



DESIGN AND ACCESS STATEMENT

G-202121 – KING GEORGE V PLAYING FIELDS

SYNTHETIC TURF PITCH

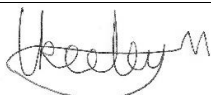
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LABOSPORT

D&A STATEMENT
G-202121 – KING GEORGE V PLAYING FIELDS – SYNTHETIC TURF PITCH (ONLY)

CLIENT	Exeter City Community Trust
SITE ADDRESS	King George V Playing Fields 386 Topsham Rd Exeter EX2 6HE
CLIENT CONTACT	Jamie Vittles
FF PROJECT NUMBER	G-202121

DOCUMENT NUMBER	LSUK.24-0687_DAS	
VERSION NUMBER & DATE	2.0	01/02/2025
REPORTED BY		Oliver Gadsby Project Design Consultant (PDC) Oliver.gadsby@labosport.com
APPROVED BY		Louis Keeley Senior Consultant & Framework Manager Louis.keeley@labosport.com

SUMMARY OF PROJECT	Labosport Ltd have been commissioned by The Football Foundation to carry out Design Consultancy services for the above AGP Framework project. This document is a design and access statement for the construction of the Synthetic Turf Pitch.
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Section 1 – General Information

General Information			
FEASIBILITY REPORT & DESIGN AND ACCESS STATEMENT REQUIREMENTS	Labosport Ltd have been appointed to produce a design and access statement concerning the proposed creation of a Synthetic Turf Pitch (STP). This design and access statement (DAS) presents a concise explanation of the appropriate design principles applied to this project; demonstrating the merits of this proposal in context and describing relevant design influences that have underpinned decision making throughout, to ensure that the proposals meet client expectations, planning policy recommendations and published technical guidance, including material considerations associated with the proposal. We consider the proposal is based upon best design practices for external sports facility provision.		
APPLICANT	Exeter City Community Trust St James Park, Stadium Way, Exeter, EX4 6PX		
PLANNING AGENT	Mr Gavin Spiller Avalon Planning and Heritage The Generator Kings Wharf Exeter EX2 4AN		
PROPOSAL DESCRIPTION	The creation of a Synthetic Turf Pitch at King George V Playing Fields, including Fencing, Floodlighting & Ancillary Equipment.		
ADDITIONAL SUBMITTED DOCUMENTS AND DRAWINGS		Name	Item
		LSUK.24-0687(G-202121)_01D_Pitch Layout	Drawing
		LSUK.24-0687 (G-202121)_02P_Site Plan	Drawing
		LSUK.24-0687 (G-202121)_03AP_Elevations	Drawing
		LSUK.24-0687 (G-202121)_03BP_Elevations	Drawing
	D&A Statement: LSUK.24-0687(G-202121)_DAS	Document	
	Pitch Components: LSUK.24-0687(G-202121)_PC	Document	
	Desktop Study: 23309-PGCAR-01-King George V Playing Fields, Topsham Road, Exeter	Document	
	Pitch Lighting Design: King George V Playing Fields 6 x 15 m columns Standard A55 LO Optic 200lux	Document	
	Preliminary Ecological Appraisal: KGV Appendix D Ecology	Document	
	Preliminary Arboricultural Appraisal: 2348 TS & TCP Rev D	Document	
	Biodiversity Net Gain Calculations: KGV Appendix D Ecology	Documents	

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Design & Access Statement Principles	
NATIONAL PLANNING POLICY FRAMEWORK	The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It provides a framework within which local authorities can produce their own distinctive local / neighbourhood plans, which reflect the priorities of their own communities.
DESIGN AND ACCESS STATEMENT REQUIREMENTS	A Design and Access Statement should be a short report accompanying and supporting a planning application, to illustrate the process that has led to the development proposal, explaining the proposal in a structured manner, with due detail included depending on the scale / complexity of the application. The general thesis is a Design and Access Statement should: • Help to ensure that development proposals are based on thoughtful design processes with a sustainable approach to access. • Improve the quality of the proposal, by clear explanation of the design and how it relates to the current site. • Help Local Planning Authorities understand the analysis that has been previously undertaken to prepare the final design prior to the seeking of necessary statutory approvals. • Provide local communities, access groups, residents, and other stakeholders with a clear understanding of the proposals, with the aim of minimising potential wrongful interpretation of proposals due to technically confusing documentation. A Design and Access Statement should increase certainty for people affected by the development, enabling transparency to all potential stakeholders, improving trust between communities and developers.
DESIGN COMPONENT	A Design and Access Statement should explain the design principles that have been applied to particular aspects of the proposal including: • Scale: Length, Width and Height of any development proposal. • Amount: The amount of any development. (For non-residential development, this means the proposed floor space for each proposed use). • Layout: The way in which any buildings, routes, open spaces are provided, in relation to each other surrounding the development. • Landscaping: The treatment of private and public spaces to enhance & protect the amenities of the site and the area it is situated through hard / soft landscaping measures. Statements should explain the function of any landscaping, for example sustainable drainage purposes, shading, climate change adaptation purposes, and explain how it will be maintained. • Appearance: The aspect of a proposal that determines the visual impression it makes, including the external built view of the development, its materials, lighting, colour, etc.
ACCESS COMPONENT	A Design and Access Statement should explain the access principles, in relation to 'access to the development', explaining how access arrangements will ensure that all potential users will have equal and convenient access to the development and the public transport networks. The statement should address the need for flexibility of the development and how it may adapt to changing needs.
PLANNING STATEMENT	The planning Statement should assess all relevant Planning History for the site and consider National Policy Considerations and Local Development Plan Policies. Any pre-application advice should also be stated.

