



Bidborough Primary School Synthetic Sports Pitch Verification Report

PN0095-PEL-VR-01

Pluviam Environmental Ltd

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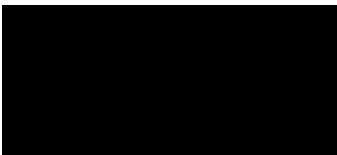
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Prepared by: John Roberts

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1.0	First Issue	02.11.23

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1 INTRODUCTION

The following validation report outlines the storm water management system installed for the new synthetic sports pitch at Bidborough Primary School. The school is accessed by Spring Lane to the northern boundary and is located at postcode TN3 0UE, Kent.



Figure 1. Site location

2 AS BUILT DRAINAGE DRAWING

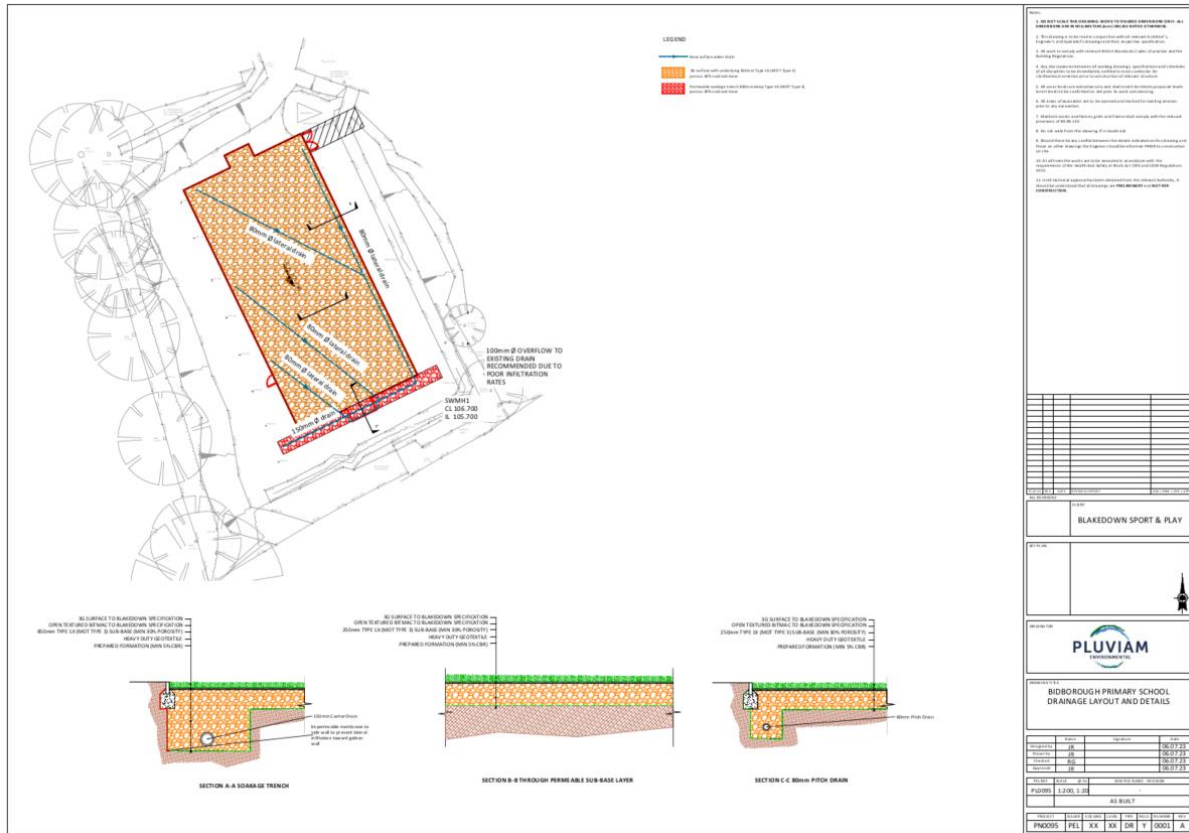


Figure 2. Snapshot of As-Built Drainage

Based on Blakedown Sport & Play’s amendments and additions, Figure 2 and Appendix A show the As-Built drainage drawing. A marked-up drawing was sent to PEL to produce the As-Built drainage drawing. The mark-up is backed up by photos from the construction, see Section 4.

3 DRAINAGE MATERIALS

Drainage sub-base

Blakedown Sport and Play have provided PEL with a copy of the material specification for the Type 1X (MOT Type 3) material used which corresponds to BS EN 933-1: 2008 and BE EN 1097-5: 2008 as specified. The depth of the substrate has been confirmed by Blakedown Sport & Play to be 250mm in line with the approved design. See supplied material sheet in Appendix B.

Filter Drainage Pipework

Corresponds to the specification for the 80mm and 150mm perforated laterals.

4 DEPARTURES FROM ORIGINAL DESIGN

Blakedown Sport & Play stated that the overflow could not be installed due to no outfall being present on site other than to ground (i.e. infiltration). Therefore, the contractor added further drainage trenches and pipework to compensate. It should be noted that the soakage trench half empty time is below 48hrs with the main section of the pitch half emptying in 72 hrs. The pitch has been designed for no flooding during the proposed 1in100+40% event with all runoff held within the sub-base layer.

Therefore, the outgoing manhole and rodding eye have been omitted as no outfall location is available.

