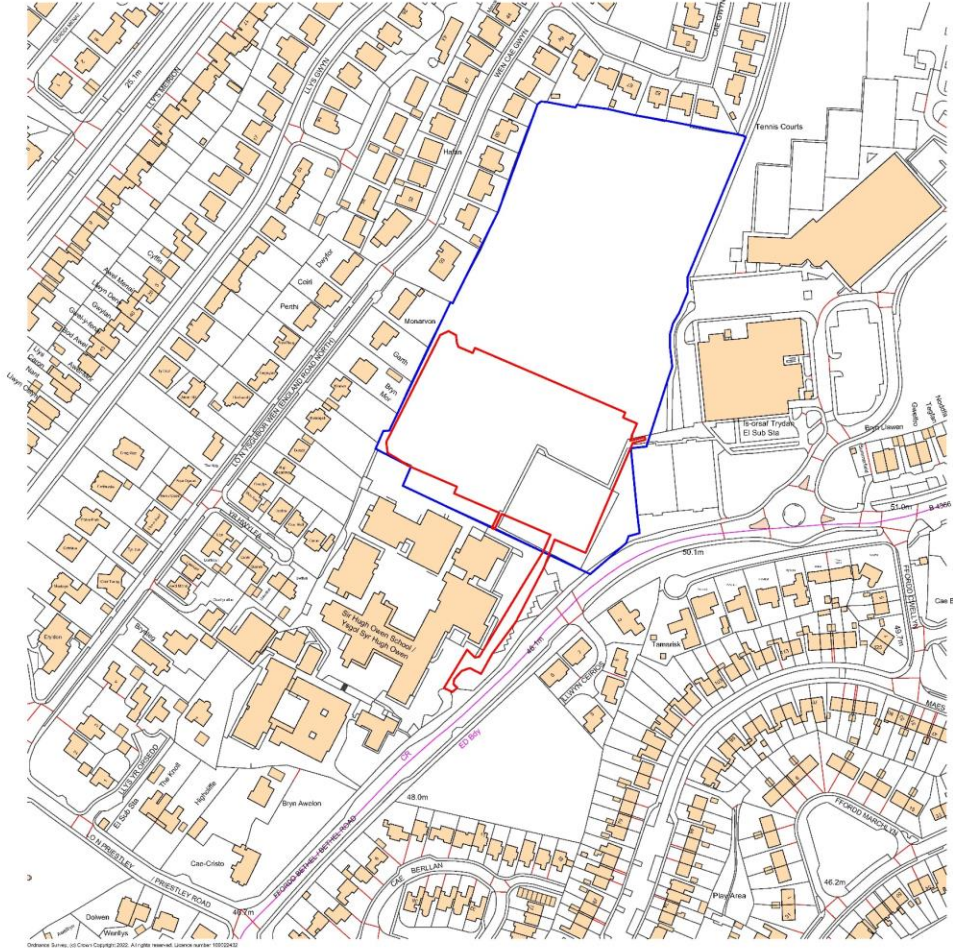


Ysgol Syr Hugh Owen

Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch



SSL
 South Wales Sports Centre
 1. CLIENT: SYDNEY SPORTS CENTRE
 2. PROJECT: CAERNARFON COMMUNITY 3G PITCH
 3. DATE: 15/08/2022
 4. DRAWING NO: A1



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REV	DESCRIPTION	DATE	BY	CHK

McARDLE
SPORT TEC

Ysgol Syr Hugh Owen
 Caer Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch
 Site Location Plan

PROJECT	McA003	SCALE	1:1250	SHEET	A1
DATE	02	REVISION			00

Ysgol Syr Hugh Owen

Caer Cymunedol 3G Caernarfon / Caernarfon Community 3G Pitch



SSL
 Stryd y Castell, Caernarfon, Gwynedd, LL55 1YU
 Telf: 01262 512345
 E-mail: info@ssl.co.uk



Linell ffens 4.5m o uchder gyda ffens acwstig 4m o uchder
 4.5m High Fence Line with 4m High Acoustic Fence Line

Bwnd uwchbridd
 Topsoil bund

Llwybr mynediad o gwmpas y cae
 Access footpath around the pitch

- Cymraeg**
- Anwynebedd chwarae artificial
 - Llwybrau ac ardaloedd llawr caled
 - Ymyl Terri Gwair
 - Linell ffens 4.5m o uchder gyda ffens acwstig 4m o uchder
 - Linell Ffens 4.5m uchder
 - Linell Ffens 2m uchder
 - Linell Ffens 1.2m uchder
 - Linell Ffens pren 1.2m uchder
- English**
- Artificial Turf Playing Area
 - Footpaths & Hard Standing Areas
 - 300mm Mowing Margin
 - 4.5m High Fence Line with 4m High Acoustic Fence Line
 - 4.5m High Fence Line
 - 2m High Fence Line
 - 1.2m High Fence Line
 - 1.2m High Timber Fence Line