Section 2 – Design Statement

General Information	
DEVELOPMENT LOCATION	The location of the proposed STP is shown below: 386 Topsham Rd, Exeter EX2 6HE Centred approximately at National Grid Reference: Easting: 294455 Northing: 089937 
EXISTING SITE OVERVIEW	The site is an existing grass football pitch. Adjacent to the proposed development area in addition is a block of 2 tennis courts. To the North and West of the proposed area is grass areas and trees.
PROPOSAL DESCRIPTION	Planning permission is sought to create a Synthetic Turf Pitch with associated features including: • Installation of a new FA guideline 11v11 Synthetic Turf Pitch (STP) sized 91 x 55m with additional FA recommended 3m safety run off with additional cross play line markings. • Installation of goal storage / spectator areas around the STP. • Installation of storage container within spectator area to house pitch maintenance equipment and to ensure clean access for maintenance equipment to the pitch. • New Twin Bar Panel fencing system 4.5m (maximum) high around the surround of the pitch, with 1.1m high spectator fencing internal to the facility footprint to separate the spectator area and the STP. • Installation of Pitch LED floodlighting system.
PURPOSE AND USE	This application seeks planning approval to create a synthetic turf sports pitch in accordance with relevant technical guidance. The facility will be designed to meet the following sporting provision(s): Football – FIFA Quality Performance Standard (for admittance to the FA Register) The proposals will result in the loss of a natural turf playing pitch, however the provision of the new STP will provide increased potential usage in comparison to the existing

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	natural turf surfaced pitch, for benefit of current and potential future users of the facility, both during the day and evenings / weekends via pre-arranged and structured community access. Synthetic Turf Pitches are more durable compared to natural turf, especially during winter weather conditions, which offers increased opportunity for sports use to improve the health and wellbeing of the local community. The proposed facility will offer a variety of football pitch sizes and training areas suitable for a range of age groups within the same enclosed playing space. This supports grassroots sport development plans as well as meaning the pitch can cater for a wide array of potential users (in comparison to the existing pitch). The STP will be capable of supporting the following formal pitch arrangement(s): <table><tr><th>Application Type</th><th>Pitch Size</th><th>Quantity</th></tr><tr><td>11v11 Football</td><td>91 x 55m</td><td>1</td></tr><tr><td>9v9 Football</td><td>73 x 46m</td><td>1</td></tr><tr><td>7v7 Football</td><td>55 x 37m</td><td>2</td></tr><tr><td>5v5 Football</td><td>37 x 25.5m</td><td>4</td></tr></table> This is in line with FA / FF Recommended Pitch Layout documentation. <u>Pitch Size Justification</u> Whilst Sport England typically support 100 x 64m STP’s, it was noted that it would not be possible to achieve a larger than 91 x 55m STP at this site during the initial design stage due to: • Dimensions: A 91 x 55m STP with associated ancillaries is the largest FA recognised size pitch that would fit within the space of the proposed development area. A 100x64m STP would require major adjustment to the adjacent Tree Line to the East and South of the development, and would therefore not meet other consultee’s statutory requirements (Ecology / Environmental) as development would be too close to tree roots and lighting spillage onto the trees would be unacceptable. Other areas of the site were assessed for potential location of an STP, but none were considered viable to support a larger STP without detrimental impact to the management of the site as a whole. The new STP has therefore been designed at the maximum possible FA size that could be achieved on the site. The STP (although smaller than Sport England ideal size) will still provide the core benefit of supporting the community use at the size designed, given sporting application are accounted for as part of the STP design. It should therefore be considered that the pitch is suitably sized for the location in which it is situated.	Application Type	Pitch Size	Quantity	11v11 Football	91 x 55m	1	9v9 Football	73 x 46m	1	7v7 Football	55 x 37m	2	5v5 Football	37 x 25.5m	4
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PROPOSAL LOCATION	Pictures from the site investigation providing context as to the location for the proposed development are included in Appendix A. Further details of the proposed development are contained within this report and additional documentation (drawings and survey documentation).															
DEVELOPMENT AMOUNT	<table><tr><th>Aspect</th><th>Area (m2)</th></tr><tr><td>Synthetic Turf Surface Area Approx. (Main Pitch Size 91 x 55m)</td><td>5917</td></tr><tr><td>Total Development Area (Approx.)</td><td>6330</td></tr></table>	Aspect	Area (m2)	Synthetic Turf Surface Area Approx. (Main Pitch Size 91 x 55m)	5917	Total Development Area (Approx.)	6330									
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Total Development Area (Approx.)	6330															

HOURS OF USE OF DEVELOPMENT	The proposed hours of use for the development are shown below:		
	Day	Start Time	End Time
	Monday-Friday	08:00	22:00
	Saturday	08:00	22:00
	Sunday / Bank Holiday	08:00	22:00
	<i>*Please note, the hours of potential use of sports lighting has been described in lighting section of report.</i>		
SPORTING PROVISION	The proposed STP will directly replace a natural turf surfaced football pitch.		
	There is a need to prove to Sport England that there is no loss of sporting provision as a result of the development proposals, and design has therefore ensured that football continues to be provided for, ensuring the proposals do not result in a loss of sporting provision. The ability for the STP to have additional cross play markings will ensure that various formats of football could be enjoyed as a result of the development proposals.		
SITE LAYOUT AND LOCATION	The optimum location for the proposed STP was considered based on convenient proximity to: - Any changing facilities (existing and proposed) - Any welfare accommodation (existing and proposed) - Any reception facilities (existing and proposed) - Any management / supervision offices (existing and proposed) - Any vehicular parking areas		
	Additionally, consideration was given to: Avoidance of unacceptable impact to residential neighbours (in relation to noise, visual, lighting, etc) or the ability to incorporate impact mitigation measures into the development proposals where impact was noted. It was concluded the proposed application area provides the best solution in relation to the above considerations, given the specific site scenario and requirement to maintain other aspects of the site.		

