the works are based on the current rates for similar works carried out by specialist contractors. The following are indicative only and are intended to provide a rough estimate of project costs. Contractors' actual rates may vary and will fluctuate depending on material and labour costs at the time of pricing. Exact costs shall be determined by the scope of works and the finalised design, which has yet to be developed.

Based on costs received for similar projects, our indicative cost estimates for the various improvement works are set out below for the indicatively marked out working area within Figure 4 of this report.

Item	Indicative cost estimates
Pitch development works (Selective herbicide application, primary drainage installation, seeding of the drain line areas)	£38,000.00
Sub -Total	£38,000.00

It should be noted that the above costs would be exclusive of VAT.

If any onsite soakaway testing is undertaken by a specialist company, then this would typically be approximately £2-3k to complete with a follow up report.

The above costs do not include the installation of any attenuation measures which would be subject to infiltration testing confirmation on connection into a suitable outfall.

When tendering for such works, it is normal practice to allow for a 10% contingency sum to cover any unforeseen costs which may arise during the course of the works.

The above costs do not include for detailed design and formulation of specification of works and drawings

8.0 HEALTH AND SAFETY

The following potential hazards are typical of sports development and maintenance works and have been identified during the site appraisal and in the preparation of this report.

- The presence of any underground and/or overhead services should be confirmed before commencing any pitch development works.
- Delivery and haulage of bulk materials on site.
- Movement of construction plant and maintenance machinery.
- Confined spaces.
- Dust.
- Excavations.

These hazards are common to most sports pitch development work, but this does not constitute a complete list, and any additional issues should be identified before commencing work. It is recommended that a Designer Risk Assessment is carried out as part of the next stage of the project

9.0 RECORD OF SITE CONDITIONS



Photo 1: View looking west



Photo 2: French drain



Photo 3: View looking north



Photo 4: Broadleaf weed cover



Photo 5: Drainage manhole



Photo 6: Overgrown vegetation at the lowest part of the site



Photo 7: Mown out Cricket wicket



Photo 8: Excavated test pit



Photo 9: Excavated topsoil



Photo 10: Northern boundary

APPENDIX 1 - PROPOSED SITE LAYOUT





STRI Ltd, St Ives Estate, Bingley, West Yorkshire, BD16 1AU

t. +44(0) 1274 565131 f. +44 (0) 1274 561891

e. enquiries@strigroup.comwww.strigroup.com**SOIL PARTICLE SIZE ANALYSIS**

CLIENT:	KNOWSLEY COUNCIL,	DATE :	10/07/25
	NEW HUTTE PLAYING FIELDS	RESULTS TO :	JW
DESCRIPTION:	TOPSOIL	SAMPLE NO :	A21232/1