01	PLANNING ISSUE	01	ME	2024/02
02	PLANNING ISSUE	02	ME	2024/02
REV	DESCRIPTION	REV	DATE	



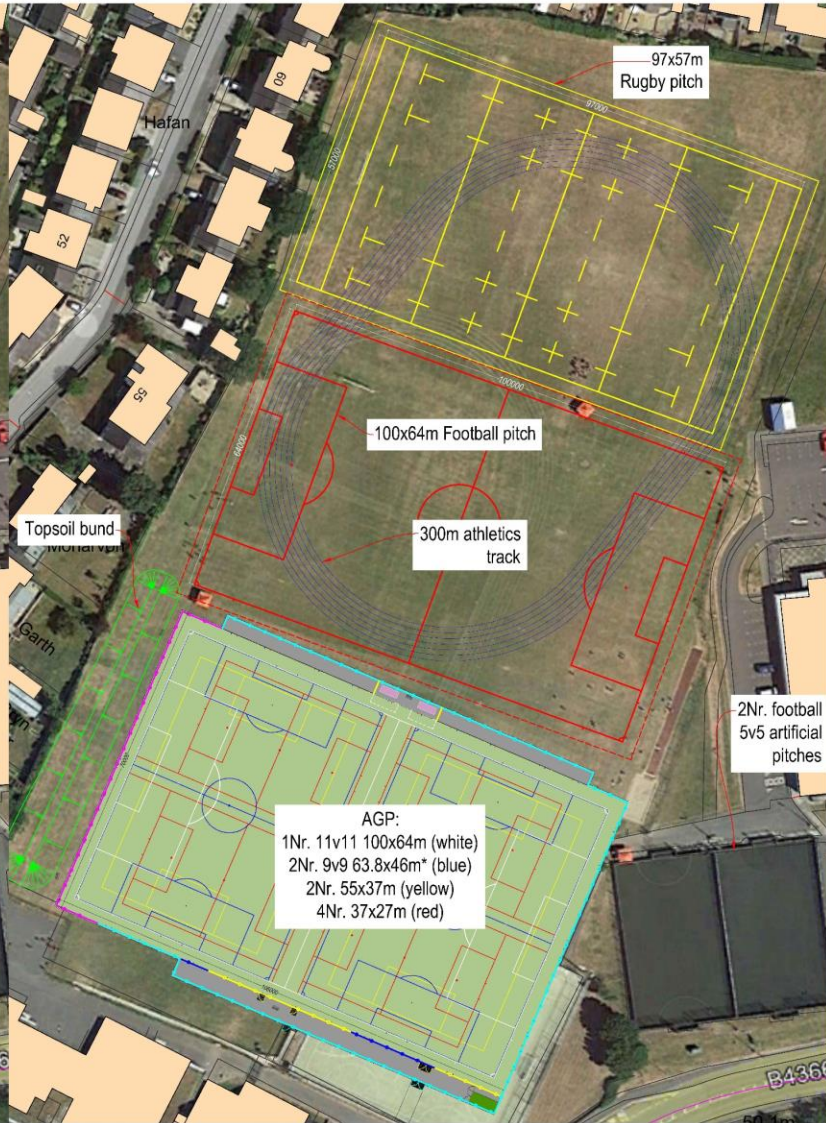
Ysgol Syr Hugh Owen
 Caer Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch
 Proposed Site Plan

PROJECT	McA003	SCALE	1:500	SHEET	A1
DRAWING NO.	03	REVISION			01

Ysgol Syr Hugh Owen

Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch

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1. ALL INFORMATION AND/OR ALL INFORMATION IS TO BE USED IN THE PROJECT
2. CONSULTATION OF THE DRAWING
3. PROVISION OF ALL NECESSARY INFORMATION TO THE CONTRACTOR
4. ALL INFORMATION IS TO BE USED IN THE PROJECT AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF SSL



DERBYN
Adran Cynllunio 15/08/2022



NO	DESIGN ISSUE	REV	ME	15/08/22
REV	DESCRIPTION	REV	DK	DATE



Ysgol Syr Hugh Owen
Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch
Playing Field Layout