Facility Design	
PITCH DIMENSIONS	The development is to include: • Main synthetic pitch size of 91 x 55m (FA Guideline 11v11 size pitch) with 3m run off around the pitch footprint (as per FA recommendations). • Additional painted line markings for cross play pitch usage, as outlined in design drawings. • Goal Storage / Spectator Hardstanding Areas. • Doc-M Compliant Access Pathway.
SURFACE LEVEL & GRADIENTS	A topographical survey of the site has been undertaken to ascertain the development perimeter, levels of the ground and any salient features within the area. This has been submitted as an additional drawing. The information has been used to develop the proposed design. The topographical survey shows the below existing site gradients where the facility is to be located: Diagonal Gradient: 2.39% Longitudinal Gradient: 0.57% Lateral Gradient: 3.66% It is recommended to build a sports pitch to a <u>maximum</u> gradient of 1%, where possible, to maintain good sporting characteristics. Given the existing topography survey undertaken, the proposed STP will be designed to incorporate ground level alterations to achieve a 0.5% longitudinal and 0.87% lateral gradient, creating a combined maximum fall of 1%. This will involve importing material to raise the ground level on the west side of the pitch, ensuring that the desired gradients are achieved at formation and subsequent additional construction layers.
CONSTRUCTION MAKE UP	Typical construction build-up for synthetic turf pitch development includes either: <u>Dynamic Base Synthetic Turf Pitch Construction</u> • Pitch Synthetic Surface • Shockpad Layer • Dynamic Stone Layer • Sub Base Layer (typically 200-300mm of crushed stone) unless sub surface conditions dictate an alternative approach to ensure quality of installation and/or potential attenuation of surface water • Formation Layer <u>Engineered Base Synthetic Turf Pitch Construction</u> • Pitch Synthetic Surface • Shockpad Layer • Macadam Layer • Sub Base Layer (typically 200-300mm of crushed stone) unless sub surface conditions dictate an alternative approach to ensure quality of installation and/or potential attenuation of surface water • Formation Layer Following Planning Approval, Contractors on the Football Foundation AGP Framework will be required to provide detailed tendered designs identifying their specific approach to installing the pitch. This will be based upon surveys that have been undertaken which provide information for their design.

An appropriate 'Performance Condition' that Sport England could suggest, to ensure the development when granted achieves suitable construction standards would be:
The chosen Contractor is to undertake development of the STP in complete accordance with:

- The Sport and Play Construction Association (SAPCA) Code of Practice for the Design, Specification and Testing of Bases for Outdoor Synthetic Sports Areas
- The requirements for surfacing detailed in the FIFA Quality Programme for Football Turf

This would protect Sport England's interests in the development ensuring the STP is constructed to a high standard. If required, formal evidence of the pitch being approved to the necessary performance requirements (FIFA Quality) could be provided as a condition to be discharged within 3 months of completion of the works.

The Contractor will need to ensure that their design is appropriate to the design principles above, whilst using the additional survey information provided (GI report, Drainage Design, etc).

If the Local Planning Authority desire additional information prior to construction, the following Planning Condition could be inserted in the planning decision notice, this would allow the subsequently chosen Contractor to develop and submit supplementary detailed designs of their proposal in this regard:

- *'Prior to the Commencement of Works, the chosen Contractor is to submit detailed drawings showing their proposed construction make up for the pitch, confirming that the designed construction is in accordance with the planning decision notice. If the detailed design conflicts, in any way, the Contractor is to clearly state reasoning for desired adjustment, producing information as required to ensure that the condition can be discharged by the Local Planning Authority.'*

DRAINAGE DESIGN

The National Planning Policy Framework classifies this type of proposed development as a Water-Compatible Development, being an **outdoor sports and recreation** facility. It is, however, a design requirement to ensure that all weather sports pitches can drain during wet weather to allow continuous play.

The ground investigation has been undertaken and the report will inform the site-specific drainage strategy.

The proposal for a synthetic turf pitch, would have the following typical design features:

- Surface layer will be a synthetic turf surface, which will have a porosity rate measured at a minimum of 500mm/hr
- Beneath the synthetic turf will be a permeable shockpad layer, which will have a porosity rate measured at a minimum of 1000mm/hr
- Beneath the shockpad layer will be a new open textured porous macadam or dynamic stone layer, which will have a porosity rate measured at a minimum of 1000mm/hr
- Beneath the open textured porous macadam or dynamic stone layer will be a 200-300mm thick sub base, which will have a porosity rate measured at a minimum of 1000mm/hr.

Whilst the proposed development is designed to be a water compatible development which is not damaged during flood event. In the case that percolation into the ground or attenuation within the construction is not enough to prevent surface flooding, the surface materials used within the development have been chosen as they are not affected by flood events, in accordance with guidance for water compatible developments as outlined in NPPF documentation.

Flood Risk	
FLOOD RISK GENERAL SUMMARY	A desktop flood risk assessment has been carried out on the area of the proposed development by Labosport, using web services located at https://check-long-term-flood-risk.service.gov.uk/risk As the proposed site is in flood risk zone 1, therefore Flood Risk Assessment not required.
SURFACE WATER FLOOD RISK	Very low risk identified.
RIVERS AND SEA FLOOD RISK	Very low risk identified.
RESERVOIRS FLOOD RISK	Flooding from reservoirs is unlikely in this area.
GROUNDWATER FLOOD RISK	Flooding from groundwater is unlikely in this area.
WATER COMPATIBLE DEVELOPMENT	The National Planning Policy Framework in Annex 3; Flood Risk Vulnerability Classification, defines in the section that Water-Compatible Development includes: Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. It has therefore been considered that this proposed development would fall under this classification.

