



DESIGN AND ACCESS STATEMENT

Construction of New 3G
Synthetic Pitch

at

Knocklyon Park

April 2023

For

South Dublin County
Council

Sports Labs Ltd
1 Adam Square
Brucefield Industry Park
Livingston
EH54 9DE



Contract Number: 3096

Issued by: Sports Labs on behalf of South Dublin County Council

Development: New 3G artificial sports pitch including 6.4m perimeter fencing system, parallel pitch drainage system and SUDS design with attenuation provided within pitch construction, shockpad and LED floodlight system.

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Author:	Graeme Stewart	
Checked by:	David Dickinson	
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Issued by: Location:	Sports Labs Ltd, 1 Adam Square, Brucefield Industry Park, Livingston, EH54 9DE	Tel: +44(0)1506 444 755 E-mail: info@sportslabs.co.uk

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1 INTRODUCTION

1.1 Sports Labs Ltd has been appointed on behalf of South Dublin County Council to develop an application for planning approval for a proposed new 3G artificial sports pitch at Knocklyon Park, Schollarstown, Dublin.

1.2 Pitch construction inclusive of:
A new 3G artificial turf surface including 6.4m perimeter fencing, 13m GAA ball-stop netting, a parallel pitch drainage system and SUDS design with attenuation provided within pitch construction, shockpad and 6 column LED floodlighting System.

1.3 In order to assist in the approval of planning permission and the development of the proposed project, this document shall outline the scope of works and considerations within the local environs and to facility users and residents.

1.4 This statement shall discuss design and access considerations regarding layout and further considerations in relation to the wider scheme.

1.5 Site Address

Páirc Chnoc Lín
Schollarstown
Knocklyon
Co. Dublin
D16 X579

1.6 Applicant Address

Knocklyon Park
Ballyboden St Enda's
Ballycullen
Dublin 16

Project supervisor: Jed McDermott – jmcdermott@SDUBLINCOCO.ie

1.7 Agent Details

Sports Labs Ltd
1 Adam Square
Brucefield Industry Park
Livingston
West Lothian
EH54 9DE

Project Engineer: Graeme Stewart - graeme@sportslabs.co.uk
Consultancy Manager: David Dickinson - david@sportslabs.co.uk

2 PURPOSE OF THIS DOCUMENT

- 2.1 The Design and Access Statement has been compiled as a short document to provide detail of the build proposals to accompany the planning application submission. The report has been published in line with government recommendations, whereby the design and access statement is a short report accompanying and supporting a planning application, to illustrate the process that has led to the development proposal, and to explain the proposal in a structured way. The level of detail required in a design and access statement depends on the scale and complexity of the application, and the length of the statement varies accordingly. Statements must be proportionate to the complexity of the application but need not be long.

3 CONTEXT

3.1 Context Summary

- 3.1.1 South Dublin is one of 4 counties in the Dublin region, the others consisting of; Dublin City (north-east), Dún Laoghaire- Rathdown (east), and Fingal (north). The county covers just under 223 km² and includes densely populated suburbs as well as rural, mountainous areas to the south and west. The county town is Tallaght with additional significant population centres of Lucan and Clondalkin. Dublin city centre is located approximately 8.5km to the north-east of Tallaght. South Dublin is one of seven Irish counties to be recognised as part of National Healthy Cities and Counties of Ireland Network. The project is a World Health Organisation movement aiming to improve health and wellbeing through political commitment, working with local stakeholders, and supporting innovative projects, this network aims to:

- Promote lifelong health and wellbeing.
- Provide a means where local issues can influence national policy.
- Provide a voice for Ireland in the WHO Network of European National Healthy Cities Network.

3.2 Project Ireland 2040

- 3.2.1 Project Ireland 2040 is the Government's overarching initiative for future planning and development. It is comprised of the National Planning Framework to 2040 and the National Development Plan 2018-2027. These documents set out the priorities for economic, environmental, and social development to 2040.
- 3.2.2 The policy has 10 goals which are named as National Strategic Outcomes. The seventh outcome is Enhanced Amenities and Heritage which: "will ensure that our cities, towns and villages are attractive and can offer a good quality of life. It will require investment in a well-designed public realm, which includes public spaces, parks and streets, as well as recreational infrastructure. This is linked to and must integrate with our built, cultural and natural heritage, which has intrinsic value in defining the character of urban and rural areas and adding to their attractiveness and sense of place." – National Planning Framework to 2040.