PROJECT	McA003	SCALE	1:500	SHEET	A1
DATE	09	REVISED		NO.	00

Ysgol Syr Hugh Owen

Cae Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch



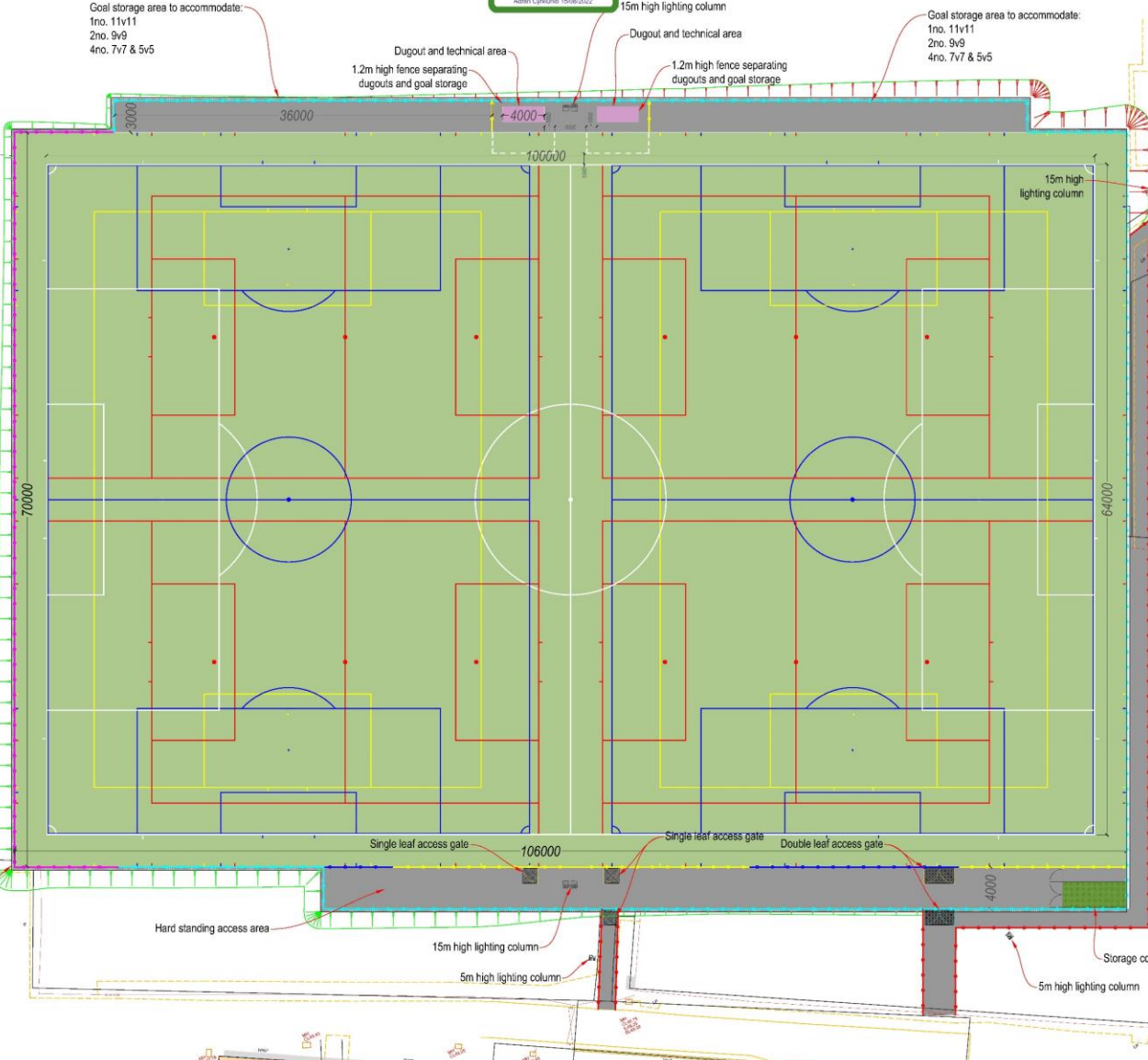
SSL
Sports Services Limited

PROJECT: YSGOL SYR HUGH OWEN
DRAWING NO: 1508/2022
DATE: 20/01/2022
SCALE: 1:200

Caernarfon

North

Caernarfon



- Cymraeg**
- Arwynebedd chwarae artificial
 - Lwybrau ac ardaloedd llawr caled
 - Ymyl Torri Gwair
 - Linell Ffens 4.5m uchder
 - Linell ffens 4.5m o uchder gyda ffens acwstig 4m o uchder
 - Linell Ffens 2m uchder
 - Linell Ffens 1.2m uchder
 - Linell Ffens pren 1.2m uchder
- Nodiadau:**
Marcâu linell i gynnyws:
1Nr. 11v11 100x64m (gwyrn)
2Nr. 9v9 63.8x46m* (glas)
2Nr. 55x37m (melyn)
4 Nr. 37x27m (rhos)
- *Llai na'r maint a argymhellir ond yn dderbyniol ar gyfer gemau FA

- English**
- Artificial Turf Playing Area
 - Footpaths & Hard Standing Areas
 - 300mm Mowing Margin
 - 4.5m High Fence Line
 - 4.5m High Fence Line with 4m High Acoustic Fence Line
 - 2m High Fence Line
 - 1.2m High Fence Line
 - 1.2m High Timber Fence Line
- Notes:**
Line markings to accommodate:
1Nr. 11v11 100x64m (white)
2Nr. 9v9 63.8x46m* (blue)
2Nr. 55x37m (yellow)
4Nr. 37x27m (red)
- *Smaller than recommended size but acceptable for FA match play

NO.	PLANNING ISSUE	DATE	BY	DATE
01	PLANNING ISSUE	20/01/22	DP	ME
02	PLANNING ISSUE	20/01/22	DP	ME
03	REV DESCRIPTION		REV	DATE



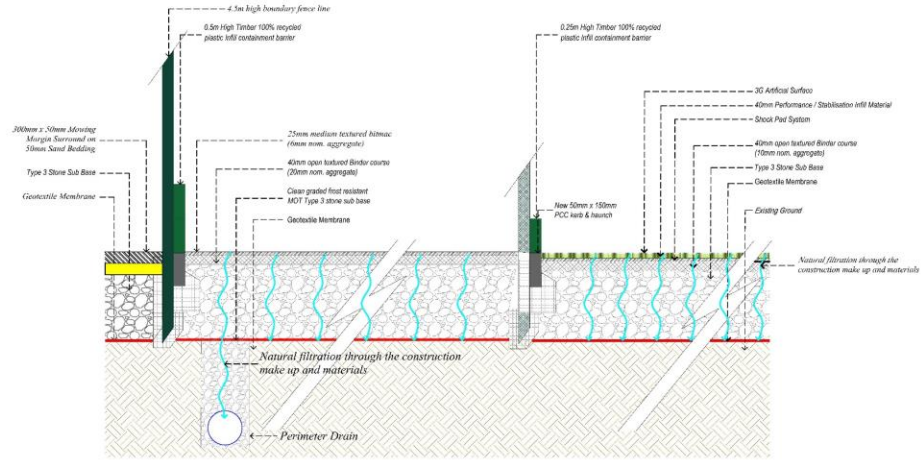
Ysgol Syr Hugh Owen
Cae Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch
Proposed ATP Plan