CATEGORY	DIAMETER mm	%
Stones	>8	0
Coarse gravel	8-4	1
Fine gravel	4-2	T

Particle size distribution of mineral matter smaller than 2mm

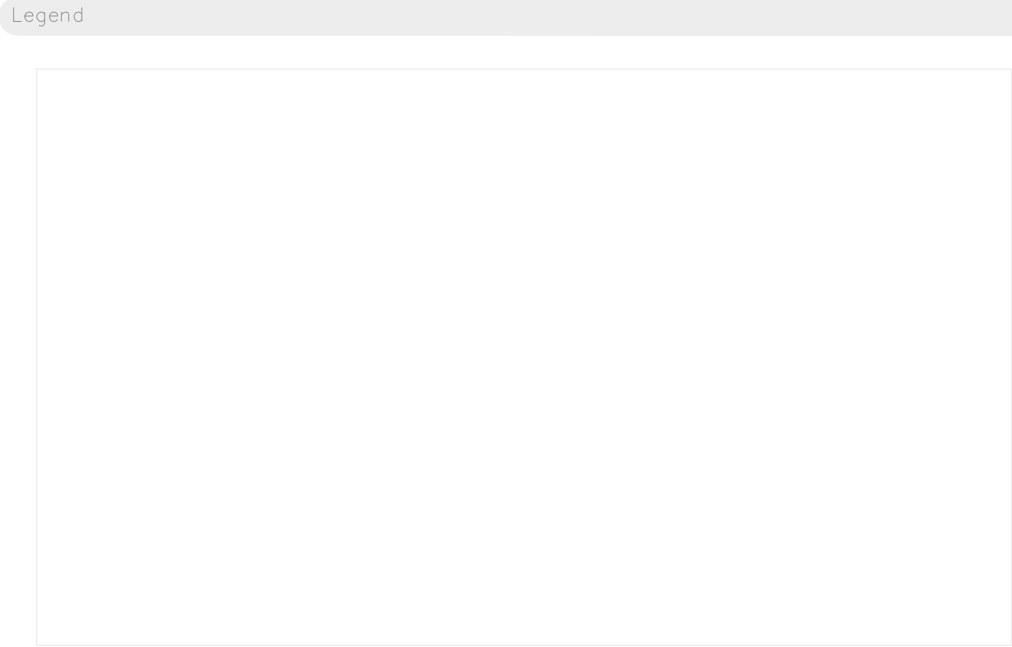
Very coarse sand	2-1	T
Coarse sand	1.0-0.5	3
Medium sand	0.50-0.25	16
Fine sand	0.250-0.125	21
Very fine sand	0.125-0.050	17
Silt	0.050-0.002	28
Clay	<0.002	15
Loss on ignition (% of oven-dry fine earth)		5.2
Calcium carbonate	%	NIL
SOIL TEXTURE		SANDY LOAM

T = TRACE

THESE RESULTS PERTAIN ONLY TO THE SAMPLE(S) SUBMITTED AND TESTED

APPENDIX C

TOPOGRAPHIC SURVEY



drawing details			
client: Knowsley Council	project: New Hütte Neighbourhood Centre	drawing title: Proposed Layout	drawn by:G checked by:W date:24.07.2025 scale:1:500 @ A1
drawing no.: J007674_001			

revision history

revision:	details:	DR	CH	AP	date:

draft For Information

notes

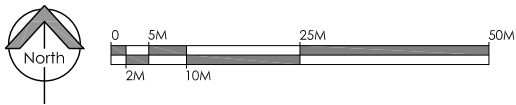


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It is the contractor's responsibility to ascertain the location of all services prior to the commencement of work. Setting out shall be the responsibility of the contractor, any discrepancies shall be reported and clarified at the earliest opportunity.

St Ives Estate Bingley West Yorkshire BD16 1AU	tel: 01274 565131 fax: 01274 561891 email: digitaldesign@strigroup.com web: www.strigroup.com
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APPENDIX D

PROPOSED LAYOUT



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Dwg. Purpose **Feasibility**

No.

Revision / Issue

Date

Project

New Pitches and Associated Works at
New Hutte Neighbourhood Centre
Lichfield Road, Halewood
Liverpool, L26 1TT

Client

New Hutte Neighbourhood Centre

Dwg. Title

Proposed Site Plan

STEVE WELLS
ASSOCIATES
making sport happen

Churchill House, Mill Hill, Pontefract, West Yorkshire,
WF8 4HY t: 01977 797258 e: mail@stevewells-associates.com

Dwg. No.

205-0003

Rev.

Scale

1:1000 @ A3

Date

September 2025

Drawn by

GSB

Checked

DKW

APPENDIX E

PRE-TENDER ESTIMATE : PROPOSED WORKS AT NHNC

NEW HUTTE NEIGHBOURHOOD CENTRE, HALEWOOD : NEW 9 v 9 FOOTBALL PITCH, WC BLOCK, IMPROVED SITE ACCESS & OVERFLOW CAR PARK : PTE : OCT 2025

PRELIMINARIES					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
P 1	Move machinery and equipment to site	item	1	£ 7,500.00	£ 7,500.00
P 2	Form Contractor's compound including on-site facilities	item	1	£ 2,000.00	£ 2,000.00
P 3	Investigate and mark out existing services crossing the area of the works	item	1	£ 1,000.00	£ 1,000.00
P 4	Provide Method Statement and Risk Assessment in accord with CDM Regs	item	1	£ 500.00	£ 500.00
carry sub-total to summary					£ 11,000.00