- 3.2.3 The National Development Plan 2018-2027 outlines in more detail the aims, objectives and strategy behind this outcome and indicates that total funding allocated across culture, heritage and sports is in excess of €1 billion. In terms of sport over €100 million has been allocated for the Sport Capital Programme (SCP) which should cover the next 4 years
- 3.2.4 The SCP is the primary means of providing Government support to sports clubs and organisations for development works. It is primarily designed for small-scale projects with the maximum grant in the most recent round of funding being €150,000.

3.3 Links to Wider Strategies: Sports Pitch Strategy 2020

- 3.3.1 South Dublin County Council commissioned a Sport Pitch Strategy (SPS) in 2020 to provide the Council with a clear evidence base and set of recommendations for future outdoor sports facility development across the district. A SPS is a strategic assessment that provides an up-to-date analysis of supply and demand for playing pitches (grass and artificial) in the local authority. The strategy and the evidence upon which it is based is delivered using local guidance and insight from national governing bodies. National guidance and facility insight from specific Governing Bodies of Sport, the strategy focused on the following sports:
- Soccer
 - GAA
 - Rugby Union
 - Hockey
 - Cricket
 - Athletics
- 3.3.2 The SPS is an important document in the future locations of additional floodlit artificial grass pitches as it provides an evidence based upon local team usage and future team generation rates that could possibly be the users of the facility. It has been highlighted within the document and others that the main users of the facility would be local GAA and Rugby Union clubs as these clubs typically have a lack of winter training provision available to them.
- 3.3.3 The SPS reflects that there is a need to provide AGP's as a vital asset to the local community in terms of a training facility for clubs and teams. AGP's can support far more matches and training sessions compared to regular grass pitches and can be strategically located in new development areas of high population zones, such as the Tallaght region. Even though this AGP will not be dedicated to just one club, it will serve many clubs and wider community users within the area, creating a much-needed asset and enabling a high volume of diverse user groups.
- 3.3.4 Traditionally GAA clubs are reluctant to play formal matches on a AGP due to the surface type (3G or Sand based) but they do act as a valuable training facility for winter training due to surfacing, floodlighting and extended hours of use. The SPS reflects there are several local GAA and soccer clubs close to the proposed sites that might utilise this location.

- 3.3.5 There are also several Rugby Union teams that the SPS highlights would utilise the development of the AGP facility including St Mary's RFC and Tallaght RFC. Clondalkin RFC are further away but the pitch could be of use to them also. Compared to GAA and Soccer there is a serious lack of floodlit AGP provision for Rugby Union as this typically relies on a specific type of pitch and associated shock pad.

4 DESIGN OVERVIEW

- 4.1 South Dublin County Council are looking to enhance their sport provision. The development will see a new full size 3G pitch which will be of great benefit to the community, facilitating for GAA, Rugby, and Soccer. The new pitch will be supplemented by full perimeter fencing, a new floodlighting system and lateral pitch drainage system.

- 4.2 The land outlined for the development area is a natural grass playing field, currently used for GAA play.

- 4.3 The works to which this planning application relate include a new -column 15 – 21m high LED floodlighting system surrounding the new pitch. A new perimeter fencing system shall also be provided to surround the pitch. This shall consist of a 6.4m high twin-wire ball-stop panel fencing system. Full details in supporting fencing sections drawing.

4.4 Site Description

The development area is within the grounds of Knocklyon Park. The M50 motorway is located top the north of the development area, residential housing to the south, plus hardstanding to the north of the development area The design has taken account of these areas and the current proposed site layout agreed following a site dimensions and orientation exercise between all relevant parties.