PROJECT	McA003	SCALE	1:200	SHEET	A1
DATE	04	REVISION			01

Ysgol Syr Hugh Owen

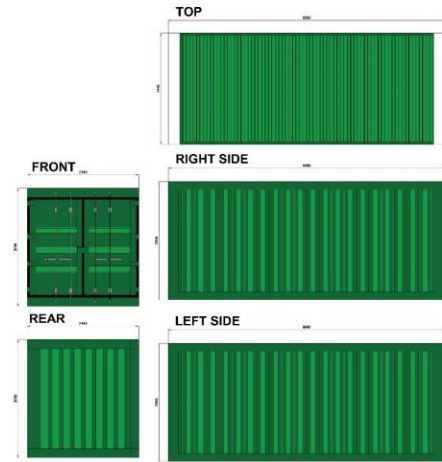
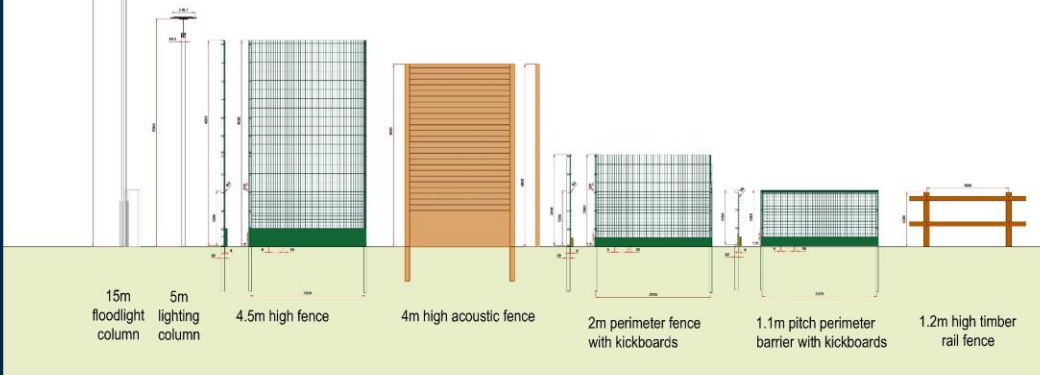
Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch

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Sports Surfaces Limited
100% Recycled
100% Recycled
100% Recycled



Typical ATP Section Detail

15000



Maintenance Storage Container



01	PLANNING ISSUE	OP	ME	05/08/22
02	PLANNING ISSUE	OP	ME	05/08/22
REV	DESCRIPTION	REV	CHK	DATE



Ysgol Syr Hugh Owen
Caer Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch

PROJECT	McA003	SCALE	1:50	SHEET	A1
DATE	05	REVISION			01

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Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch



SSL
Sports Lighting Solutions

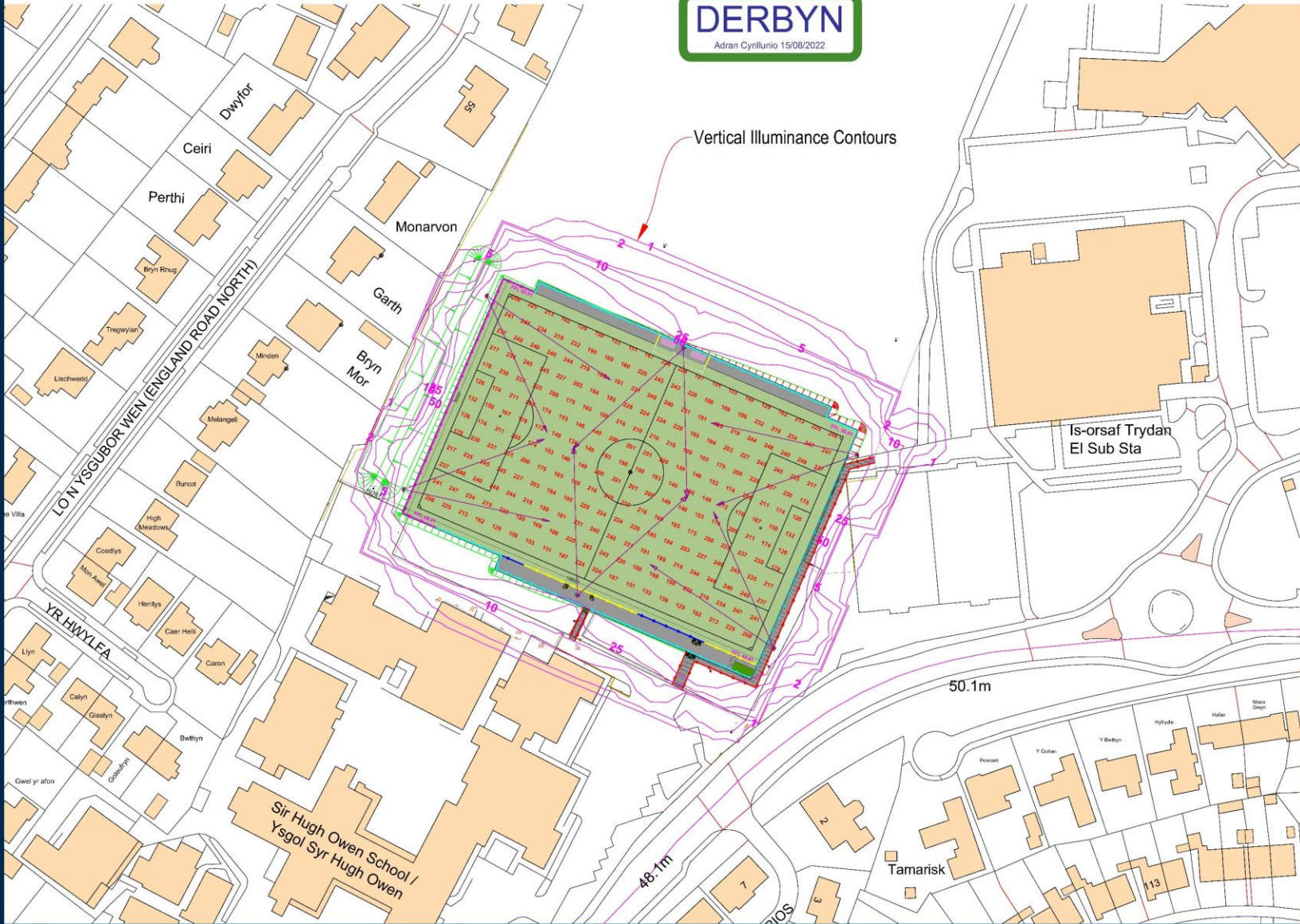
1. LIGHTING DESIGN AND ALL WORKS TO BE DESIGNED AND PROVIDED IN ACCORDANCE WITH THE FOLLOWING:
2. PROVISION OF LIGHTING TO BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FA GUIDE TO FLOODLIGHTING.
3. ALL WORKS TO BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FA GUIDE TO FLOODLIGHTING.