PART 1 : SITE PREPARATION & GRADING					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
1.1	Apply total herbicide to the site of the works	m²	4108	£ 0.08	£ 328.64
1.2	Power harrow within topsoil layer to restore levels of evenness	m²	4108	£ 1.60	£ 6,572.80
carry sub-total to summary					£ 6,901.44

PART 2 : PRIMARY PITCH DRAINAGE					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
2.1	Locate and establish connection to existing outfall	item	1	£ 1,500.00	£ 1,500.00
2.2	Supply and install HydroBrake chamber	no.	1	£ 4,000.00	£ 4,000.00
2.3	Install 160mm mains with backfill; connect to outfall; all arisings removed from site (1 no 82m run + extra 20m for IC / HB connections)	m	102	£ 45.29	£ 4,619.58
2.4	Install new inspection chamber with frame, cover and connections	no.	1	£ 900.00	£ 900.00
2.5	Install 80mm laterals at 5m centres with backfill & purpose-made couplings; all arisings removed from site (16no 55m lateral runs)	m	880	£ 14.76	£ 12,988.80
carry sub-total to summary					£ 24,008.38

PART 3 : SECONDARY DRAINAGE					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
3.1	Koro Top-Drain pitch areas to 220mm deep at 500mm centres (@90 degrees to lateral drain runs); backfill with sand; all arisings off site	m²	4108	£ 2.85	£ 11,707.80
carry sub-total to summary					£ 11,707.80

PART 4 : CULTIVATION & SEEDING

ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
4.1	Lightly cultivate topsoil; manually stone pick; fine grade to restore levels	m²	4108	£ 0.50	£ 2,054.00
4.2	Sand top dress new playing pitch areas at 150 tonnes/ha	m²	4108	£ 0.85	£ 3,491.80
4.3	Restore levels; prepare seed bed	m²	4108	£ 0.40	£ 1,643.20
4.4	Apply pre-seed fertiliser at 35gm/m	m²	4108	£ 0.10	£ 410.80
4.5	Seed with dwarf ryegrass mix at 40gm/m	m²	4108	£ 0.45	£ 1,848.60
carry sub-total to summary					£ 9,448.40

PART 5 : PLAYING EQUIPMENT

ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
5.1	Supply & install wheeled 360 aluminium goals with nets @ 2.13m x 4.88m	item	1	£ 4,600.00	£ 4,600.00
5.2	Supply padlocks & chains	item	1	£ 150.00	£ 150.00
carry sub-total to summary					£ 4,750.00

PART 6 : COMPLETION

ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
6.1	Supply & install protective chestnut pale fencing to the entire site of the works	m	270	£ 11.00	£ 2,970.00
6.2	Make good Contractor's access	item	1	£ 2,000.00	£ 2,000.00
6.3	Supply Health & Safety File along with O&M Manual and as-built drawings	item	1	£ 500.00	£ 500.00
carry sub-total to summary					£ 5,470.00

PART 7 : ESTABLISHMENT MAINTENANCE

ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
	12 months establishment maintenance:				
7.1	mowing	cuts	30	£ 150.00	£ 4,500.00
7.2	fertiliser - spring application	no.	1	£ 0.10	£ 410.80
7.3	fertiliser - summer application	no.	1	£ 0.10	£ 410.80
7.4	selective herbicide application	no.	1	£ 0.10	£ 410.80
7.5	over-seeding	item	1	£ 0.25	£ 1,027.00
7.6	decompaction	pass	1	£ 0.20	£ 821.60
carry sub-total to summary					£ 7,581.00

PART 08 : BIODIVERSITY NET GAIN REQUIREMENTS					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
8.1	Supply & plant native trees in location specified in Drawings		PROVISIONAL SUM		£ 3,800.00
			carry sub-total to summary		£ 3,800.00