4.5 Site Description

- 4.5.1 The site is located at Knocklyon Park (see Figure 1). The proposed location of the pitch is located on the site of the existing natural grass playing field. The design has taken account of this and the current proposed site layout agreed following a site dimensions and orientation exercise between all relevant parties.

The M50 motorway is located to the north of the development area, residential housing to the south, plus a hardstanding footpath round the extents of the existing natural grass pitches.



Figure 1 – Knocklyon Park

4.6 Pitch Location

4.6.1 South Dublin County Councils Zoning Plan 2022-2028 calls up a requirement to protect and preserve a significant view as shown in the below figure. The location of the pitch has been situated within Knocklyon Park to mitigate impact upon the significant view. The pitch has been located to the southeast of the park, and is situated behind existing trees. The fencing design specifies twin wire fencing which is transparent in nature and further mitigates impact on the significant view. Access to the view is maintained to the northwest of the park, and due to the increased height of mound to southeast, a similar view is available from there.



Figure 2 – Pitch Location Overview

4.7 Site Dimensions

- 4.7.1 The total area of the pitch construction which includes synthetic turf and spectator hardstanding shall be 140.0 m x 90.0m, with recess areas 2.5m x 18.5m. The asphalt finish spectator hardstanding 140.0m x 4.0m, as indicated in contract drawings. The facility has been designed to comply with the requirements outlined in World Rugby Regulation 22 and The FIFA Quality Programme for Artificial Turf - Handbook of Requirements (2015)

4.8 Site Topography

- 4.8.1 Topographical data provided assisted with the completion of the topographical survey drawing which was then used to implement the cut & fill required for the site to achieve the 1:100 maximum slope requirement. The earthworks plan details the extent of cut & fill operations required to get from the existing current arrangement to the new arrangement whereby there is a maximum 1:100 slope requirement. The cut & fill exercise is carried out with consideration of existing site topography so as to minimise the earthworks required. The topographical survey indicates that the site falls from the South East down towards the North West.

4.9 Drainage Design

- 4.9.1 The pitch will consist of a parallel drainage system of 80mm porous lateral drainage pipes laid at 10.0m centres across the width of the pitch. These shall connect into a 150mm porous carrier drainage pipe which will transfer surface water run-off to the new proposed attenuation system.
- 4.9.2 The pitch construction is to be controlled by Key Stage Inspections (KSI's) at each phase of construction. This will allow porosity testing to be carried out in line with BS EN standards to ensure that the pitch is draining correctly at key stage of construction. It shall be ensured during the laying and installation of new parallel drainage system on site that lateral drainage is laid across the pitch in such a way so not to disrupt any existing services.
- 4.9.3 The pitch itself will consist of a sub-base construction 300mm thick, which when specified at 30% voids within the system shall provide natural attenuation for surface water run-off. This is substantial over the proposed pitch area and is more than adequate for a pitch of this nature in this location based in Sports Ltd's >20 years' experience designing sports pitches alongside supporting SUDS calculations.

5 PITCH CONSTRUCTION

5.1 Subbase/Base Layer

- 5.1.1 The pitch construction shall consist of the excavation of the existing grassland area to a depth of approximately 300mm to new pitch formation where a new Geotextile layer will be installed. The pitch construction shall consist of 300mm of modified type 1 stone which is overlaid by approximately 40mm of open texture base layer. The new pitch area is to then have a new pitch levelling layer applied, 25mm thick, thereby providing a level surface to meet the required design tolerances. See drawing no.150 for construction details.

5.2 Shockpad

- 5.2.1 A performance shockpad shall be laid over the new engineered base layer. The shockpad provides a solid platform on which the synthetic turf shall be laid while providing further shock absorption properties to prolong the life of the synthetic system.

5.3 Synthetic Turf

- 5.3.1 A 60mm pile height 3G synthetic turf system is proposed. The 3G turf system consists of synthetic turf with sand and performance infill to provide the required performance characteristics. This shall provide a system suitable for GAA, Rugby, full-size and small-sided Soccer use and meet the laboratory and performance testing requirements of FIFA Quality and WR22.