Proposal Component Design	
SYNTHETIC TURF PITCH (STP) SURFACING SYSTEM	The proposed pitch surface will be a long pile length, tufted synthetic turf, coloured grass green, partially in-filled with Stabilising & Performance material. Designed to meet necessary National / International Sports Governing Body Performance Requirements. This will include an associated shockpad component. The surfacing system will be a FIFA Certified System and will be tested upon completion for adherence to the required performance standards.
PERIMETER BALL STOP FENCING / PITCH PERIMETER BARRIER	New ball stop fencing will be installed around the perimeter of the pitch in locations shown in the drawings associated with this proposal. This includes 1.1-4.5m high twin bar panel fencing, with noise reducing dampeners, finished to polyester powder coated black, supported with an intermediate post system and entrance gates of matching colour. The fencing type will be steel open mesh fencing containing a general 200 x 50mm aperture (and 66 x 50mm rebound aperture to the internal pitch perimeter barrier). Fence panels are fixed onto posts with 8mm galvanised security bolts to (U shape) brackets containing threaded inserts and are insulated from the posts using noise reducing dampeners (neoprene washers or similar) on every fence post / mesh fixing point, to aid noise reduction and acoustic attenuation by reducing rattle and vibration from ball impacts. Panel connectors are applied at horizontal panel joins to increase rigidity of the fencing system. New Infill Migration Mitigation features including Trekboards will be connected to the spectator fencing system around the pitch footprint, to ensure that microplastics cannot exit the STP footprint through the fencing system.
SYNTHETIC TURF RECYCLING	As a Football Foundation funded project, when the pitch requires future replacement (circa 10+ years), the applicant will be required to recycle the synthetic turf system using an approved and correctly licenced recycling company that is on The Football Foundation's approved list of recycling companies. Recycling of the synthetic turf will therefore be undertaken (when required) by an approved company, confirming compliance to current UK Recycling Legislation. The Football Foundation & Football Association have published & will continue to regularly update an approved list of Synthetic Turf Recycling Companies, in line with legislation, and encourage UK sport's governing bodies and owners of synthetic sports surfaces to adopt approved recycling methods within their replacement project specifications. The design aims to prolong the longevity of the synthetic turf surface usability and reduce the need for recycling, using the following methods: • Containment Measures: Utilising containment measures around the STP ensures that infill is kept within the pitch footprint, ensuring the pitch is not detrimentally affected by loss of infill • Maintenance Equipment: A storage container with associated maintenance equipment has been proposed within the development footprint. This ensures clean access for in-house maintenance of the facility, extending the anticipated lifespan of the surface and therefore maximising the usability of the turf system prior to requiring replacement. • Shockpad System: The shockpad system proposed as part of the construction make up allows the initial synthetic turf layer to be removed and replaced

	without removal of the shockpad for 2Nr life cycles of the turf, thus reducing the volume of material that requires recycling during refurbishment (when is designed to last 2Nr turf cycles, therefore allowing it to remain past the initial life cycle of the synthetic turf)										
LED FLOODLIGHTING SYSTEM	<u>General Appearance / Lighting Requirements</u> Lighting is a necessary component for a STP, as it will provide the necessary usage profile throughout the year to make the facility viable and sustainable by providing an income stream to support the required maintenance schedule for the pitch and sinking fund for component replacement when required. LED floodlighting will be installed in locations shown in the drawings associated with this proposal. The lighting system will include 6Nr 15m high tubular steel masts finished galvanised 7275 self-coloured, mounted with 12Nr LED luminaires (2 per column), designed to meet the required Sports Governing Body requirements. LED floodlighting is required to satisfy the necessary and planned weekly usage for community participation. The lighting system will be operated during evenings of permitted use, after dusk, and up to the approved curfew hour. A lighting design supplements this planning application, and is based around the following: <table border="1"> <thead> <tr> <th>Requirement</th><th>Detail</th></tr> </thead> <tbody> <tr> <td>Description of Lighting Column / Luminaire Design</td><td>Refer to lighting design document</td></tr> <tr> <td>Lighting Performance Requirements</td><td>BS EN 12193 FA Guide to Floodlighting ILP <u>Guidance Documentation</u></td></tr> <tr> <td>Specific Lighting Performance Requirements</td><td>Average Lux = >200Lux Training Average Lux = >120Lux Uniformity = >0.6 Colour Temperature = 4200K-5700K</td></tr> <tr> <td>Details of any cowls / hoods / shades / baffles to control light spill & glare</td><td>All luminaires are designed to have a zero upward light ratio without the need for additional accessories (rear louvres) to limit overspill.</td></tr> </tbody> </table> The floodlight system has been designed to provide sufficient performance as required by the sports to be played on the surface, as detailed in relevant sporting application lighting documentation. LED floodlighting was chosen, ensuring that the lighting can be controlled to reduce energy consumption and impact on surrounding environment, by offering dimming potential and ability to light individual sections of the pitch (e.g. lateral cross pitches), to facilitate economical / ecological management and prevent 'over lighting' to pitch areas when not in use. BS EN 12193 is the standard that specifies requirements for sports lighting to ensure good visual conditions for players, athletes, referees, spectators, and CTV transmission. Its objective is to provide requirements for good quality sports lighting by: - Optimising the perception of visual information used during sports events - Maintaining the level of visual performance - Providing acceptable visual comfort	Requirement	Detail	Description of Lighting Column / Luminaire Design	Refer to lighting design document	Lighting Performance Requirements	BS EN 12193 FA Guide to Floodlighting ILP <u>Guidance Documentation</u>	Specific Lighting Performance Requirements	Average Lux = >200Lux Training Average Lux = >120Lux Uniformity = >0.6 Colour Temperature = 4200K-5700K	Details of any cowls / hoods / shades / baffles to control light spill & glare	All luminaires are designed to have a zero upward light ratio without the need for additional accessories (rear louvres) to limit overspill.
Requirement	Detail										
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Details of any cowls / hoods / shades / baffles to control light spill & glare	All luminaires are designed to have a zero upward light ratio without the need for additional accessories (rear louvres) to limit overspill.										