Floodlight System
6Nr. Columns 15m high
Lighting Design meets the requirements of the FA Guide to Floodlighting

Property	Standard	Maintained
Tfwt11 Maintained Avg Illuminance	>200 Lux	200Lux
Tfwt11 Min/Avg Uniformity	>0.6	0.6

Design in accordance with ILP Guidance Note 1 (2021) For The Reduction Of Obtrusive Light and adheres to the requirements of an E3 Environmental Zone.

0% Upward Light Ratio
<1lux on vertical illuminance on adjacent residential Properties Pre-curfew and <0.1lux post-curfew.



PLANNING ISSUE	DATE	BY	DATE
DESCRIPTION	REV	CHK	DATE

Ysgol Syr Hugh Owen
Caer Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch
Proposed Floodlighting Plan

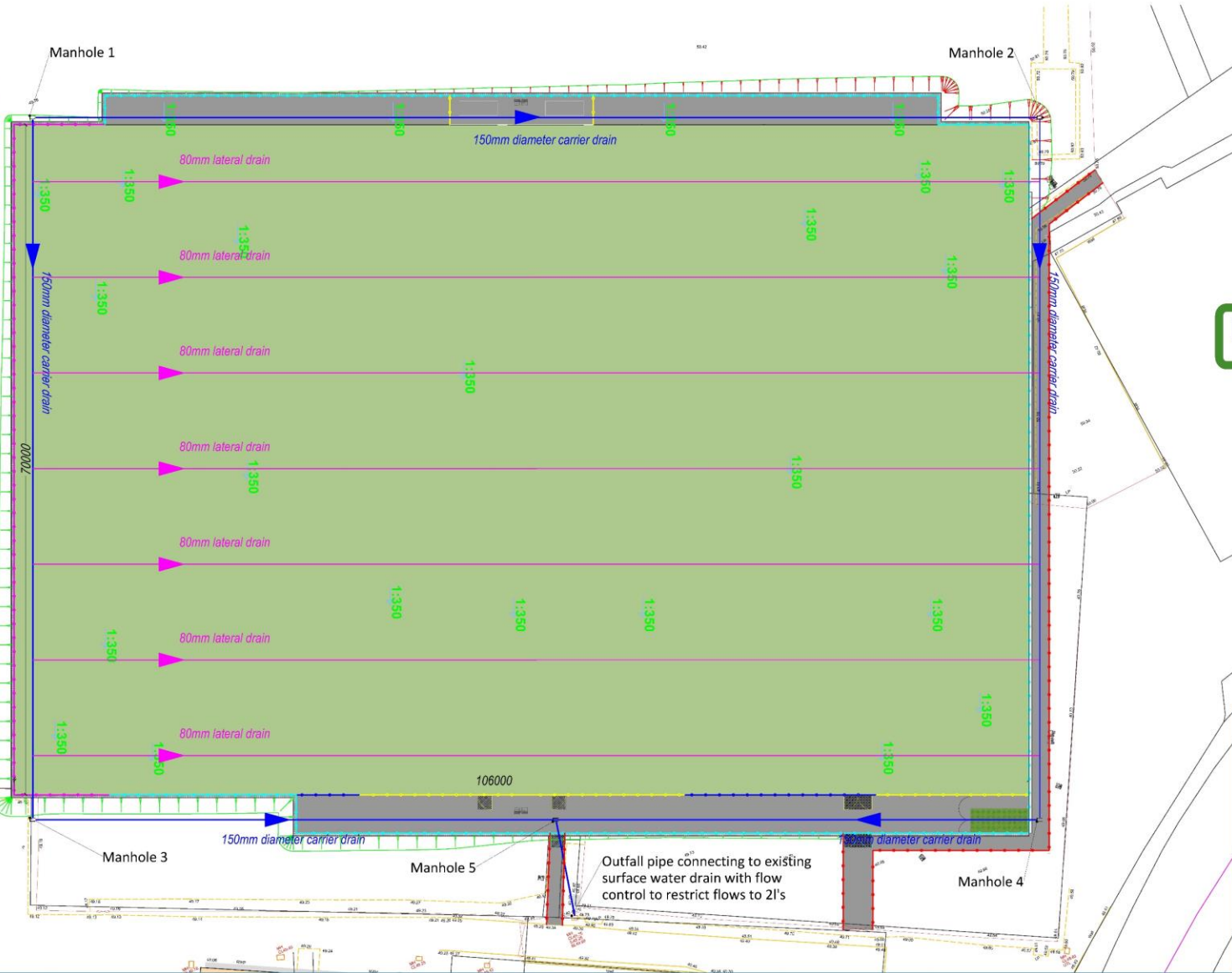
PROJECT	SCALE	SHEET
McA003	1:500	A1
DRAWING NO		REVISION
06		00

Ysgol Syr Hugh Owen

Cae Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch



SSL
 Surface Solutions Limited
 1. CHECK ALL DIMENSIONS AND LOCATIONS TO BE DRAWN OR RE-DRAWN TO
 COMPLY WITH CODES
 2. PROTECTIVE SURFACING TO BE DRAWN AND MANAGED
 3. ALL DIMENSIONS TO SURFACE UNLESS OTHERWISE STATED
 4. ALL DIMENSIONS TO BE CHECKED BY THE CLIENT