Figure 3 – Typical 60mm 3G Synthetic Turf System

5.4 Perimeter Fencing

- 5.4.1 The new pitch shall be enclosed by a 6.4m high twin-wire perimeter fencing (see Figure 3) system full perimeter. All fencing, including gates shall be coloured green to RAL6005 and all supported by an intermediate post system. The colour is chosen in order to minimise the visual impact to the surrounding environment.



Figure 4 – Typical Twin-wire Fencing System

- 5.4.2 Double gate access shall be provided for vehicular/ maintenance access to the pitch and single gates for pedestrian access/ ball retrieval.
- 5.4.3 It shall be ensured that all fencing is installed correctly to mitigate against noise generated. Rubber washers are to be installed at all joints of the fence panels in order to reduce rattling of the fence.
- 5.4.4 Within the spectator zone there is a requirement to install a 1.2m high twin wire rebound fencing system (see Figure 4) in line with the usual requirements.



Figure 5 – Typical 1.2m Spectator Fencing System

5.4.5 In addition to the fencing there will be high height ball stop netting to 13m high to eliminate the possibility of balls clearing the fencing system. This will be placed behind the main goals across the penalty areas. This system will consist of timber posts with high strength ball stop netting with tensioned wire to anchor points. The design and foundation requirements of this system will be prepared by structural engineers bespoke to the site ground conditions.

5.5 Floodlighting System

5.5.1 The proposed floodlighting system shall consist of a 6-column system, with 15m high columns along the south touchline (due to a requirement to meet the strict compliance of the ESB overhead cables and following their advice), 21m high to the north, supporting LED lighting fixtures. Please refer to supporting drawings for full details and the floodlighting report. The design has considered the neighbouring properties, with the housing not affected by the proposals. The supply shall be drawn from a feeder pillar located adjacent to the pitch.

5.5.2 The light spill for the design system demonstrated that there is no spill directly impacting on neighbouring dwellings.

5.5.3 The following mitigation measures have been implemented to minimise the impact of the floodlighting system;

- The system shall use LED light fittings to use less energy
- To minimise the light spill and to eliminate upward light the floodlights selected are designed specifically for floodlighting sports fields. The floodlighting provides with a wide range of ambient temperature tolerance making it suitable for a variety of sports applications whilst having the best class spill light, 0 tilt and glare.
- The wide range of optics ensures maximum optical efficiency and enables highly precise light distribution with minimum spill light – refer to supporting documentation.

5.6 Environmental Measures

5.6.1 Kickboards

Kickboards shall be installed to the base of the ball-stop perimeter fencing system around the new 3G facility. This shall consist of a detail 150mm x 50mm and shall reduce the likelihood of performance infill materials leaving the pitch area into the site surrounds. The kickboards shall consist of timber/ recycled plastic materials.

5.6.2 Detox area

This shall be located at the main double gate access to the facility as well as the single gate access points for user access/ ball retrieval. The detox area shall consist of a steel grid at gate width to capture performance infill materials from pitch users footwear as they access/ egress the facility.

5.6.3 The steel grate shall be recessed in concrete, beneath this it shall be specified that a removable geotextile lined tray is installed. The tray shall capture any performance infill material which falls into the grate and while allowing free drainage thereby preventing this reaching the surrounding environment and water table. The tray is removable and facility operators are encouraged to empty the tray regularly back into the pitch, thereby recycling this infill material.

5.6.4 The concrete base shall have porosity holes for free drainage/ drain locally to a small soakaway.

5.6.5 Boot brushes shall be located immediately adjacent, above the detox grid. Pitch users cleaning their footwear accessing/ egressing the facility will send performance infill materials into the grate and removable tray system as described and reduce the likelihood of this material leaving the pitch area.

5.6.6 Signage

Do's & Don'ts boards shall be located at the main double gate access to the facility. This shall encourage best practise and use of the facility, utilisation of the boot brushes and grid system.