- Restricting obtrusive light

Exterior Lighting Environmental Status

ILP GN01 documentation categorises the environment into five zones as per below:

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High district brightness	Town / City centres with high levels of night-time activity

This site would fall into environmental **Zone E3**, and has been designed to meet the below limitations, as outlined in ILP GN01:

Obtrusive Light Limitations for Exterior Lighting Installations						
Zone	Sky Glow ULR (max %)	Light Intrusion (into windows) EV (lux)		Luminaire Intensity		Building Luminance
		Pre Curfew	Post Curfew	Pre Curfew	Post Curfew	
E0	0	n/a	n/a	0	0	<0.1
E1	0	2	<0.1	2500	0	<0.1
E2	2.5	5	1	7500	500	5
E3	5	10	2	10000	1000	10
E4	15	25	5	25000	2500	25

LED luminaire technology has been chosen to meet the requirements set out in ILP GN01, whilst reducing energy consumption and potential impact on the surrounding environment / ecology. ILP GN08 states: *Many night-flying species of insect that bats hunt are attracted to light, especially those light sources that emit an ultraviolet component (LEDs) have removed this) or have a high blue spectral content (this can include LEDs).*

ILP GN08 Hierarchy of Light Impact

The lighting design has been produced in accordance with the mitigation hierarchy outlined in ILP GN08, by:

- Avoidance – Where possible, impact to biodiversity has been avoided. Where this is not possible:
- Mitigation – Where complete avoidance of impact to roosts, foraging and commuting habitat is not possible, the lighting design has been developed to minimise such impact. It is noted that the core performance requirements for the relevant sporting applications must be maintained, but where necessary, detailed designing of the lighting system including the areas of potential light

spillage onto impacting areas has been undertaken by professionals tasked with minimising impact, to ensure that the light design proposed provides minimises potential impact whilst still providing the performance requirements required for the applications they are to be used for. Where this is not possible:

- Compensation – Where impact is noted and there is no ability to avoid or mitigate against the impact of the lighting scheme, as per the hierarchy in ILP GN08, constructive discussion with Local Planning Authorities Ecology department should be undertaken during the planning process, with an aim for setting a relevant Pre-Use Condition for off-setting of unavoidable impacts.

Mitigation Measures Included

The following specific mitigation measures / considerations were discussed and have been adopted on this project as per ILP GN08 Step 4 (Mitigation Measures / Sensitive Design):

- LED Lights – LED luminaires have been specified, due to their sharp cut-off, low intensity, good colour rendition and dimming capability (the design is to meet necessary 200lux average illuminance as per the relevant sporting performance requirements, whilst having the ability to dim the lights to 120lux for training events).
- Warm white light source (2700K or lower) was not possible on this application due to the performance requirement of needing to provide lighting between 4200-5700K to meet the relevant performance requirements. Reducing the light source to 2700K would mean the lighting system would not be fit for purpose, and not provide adequate safety for use of the facility by sporting users.
- Column heights were considered to produce a design maximising downwards light, and therefore minimising light spill and glare visibility.
- Operation hours – It is noted that the hours of use for the facility only shows the intended use of the facility as a whole, and do not detail how lighting will be operated during these uses. Further clarity is provided in the following table, illustrating an expected weekly plan of floodlight use during winter months:

	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
M															
T															
W															
T															
F															
S															
S															
								Hours of Potential Use of the Facility							
								Hours of Additional Potential Floodlight Use (typical)							

Please note:

- During spring, summer and autumn seasons, it would be possible to turn the floodlights on later during each day (given the usual longer daylight hours), to further minimise impact on species during months other than winter.
- Floodlighting will only be operational when the facility is in use, and therefore it is not intended that the lighting will automatically run continuously as per the above table every day.

- The above table details the typical winter usage, assuming the pitch is in use for all operational hours, and therefore provides a 'Maximum' illustration of floodlight use.
- The floodlighting is designed to meet the performance requirements as set out for the relevant sporting application with ability for dimming of the lights for lower sporting applications, providing both ecological benefit through lowering of the lighting intensity / spillage, and economic benefit through operational costs for running the floodlighting. It is therefore in the applicant's interest to ensure that dimming of the lighting system occurs during most training applications, to lower operational costs.

Part Night Lighting

The lighting proposed is to be controlled by human activity (light on demand) and controlled by dimming to suit the particular use at any given period. *Given this, it is expected that the Local Planning Authority will accept the above information and subsequent lighting design as the 'worst-case' practical scenario on site, and their response to proposals will take into account that the sports facility lighting design proposed (and its dimming ability) will only be operated during specific times of day / year during use of the facility, as opposed to other lighting applications they may assess that seek constant use.*

Floodlight Mast Design

The mast height chosen was calculated using methods detailed in CIBSE Document 'LG04 Sports Lighting (2023)', ensuring that:

- Vertical overspill is low.
- Good uniformity around the playing surface is obtained.
- Lights are directed downwards towards the playing pitch surface.
- Sky glow is avoided.
- Full cut-off is achieved (as recommended by The British Astronomical Association's Campaign for Dark Skies).

If higher columns were used, more intensive lighting would be required to provide necessary performance results at ground level.

If lower columns were used, a higher aiming angle would be needed on each luminaire, which would increase overspill and glare during use.

The masts are of a slim design, which will prove further benefit to the visual impact of floodlighting during the daytime.

Floodlight Performance

The necessary performance requirements for floodlighting development is outlined in the following documents:

- BS EN 12193
- FA Guide to Floodlighting
- ILP Guidance Documentation

The lighting plan show the mast locations, floodlight orientations, luminance levels on the pitch (confirming it meets necessary performance requirements for the specific applications to be used). It is noted that ILP Guidance Documentation directly conflicts with BS EN 12193 / FA Guide to Floodlighting requirements in terms of the value of light source (*ILP GN08 suggests 2700K or lower, in comparison to FA Requirements of 4200-5700K*). As ILP is Guidance documentation, the lighting plan has been produced to meet