NO	PLANNING ISSUE	ME	DATE
REV	DESCRIPTION	REV	DATE



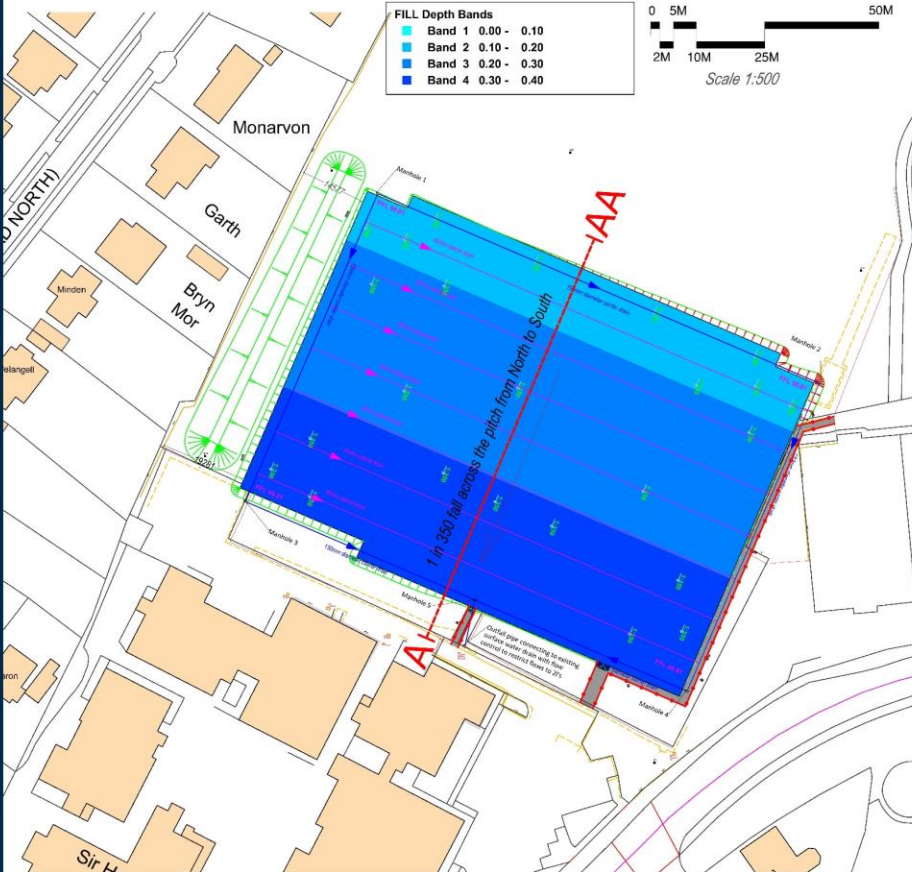
ME

Ysgol Syr Hugh Owen
 Cae Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch
 Proposed AGP Drainage Layout

PROJECT	SCALE	SHEET
McA003	1:200	A1
DRAWING NO		REVISION
07		00

Ysgol Syr Hugh Owen

Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch



Surface Water Drainage Design
The proposed design of the AGP development is for a permeable surface construction. The surface of the synthetic turf area shall be permeable with the underlying stone sub-base acting as an attenuation/storage area for surface water. The stone base will act as an attenuation system to increase attenuation capabilities of the playing field area. This is combined with a perforated drainage system being installed underneath the pitch base to connect to the existing outfall chamber at the south east of the development site.

- It is intended that a positive drainage scheme (land drainage) shall be installed beneath the development areas comprising UPVC perforated carrier and lateral pipe drains.
- The granular pitch substrate (typically consisting of Type 3 unbound (SHW 800 Series) to comply with BS EN 12185) is intended to provide ornate containment and attenuation within the granular sub-base, before surface water enters an outfall.
- The designed surface water drainage solution should be based upon the following criteria, to maintain satisfactory system performance:
 - Provide adequate functionality over a period of twenty years.
 - Ensure that surface water is removed from the surface area at a rate necessary to prevent surface flooding experienced during acute rainfalls and to ensure the facility will not be lost through rain at the highest intensity which may be expected to occur either once every five years or through continuous rainfall of 50mm over a 24 hour period.
 - Ensure that surface water is effectively removed from the facility construction to ensure that load bearing capacity of the substrate is not weakened by an increase in moisture content or becomes more susceptible to frost damage.
 - Protect the installation from influences of groundwater or surface water from surrounding areas.
 - Prevent the risk of uncontrolled flooding elsewhere (to land adjacent to the development).
 - Comply with all applicable Sustainable Urban Drainage System (SUDS) requirements with attenuated flows (contained within the granular pitch sub-base) incorporated wherever necessary, without affecting the performance of the pitch.

Only natural surface water is being dealt with. The new development will not increase to the volume of water that the existing site area is currently subjected to.
The area is in a Category 1 flood zone and as such is at a low risk of flooding. Water discharging from the playing field area currently reaches the existing surface water drainage system, without any control or restrictions.
The collector drainage pipe to the synthetic pitch will connect to the existing surface water chamber within the site with a restricted outfall rate.

In terms of the proposed restricted outfall rate, where one restricted discharge rate is proposed for all events, the Qbar (average annual) greenfield runoff rate should be used, or 2/3, whichever is greater. The QBAR for this site is 2 l/s. We have, therefore, used 2/3 as the suggested limited discharge rate. Calculations have been based on a 1 in 100 year storm event with a 40% allowance for climate change.

In terms of the proposed restricted outfall rate, where one restricted discharge rate is proposed for all events, the QBAR (Average Annual) greenfield runoff rate should be used, or 2/3, whichever is greater. Since the QBAR runoff rate <2/3, a rate of 2/3 has been used as the limiting discharge from the site. Calculations have been based on a 1 in 100 year rainfall event with a 40% allowance for climate change. No urban crop allowance is required for schemes of this nature.