6 TREE SURVEY

- 6.1 A Condition Assessment of trees was carried out in the surrounding area local to the natural grass pitch proposal – please refer to the attached supporting Tree Space Report dated October 2022.
- 6.2 In total 32 individual trees, four tree groups and one hedge feature was included in the tree survey. The most common species are Norway Maple and Common Beech.
- 6.3 70% of the trees were categorised as category B – moderate quality trees.
- 6.4 No trees will be lost to facilitate this work.

7 ADDITIONAL PLANNING CONSIDERATIONS

7.1 Site Investigation

- 7.1.1 A detailed and thorough ground investigation was carried out by Sports Labs appointed specialist contractor Causeway GeoTech, conducted between 30th August and 14th September 2022. This comprised of 4 No. boreholes by dynamic (windowless) sampling, 2 No. machine dug trial pits, and infiltration tests performed in the two trial pits.

7.2 SuDS Design and Drainage Calculations

- 7.2.1 As part of the ground investigations soil infiltration values were taken and the results for these will be used to support the attenuation detailing for the drainage outfall. These infiltration values were used to form the drainage calculations. Sports Labs have instructed Agripower Contractors to assist with drainage calculations

The expected drainage calculations should detail that the soils drain very well and will not require any formal drainage connection into the existing surface water network. For good practice, the pitch drainage network will connect into a new soakaway system.

7.3 Duty of Care – Consultation with Relevant Bodies

7.3.1 GPR Survey

Sports Labs Ltd will instruct a GPR surveyor to determine the existing services below the site, which could be present. At this stage, we would conduct further consultation with the relevant service provider.

7.3.2 ESB – Irish Electricity Company

Sports Labs and South Dublin County Council have been in continual consultation with ESB Electricity Supplier. To the south of the development there is a 110kV electrical power supply running parallel with the proposed pitch layout. In principal, ESB network have confirmed the proposed height and location of the new floodlight columns are comply with the required safety zone offset distance. At this stage, we would conduct further consultation with the relevant service provider.

7.3.3 Irish Water Pre-Planning - Water & Drainage

South Dublin County Council have engaged with Irish Water & Drainage Department to obtain existing service details. Consultation confirmed a 300mm ductile iron water pipe is present to the north of the site, which has allowed us to place the pitch at the correct orientation.

7.4 **Site Constraints**

7.4.1 The M50 motorway is located to the north of the development area, with residential housing located to the south.

7.5 **Benefits of the Development**

7.5.1 A new 3G facility will be beneficial to the wider community and local sports clubs who would be able to rent the pitch, increasing the community access to high level sport facilities.

7.5.2 This new facility will have line markings for GAA, Rugby, and Soccer, plus allowance for cross-field play, giving the facility good flexibility and making it a valuable asset for the community.

8 ACCESS OVERVIEW

8.1 **Site Access**

8.1.1 Access to the development area will be from the Knocklyon Park entrance gate located on Killinniny Road.

8.1.2 Access and usage of the facility will be in line encouraged use of sustainable modes of transport which will be detailed as part of the facilities operation and management. Carpooling, public transportation and the use of green corridors will be promoted means of access to the facility. Methods of access to the pitch will be discussed with clubs within the usage catchment as part of detailed design. These discussions will inform the production of operation and management requirements for the facility are aligned with pitch usage requirements.

8.2 **Pitch Opening Hours**

8.2.1 It is proposed that the facility operates under the following hours;

- Monday to Friday up to 22:00
- Saturday and Sunday up to 21:00

8.2.2 The above hours shall allow use of the pitch during the evening and weekends thereby increasing the current provision from the existing grass pitch.

9 PROPOSAL SUMMARY

9.1 In view of the proposals outlined herein assessed against relevant planning policies and considerations, we request that the proposal be accepted with the following key points;

- The new facility will provide an all-weather evening and weekend use pitch allowing increased participation, expansion and development of local teams, strengthening of links already in place with local sports teams.
- The proposal ensures that surface water run-off is adequately managed and does not increase the flood risk, noted as very low for the facility.
- The proposal ensures that the performance of floodlighting system complies with local planning conditions for residential areas.
- The proposed LED floodlighting system will allow efficient energy usage.
- The proposal would not result in an unacceptable impact to any residential amenity.

END OF REPORT