	the required sporting performance requirements, whilst also adhering to ILP Guidance where this does not conflict and taking into account GN08’s hierarchy of Avoidance – Mitigation – Compensation. <u>Obtrusive Light</u> The closest residential properties have been assessed to establish obtrusive light calculations, to assess whether the lighting plan meets requirements for the relevant environmental zone. This results in: <table><tr><th>Value Attained</th><th>Pre-Curfew Requirement E3</th><th>Post-Curfew Requirement E3</th><th>Result</th></tr><tr><td>0 Lux</td><td>10</td><td>2</td><td>PASS*</td></tr></table> *As use of the facility is until 10pm, the measured illuminance during post-curfew scenarios (after 10pm) will be 0Lux, as the lights will not be on, which results in the system being below the Post-curfew threshold for the Environmental Zone. <u>Lighting Design Conclusions</u> • The proposed floodlighting system is specifically designed to meet sports lighting requirements, and subsequently meets the requirements for the intended sporting applications and standards of play. • The proposed hours of <u>potential</u> use for floodlighting has been shown, but it is noted that the floodlighting will only be on during actual use of the site, and this therefore represents worse-case scenario. • Given natural light during Spring, Summer and Autumn, it would be possible to turn floodlights on only when light is actually required. • The floodlighting design includes dimming features & ability to light part areas of the facility, therefore allowing the reduction of light during scenarios where full lighting of the area is not required. • Warm white light source (2700K or lower) was not possible, due to the sporting requirements outlined. • Other guidance notes in ILP GN01 & GN08 have been adhered to, where not in direct conflict with the sporting application requirements. • In line with ILP Guidance Hierarchy when creating a lighting design, where <u>avoidance</u> of impact to biodiversity was not possible, <u>mitigation</u>, by adjusting the lighting design specifically for the site scenario, has been undertaken to minimise the spillage of light as much as possible from areas that are not specifically the pitch. • The height of masts was chosen to provide the most efficient solution, in terms of minimising intensity required / spillage / glare. • The lighting design meets obtrusive light requirements for residential properties within the relevant Environmental Zone in which it is being installed.	Value Attained	Pre-Curfew Requirement E3	Post-Curfew Requirement E3	Result	0 Lux	10	2	PASS*
Value Attained	Pre-Curfew Requirement E3	Post-Curfew Requirement E3	Result						
0 Lux	10	2	PASS*						
HARD STANDING AREAS / GOAL STORAGE AREAS / ACCESS PATHWAYS	<u>Hard Standing</u> A hard-standing area has been created along one end of the pitch, as per the associated drawings, to provide a spectator viewing area to ensure the pitch meets FA Technical Guidance. <u>Access Pathways</u>								

	An access pathway has been created to tie the existing path to the new spectator area, ensuring that users / spectators of the facility have clean access to the pitch spectator area. Access pathways have been designed in accordance with Equality Act 2010, ensuring that the perimeter paths are a minimum of 1.8m width (unless there are unavoidable pinch points where width can be reduced to 1.2m for no greater than 6m in length). As per Sport England’s Design Guidance Note – Accessible Sports Facilities, where access routes are steeper than 1:60, but not as steep as 1:20, a level landing will be created for every 0.5m rise along any access route. <u>Goal & Maintenance Storage</u> Storage areas have been included to ensure all goals (when not being used) can be stored in the goal storage areas as opposed to being left on the pitch / within the 3m run off. This ensures the facility has been designed in accordance with relevant FA Guidelines in relation to securing obstacle free run offs during use. A maintenance storage area (black storage container) has been described further in the ancillary components section, but will be installed at the end of the spectator area.
INFILL MIGRATION MITIGATION FEATURES	Measures detailed in CEN/TR 17519 will be adopted in full, ensuring the proposed development contains all relevant mitigation features to minimise any potential infill dispersion into the local environment, including: • Drainage Silt Traps / Micro-Filters • Infill Containment Barriers (500mm high as per CEN documentation for synthetic turf that is laid up to the outer perimeter fencing) • Decontamination Grates / Scraper Mats (at all entrances) • Boot Cleaning Stations (at all entrances) To further reduce the potential of any infill dispersion into the local environment, further measures have also been adopted, including: • Mowing Margins: 300mm wide mowing margins around the outer perimeter (outside of fenced footprint) to provide additional buffer separating the synthetic turf / perimeter fencing and adjacent natural grassed areas.

Ancillary Equipment

GOALS	Portable football goals will be provided and installed as required by the sporting pitches marked. These goals will be of a type for use on synthetic turf pitches. All goals supplied will comply with BS EN 16579.
STORAGE CONTAINER	A storage container will be installed within the footprint of the spectator area created as per the design drawings. The storage container will be of a standard design comprising of: • 2.529m high x 6.06m long x 2.44m wide container • High tensile profiled steel, finished powder coated black The storage container will house maintenance equipment, as well as various sporting equipment, to ensure regular maintenance can be undertaken to the pitch. Regular maintenance of synthetic turf pitches ensures the following performance / environmental benefits: • Less compaction of turf and infill, resulting in better adherence to performance requirements over the medium / longer term. • Extended longevity of the turf system.

Section 3 – Additional Project Surveys Overview

Surveys Undertaken	
The following surveys have been undertaken, to provide information relevant to developing the design proposals. The key findings have been summarised below:	
DESKTOP STUDY SITE REVIEW & UTILITIES SEARCH	The full Desktop Study has been provided as an additional document. Labosport have summarised the findings below: • Site Overview: The proposed Artificial Grass Pitch (AGP) and PlayZone pitches are located at King George V Playing Fields, Exeter, currently consisting of grassed playing fields with minimal vegetation. • Geological Conditions: • The site is underlain by superficial River Terrace Deposits (sand and gravel) and Heavitree Breccia Formation (sandstone/breccia). • Bedrock is shallow, and additional conditioning or breaking out may be required for pitch formations. • Flood Risk: The site is in Flood Zone 1, indicating a low risk of flooding from rivers or the sea. Limited potential for surface water flooding was noted in specific areas. • Environmental and Structural Considerations: • The site is not located near any historical landfill sites, suggesting low risk from ground gases. • Minimal Made Ground is anticipated due to limited prior development. • Drainage and Soakaways: The permeability of granular deposits may support effective drainage systems, which requires further investigation. • Unexploded Ordnance (UXO): The site is within a high bombing density area from historical military activity, necessitating a UXO risk review. • Construction Feasibility: • Ground levels will need adjustment to achieve desired gradients for drainage (up to 1% combined fall). • Additional material may need to be imported to raise levels, particularly on the west side of the pitch. • Utility and Service Constraints: There are no known utilities crossing the immediate proposed pitch area, but care should be taken with surrounding infrastructure.
TOPOGRAPHICAL SURVEY	The topographical survey has been provided as an additional document. This provides data from which the design of the facility has been developed.
GROUND INVESTIGATION	TBC
TOPSOIL ASSESSMENT	TBC
DRAINAGE STRATEGY	TBC