The foundations of the new synthetic turf area (shown in drawing MCA003-07 - Proposed AGP Drainage Layout) includes:
- 300mm deep layer of type 3 stone
- 40mm macadam
- 40mm mill of sand and rubber on the carpet

The minimum 350mm deep aggregate base construction offers a wedge for surface water attenuation prior to filling and flooding the pitch surface or surrounding grassed areas. The available volume of the wedge is created through the following calculations:
- The pitch layer constructed at a 1 in 350 gradient offers a volume and capacity of 2170m³
Based on a voidage space of 37% this offers 803m³ of water attenuation.

The surface water attenuation calculations as per the table provided below shows the following:
- 1 in 100 year storm event + 40% allowance for climate change at run off restricted to 2 l/s - would require 584m³ of attenuation

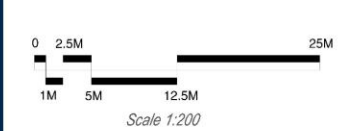
The attenuation provided by the pitch design will comfortably cater for a 1 in 100 storm event +40% without flooding either the pitch surface or surrounding areas

Minimum Storage Required:	584 m ³	incl cc allowance
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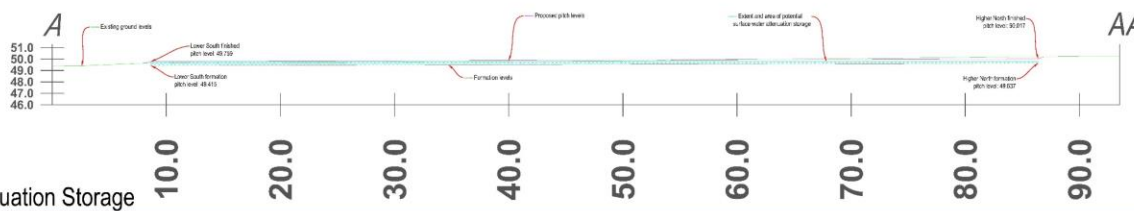
FACTOR	VALUE	SOURCE	FACTOR	VALUE
Return Period (yrs)	100	Environment Agency, Water Authority, etc.	Additional Inflow (l/s):	0
Limiting Discharge (l/s):	2	Environment Agency, Water Authority, etc.	Calculate/Specify PR:	Calculate
Contributing Area (ha):	0.8234	Site plans	Specify PR:	100
Impervious, PIMP (%):	100	Site plans	Climate Change Allowance	40
MS-60min (mm):	17	Volume 3 maps and site location		
SMAR (mm/vr):	1106	Volume 3 maps and site location		
Ratio, r:	0.3	Volume 3 maps and site location		
Soil Type:	1	Volume 3 maps and site location		
SOIL:	0.15	Soil Type and Volume 1, Section 7.4		
UCV:	120	SAAR and Volume 1, Figure 9.7		
Calculated PR	75.29			
Percentage Runoff =	75.29			

Duration, D (min)	MS-60 (mm)	23 for +40.30 (mm)	MS-D (mm)	22 for M100 (mm)	M100-D (mm)	incl climate change (ha)	Area C (ha)	PK (%)	Runoff (m ³)	Add. Runoff (m ³)	Total Runoff (m ³)	Limiting Discharge (m ³ /min)	Limiting Runoff (m ³)	Storage Required (m ³)
5	17	0.34	5.8	1.81	10.5	14.7	0.82	75	91.0	0.0	91.0	0.12	0.6	90.4
10	17	0.50	8.5	1.89	16.0	22.4	0.82	75	139.1	0.0	139.1	0.12	1.2	137.9
15	17	0.60	10.2	1.91	19.5	27.3	0.82	75	169.1	0.0	169.1	0.12	1.8	167.3
30	17	0.78	13.3	1.96	26.0	36.3	0.82	75	225.3	0.0	225.3	0.12	3.6	221.7
60	17	1.00	17.0	2.01	34.1	47.7	0.82	75	296.0	0.0	296.0	0.12	7.2	288.8
120	17	1.29	21.9	2.02	44.3	62.1	0.82	75	384.8	0.0	384.8	0.12	14.4	370.4
240	17	1.60	27.2	1.99	54.2	75.9	0.82	75	470.7	0.0	470.7	0.12	28.8	441.9
360	17	1.79	30.4	1.97	59.9	83.9	0.82	75	520.3	0.0	520.3	0.12	43.2	477.1
480	17	1.97	33.5	1.95	65.2	91.2	0.82	75	565.6	0.0	565.6	0.12	57.6	508.0
600	17	2.15	36.6	1.91	70.0	97.9	0.82	75	607.1	0.0	607.1	0.12	72.0	535.1
720	17	2.19	37.2	1.91	71.3	99.8	0.82	75	618.4	0.0	618.4	0.12	86.4	532.0
840	17	2.24	38.1	1.91	72.6	101.6	0.82	75	629.9	0.0	629.9	0.12	100.8	529.1
1440	17	2.81	47.8	1.83	87.2	122.1	0.82	75	757.0	0.0	757.0	0.12	172.8	584.2
2880	17	3.50	59.5	1.74	103.6	145.1	0.82	75	899.6	0.0	899.6	0.12	345.6	554.0

Drainage Scheme



Section Showing Surface Water Attenuation Storage



07 PLANNING ROLE	ME	15/08/22
08 PLANNING ROLE	ME	15/08/22
REV DESCRIPTION	REV	DATE

McARDLE SPORT TEC

ME

Ysgol Syr Hugh Owen
Caer Cymunedol 3G Caernarfon/Caernarfon Community 3G Pitch
Proposed AGP Drainage Strategy