PART 9 : W/C BLOCK, CONCRETE SLAB, ACCESS STEPS / RAMPS & SERVICE CONNECTIONS						
ITEM	DESCRIPTION	UNIT	QUANT	RATE		TOTAL
9.1	Excavate area of proposed WC to depth of 300mm to accommodate bearing slab; trim and vibratory roll to CBR >6; arisings off site	m³	7.41	£	50.00	£ 370.50
9.2	Supply and install geotextile membrane (thermal bonded w min puncture resistance - EN ISO 11058 / EN ISO 12236)	m²	24.7	£	1.10	£ 27.17
9.3	Lay Type 1 stone sub base to compacted depth of 125mm	m³	3.09	£	87.00	£ 268.83
9.4	Supply and install A393 10mm steel reinforced Concrete bearing slab to toilet block location to depth of 175mm (6.50m x 3.8m = 24.7sqm)	m³	4.33	£	500.00	£ 2,165.00
9.5	Supply and install modular 2x M/F +1 DDA compliant toilet unit; (6m x 2.4m)	item	1	£	23,500.00	£ 23,500.00
9.6	DDA / BR compliant steps & ramps to WC	PROVISIONAL SUM			£	5,000.00
9.7	Service connections : water / foul / electricity supply - incorporate into concrete raft	PROVISIONAL SUM			£	6,000.00
				carry sub-total to summary		£ 36,665.00

PART 10 : OVERFLOW TO EXISTING CAR PARK (22.5m x 16m = 360sqm) : CELL PAVE					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
10.1	Proposed car park extension : excavate to formation level of 220mm; trim and vibratory roll to achieve CBR >6; dispose of arisings off site	m³	79.2	£ 50.00	£ 3,960.00
10.2	Supply and install geotextile membrane (thermal bonded w min puncture resistance - EN ISO 11058 / EN ISO 12236)	m²	360	£ 1.10	£ 396.00
10.3	Supply & install 255mm x 125mm x 915mm flat topped pcc square channel straight edge kerbs to perimeter of car park extension	m	88	£ 17.00	£ 1,496.00
10.4	Lay Type 1 stone sub base to compacted depth of 160mm	m³	57.6	£ 87.00	£ 5,011.20
10.5	Lay 20mm depth sharp sand blinding layer	m²	360	£ 1.80	£ 648.00
10.6	Supply and install Ecogrid E40 system (to carry up to 800t / m² when gravel infilled)	m²	360	£ 22.00	£ 7,920.00
10.7	Gravel infill for Ecogrid E40 to depth of 40mm @ 0.068t/m²	m²	360	£ 8.00	£ 2,880.00
carry sub-total to summary					£ 22,311.20

PART 11 : NEW SITE ACCESS					
ITEM	DESCRIPTION	UNIT	QUANT	RATE	TOTAL
11.1	Create new site access (design by others)		PROVISIONAL SUM		£ 50,000.00
			carry sub-total to summary		£ 50,000.00

SUMMARY		
ITEM	DESCRIPTION	TOTAL
P	Preliminaries	£ 11,000.00
1	Site Preparation & Grading	£ 6,901.44
2	Primary Pitch Drainage	£ 24,008.38
3	Secondary Drainage	£ 11,707.80
4	Cultivation & Seeding	£ 9,448.40
5	Playing Equipment	£ 4,750.00
6	Completion	£ 5,470.00
7	Establishment Maintenance	£ 7,581.00
8	Biodiversity Net Gain Requirements	£ 3,800.00
9	W/C Block	£ 36,665.00
10	Overflow to Existing Car Park : Cell Pave	£ 22,311.20
11	New Site Access	£ 50,000.00
Contract Sum (ex VAT)		£ 193,643.22

A	Project Contingency @ 5%	£ 9,682.16
B	Surveys : BNG plan incl baseline metric / FRA / Outline Drainage Strategy / Camera Survey	£ 6,000.00
C	LPA & PP Fees	£ 1,870.00

Total Contract Sum (ex VAT)		£ 211,195.38
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D	Professional Fees	£ 21,000.00
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Total Project Costs (ex VAT)		£ 232,195.38
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