ARBORICULTURAL ASSESSMENT	Tree Categories: - Trees are categorized under BS5837:2012 into the following groups: Category A: High quality with a life expectancy of at least 40 years. Category B: Moderate quality with a life expectancy of at least 20 years. Category C: Low quality or younger trees with a life expectancy of at least 10 years. Category U: Unsuitable for retention due to poor condition or short life expectancy. Trees on the Western Side: - Several trees of varying quality are located in the proposed AGP area and its vicinity. - A significant number of Category B trees (moderate quality) are present, providing landscape value and biodiversity. Category C trees are less critical but still require appropriate management during construction. - Any Category U trees identified are recommended for removal due to their poor condition. Root Protection Areas (RPAs): - RPAs for these trees are delineated to prevent root damage during construction. Protective fencing is required to ensure no encroachment occurs in these zones. Potential Impact: - Tree removal or disturbance may be necessary for the AGP construction. However, efforts should be made to minimize this, particularly for Category A and B trees, due to their higher ecological and aesthetic value. - Enhancement measures, such as compensatory planting, should be planned for any trees that must be removed. Tree Protection Measures: - The survey outlines specific protective measures, including fencing specifications and monitoring, to safeguard retained trees during construction.
PRELIMINARY ECOLOGICAL ASSESSMENT & BIODIVERSITY NET GAIN	Designated Sites: - The Exe Estuary Ramsar and Special Protection Area (SPA) is 100m south of the site and is a sensitive ecological area. - The site lies within an Impact Risk Zone (IRZ) for the Exe Estuary Site of Special Scientific Interest (SSSI). Consultation with Natural England is required. Habitats: Broadleaved Woodland: Located centrally, it is a high-value habitat within the Devon Nature Recovery Network. Removal of any woodland will need significant compensation. Grassland: Predominantly modified, low-diversity grassland used for sports. Edges near woodlands and hedgerows present opportunities for ecological enhancement. Watercourse: A small watercourse runs through the woodland; any development within its 10m riparian buffer should be avoided. Trees: - Several mature and veteran trees are on site, especially in the east/center. These are irreplaceable habitats, and their removal is considered unacceptable under the National Planning Policy Framework (NPPF). Fauna:

- **Bats:** Several species, including protected and notable ones, may roost in trees or forage in the area. Bat activity and roost surveys are needed for impacted trees and areas.
- **Dormouse:** Suitable woodland and hedgerow habitats exist, but further surveys are required where impacts are likely.
- **Birds:** Trees and woodlands provide nesting habitats. Development should avoid disturbance during nesting seasons.
- **Invertebrates:** Woodlands and veteran trees support invertebrates, especially those associated with deadwood.
- **Other Species:** Hedgehogs are likely present, using the site for foraging and hibernation.

Constraints for the Proposed AGP

- The AGP construction, including floodlighting, may disturb habitats and species, particularly woodland, mature trees, and bats.
- Any loss of habitats, especially woodland or veteran trees, will require significant mitigation, possibly including off-site compensation.
- Lighting for the AGP must minimize impact, especially on bat habitats, with low-level, directed solutions.

Biodiversity Net Gain (BNG)

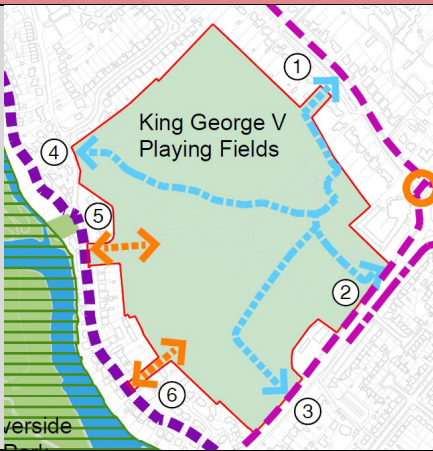
- Initial calculations suggest a **13.22% habitat loss** without additional measures, requiring off-site compensation to meet the mandated 10% net gain target under the Environment Act 2021.
- To address this:
- Enhance and create habitats, such as species-rich grasslands, woodland, and hedgerows.
- Protect existing high-value habitats and strategically plan for biodiversity improvements.

Recommendations

- Retain as many high-value habitats (woodland, hedgerows, veteran trees) as possible.
- Conduct further surveys for bats, dormice, and invertebrates before finalizing plans.
- Avoid construction within sensitive areas, such as the riparian buffer zone.
- Implement ecological enhancements, such as native tree and hedgerow planting, and manage grassland edges for wildlife.

Section 4 – Access Statement

Parking and Access	
STP PARKING DEMANDS	As part of the proposed development, improvements will be made to both car parks on-site. The main car park will provide a total of 76 spaces, including designated bays for four disabled spaces and electric vehicle (EV) charging points. Additionally, the Countess Wear Road car park will accommodate 69 spaces, ensuring sufficient parking capacity in line with the Transport Assessment.
TRAVEL AND PARKING MANAGEMENT PLAN	The findings and recommendations for the Travel and Parking Management Plan are detailed in the site-wide Design and Access Statement (DAS) document and the accompanying Transport Assessment report.

General Access	
	
PEDESTRIAN ACCESS ROUTES	There will be pedestrian access routes at locations 1, 2, 3, 4 and 5 on the map (above).
EMERGENCY AND MAINTENANCE ACCESS	There will be emergency access routes at locations 1 and 4 on the map (above).
WHEELCHAIR ACCESS	The proposals include creating a pedestrian access to the STP of suitable width (as per Equality Act 2010 / Doc-M Compliance / Sport England's Design Guidance Note).