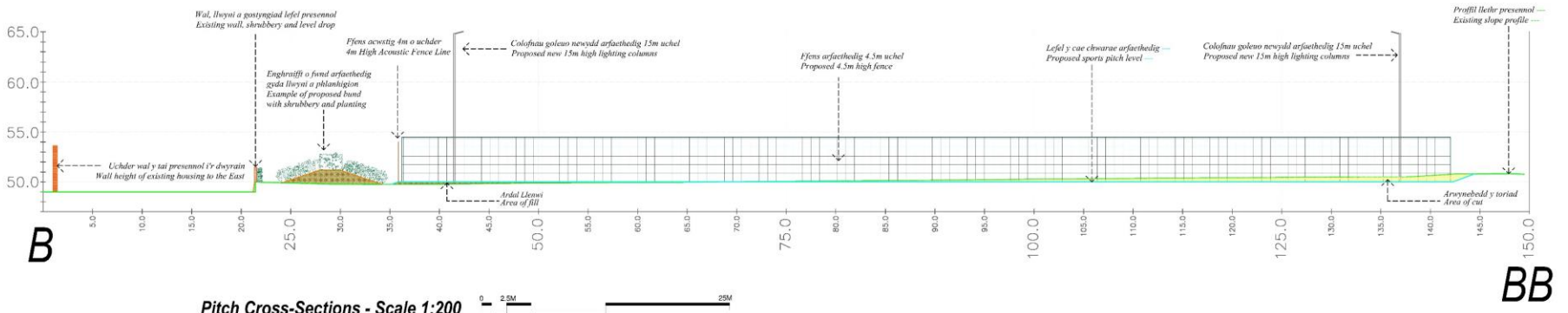
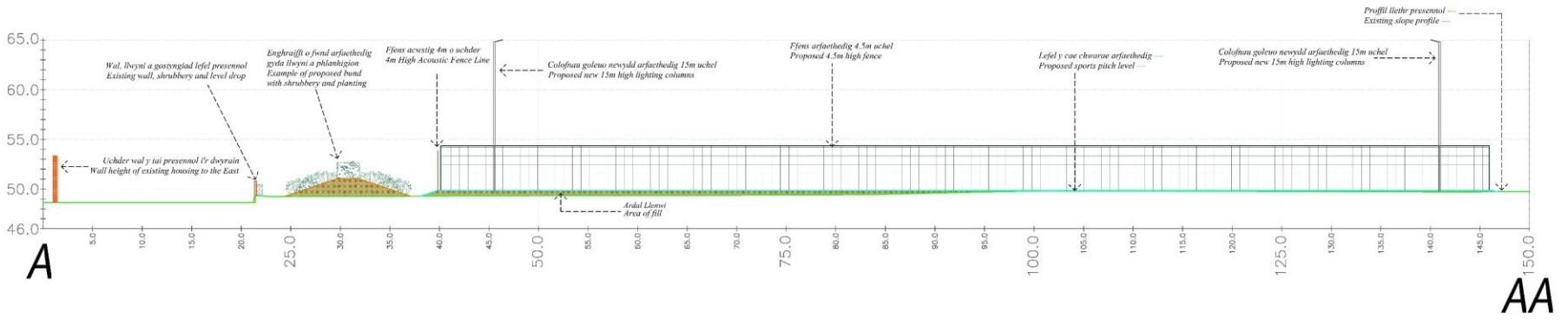
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DATE	08	REVISION			01

Ysgol Syr Hugh Owen

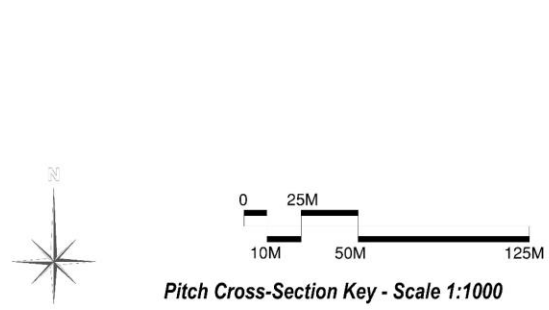
Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch

SSU
Landscape Services Limited
100, Victoria Road, Caernarfon, Gwynedd, LL55 2JG
Tel: 01248 862222
www.ssu-landscapes.co.uk

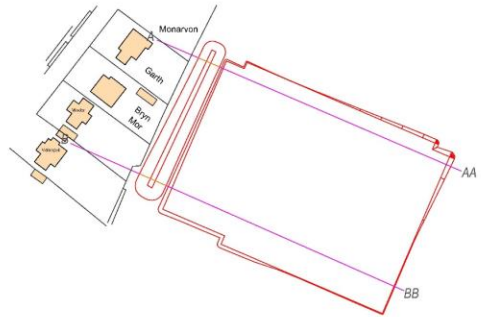
1. THIS PLAN IS A PRELIMINARY DESIGN AND SHOULD NOT BE USED FOR CONSTRUCTION WITHOUT THE APPROVAL OF THE DESIGNER. ALL DIMENSIONS TO BE TAKEN AS SHOWN UNLESS OTHERWISE SPECIFIED.



Pitch Cross-Sections - Scale 1:200



Pitch Cross-Section Key - Scale 1:1000



DERBYN
Adran Cynllunio 15/08/2022

NO	PLANNING ISSUE	WB	RE	DATE
1	REV DESCRIPTION	REV	DATE	

McARDLE SPORT TEC

REV: WB

TITLE: Ysgol Syr Hugh Owen
Caer Cymunedol 3G Caernarfon /Caernarfon Community 3G Pitch
Pitch Cross-Sections

SCALE: Varies
REV: A1

DRAWN BY: McA003
CHECKED BY: 09