Section 5 – Planning Statement

Planning Requirements	
Labosport have assessed guidance on planning applications for the relevant Local Planning Authority based on their planning website, and have noted the following features that will be required for this particular application:	
RELEVANT COUNCIL	EXETER CITY COUNCIL
PLANNING AUTHORITY ESSENTIAL CHECKLIST	- Completed application form - Completed certificate of ownership - The relevant fee - Location Plan - Site Plan (Existing and Proposed) - Elevations (Existing and Proposed) - Design and Access Statement
RELEVANT NATIONAL PLANNING POLICY FRAMEWORK CONSIDERATIONS	Section 2 Achieving Sustainable Development Section 4 Decision Making Section 8 Promoting Healthy and Safe Communities Section 11 Making Effective Use of Land Section 12 Achieving Well Designed and Beautiful Places Section 15 Conserving and Enhancing the Natural Environment
RELEVANT DEVELOPMENT PLAN POLICIES EXETER CITY COUNCIL	CC1: Net Zero Exeter CC5: Future Development Standards CC8: Flood Risk Policy CC9: Water Quantity and Quality CP18: Infrastructure CP17: Design and Local Distinctiveness EN2: Contaminated Land L3: Protection of Open Space NE3: Biodiversity NE4: Green Infrastructure NE6: Urban Greening Factor NE7: Urban Tree Canopy Cover T3: Encouraging Use of Sustainable Modes of Transport HW1: Health and Wellbeing
COMMUNITY CONSULTATION	This proposed development (if approved) is applying for funding from The Football Foundation's AGP Framework. As part of The Football Foundation Grant Application Process, clients are required to provide sufficient evidence of potential community use from the development to access the funding programme. Additional user groups that will be facilitated on the new pitch have been identified, and formal community use agreement will be created as part of the client's final application for funding via The Football Foundation Framework. We therefore recommend that Sport England suggest a Pre-Use Condition for the facility, requesting that a Community Use Agreement is completed and provided to Sport England prior to first use of the facility. This would allow the client to secure match funding from The Football Foundation and then inform the identified community groups that the project will proceed.
LOCAL FOOTBALL FACILITY PLANS	The Exeter Local Football Facility Plan (LFFP) identifies priority projects to improve football infrastructure in the city. It was developed by the Football Foundation, FA, Sport England, and local stakeholders. The key priorities include:

	• 3G Football Turf Pitches: Addressing gaps in provision and improving pitch quality. • Improved Grass Pitches: Upgrading existing natural turf surfaces. • Changing Room Pavilions/Clubhouses: Enhancing facilities to support clubs. • Small-Sided Facilities: Creating spaces for informal and recreational play.
SPORT ENGLAND CONSULTATION	Sport England are a statutory consultee for this type of planning application. Sport England will oppose the granting of planning permission for any development which could lead to the loss of, or prejudice the use of: • All or any part of a playing field • Land which has been used as a playing field and remains undeveloped • Land allocated for use as a playing field Unless in the judgement of Sport England, the development as a whole meets with one or more of the below 5 exceptions: 1. A robust and up-to-date assessment has demonstrated, to the satisfaction of Sport England, that there is an excess of playing field provision in the catchment, which will remain the case should the development be permitted, and the site has no special significance to the interests of sport. 2. The proposed development is for ancillary facilities supporting the principal use of the site as a playing field, and does not affect the quantity or quality of playing pitches or otherwise adversely affect their use. 3. The proposed development affects only land incapable of forming part of a playing pitch and does not: • Reduce the size of any playing pitch • Result in the inability to use any playing pitch (including the maintenance of adequate safety margins and run-off areas) • Reduce the sporting capacity of the playing field to accommodate playing pitches or the capability to rotate or reposition playing pitches to maintain their quality • Result in the loss of other sporting provision or ancillary facilities on the site • Prejudice the use of any remaining areas of playing fields on the site 4. The area of playing field to be lost as a result of the proposed development will be replaced, prior to the commencement of the development, by a new area of playing field: • Of equivalent or better quality, and • Of equivalent or greater quantity, and • In a suitable location, and • Subject to equivalent or better accessibility and management arrangements 5. The proposed development is for an indoor or outdoor facility for sport, the provision of which would be of sufficient benefit to the development of sport as to outweigh the detriment caused by the loss, or prejudice to the use, of the area of playing field. Given the context of the existing site (grassed sports pitch) and proposed development (replacement of the existing grassed pitch with a new STP, with drawings showing how other affected sports will still be accommodated for across the site, Labosport believe the development meets Exception E5. Sport England recognise that STP's have the following advantages over natural grassed facilities: • Greater Durability • More Efficient Use of Space

- Increased Usage
- Flexibility
- Better Overall Value for Money
- Defined Performance Characteristics

Labosport believe the development proposals (replacement of the natural grass pitch with a new STP facility) would bring 'sufficient development of sport as to outweigh the detriment caused by the loss'.

Section 6 – Planning Conclusions

Conclusions	
CONCLUSIONS	Having assessed relevant planning policies and material considerations relevant to this proposal, we request this proposal is accepted, due to the following: • The proposed Synthetic Turf Pitch will replace an existing area that has previously been used for sporting type applications, therefore providing access to greater quantity of provision in a suitable location and supported by effective and appropriate management arrangements, whilst implementing construction techniques outlined for the various specific components to ensure minimum waste and pollution is caused by the development, in accordance with National Planning Policy Framework Section 2 - Achieving Sustainable Development. • The proposal will give rise to a considerable benefit to the wider community through the provision of an enhanced playing facility and the opportunity for usage throughout the year, in accordance with National Planning Policy Framework Section 8 – Promoting Healthy and Safe Communities • The proposal will ensure surface water run-off is effectively managed and does not increase flood risk elsewhere, in accordance with National Planning Policy Framework Section 10 – Meeting the Challenge of Climate Change, Flooding and Coastal Change

Appendix A – Existing Site Photograph

Site Overview