5 PHOTOS OF CONSTRUCTION



Plate 1. Formation dig and laying of sleeved pitch drain



Plate 2. Pitch drainage pipework in trench

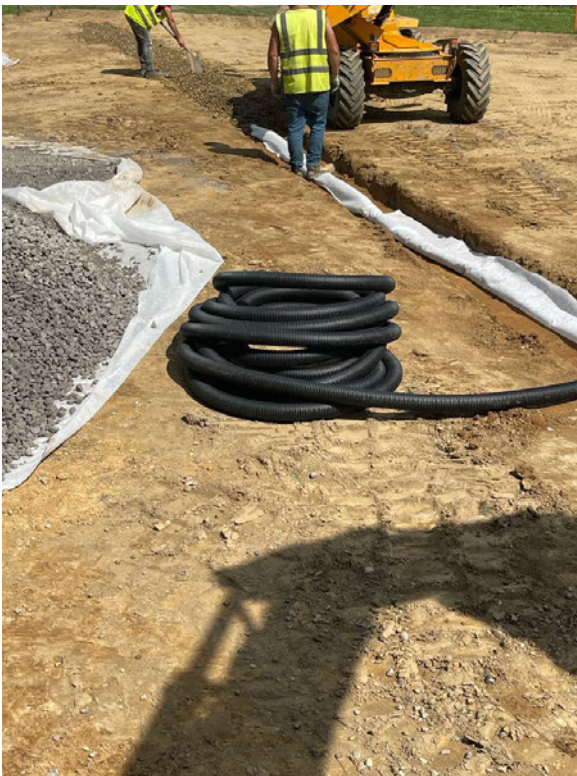


Plate 3. Pitch drainage and MOT Type 3 piled above geotextile at formation (MOT Type 3 not spread)



Plate 4. trench filled and geotextile at formation with MOT Type 3 being spread



Plate 5. Permeable basecourse to Blakedown specification



Plate 6. Shockpad installed and synthetic surface partially laid

6 PHOTOS OF FINISHED PITCH



Plates 7 & 8. Finished pitch

7 MAINTENANCE

We understand that Pre-handover inspections have been undertaken by Blakedown Sport & Play.

Sports Pitch:

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove litter and debris	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations
Occasional maintenance	Occasional sand re-dressing	As required and to manufacturers guidelines
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial Actions	Initial inspection	Monthly for three months after installation
Monitoring	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48 h after large storms in first six months
	Monitor inspection chambers	Annually

Management

It is understood that Bidborough Primary School will undertake the maintenance and management duties for the pitch. The management team must be aware that the sub-base below the surfacing layer is necessary requirement to manage the drainage of the pitch. They should inform any contractor working on any future repairs of the presence and requirement of the sub-base drainage system.

Bidborough Primary School should keep records of all inspections and maintenance.

8 CONCLUSION

The As-Built design materials and construction aligns with the approved design based on the photos and information received.

There is one departure from the approved design based on the evidence received. This is the omission of the overflow. The approved design showed the overflow with no point of discharge as desk based methods to find a drain or watercourse were exhausted. No drainage was found close to

the site to allow connection. To compensate, Blakedown Sport & Play have added three additional drainage laterals and trenches within the pitch sub-base.

Pitch maintenance should be in line with Section 7 of this report.

9 APPENDIX A:

As-Built Drainage Drawing

10 APPENDIX B:

Type 3 Material Supplied

Laboratory:
Unit 4
Rose Lane Industrial Estate
Lenham Heath
Kent ME17 2JN
01622 851176



TEST REPORT

Report No: **XTE 62527**
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TEST REPORT OF PARTICLE SIZE DISTRIBUTION & WATER CONTENT OF AGGREGATES

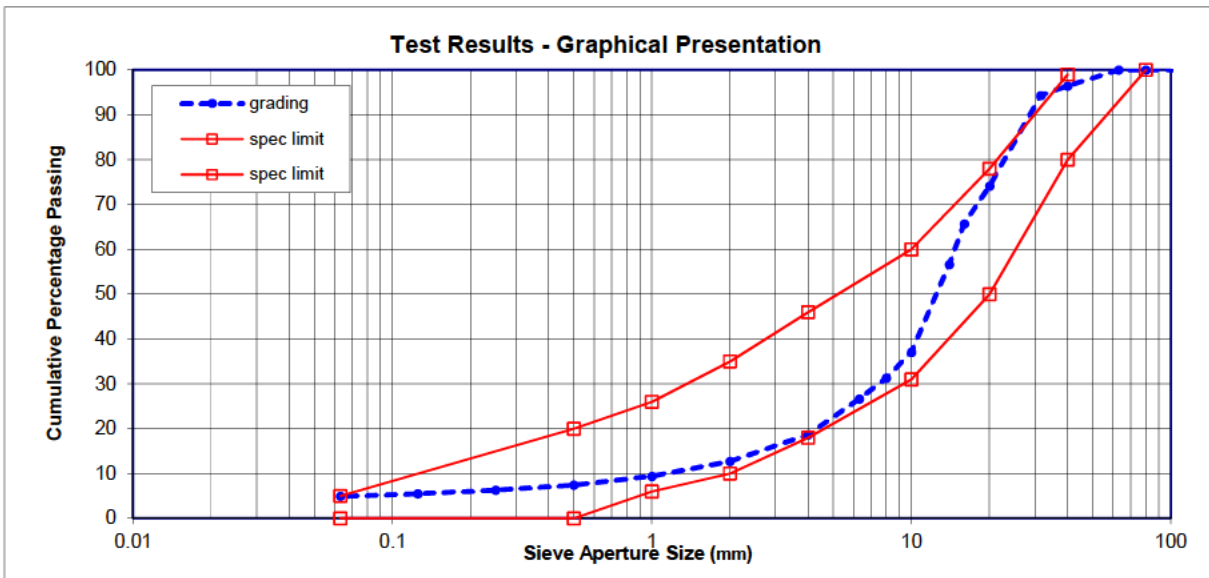
Method: Particle Size Distribution: BS EN 933-1:2012. (washing & sieving)
Method: Water Content: BS EN 1097-5:2008

XTRATEC SAMPLE REF | XTE 62527
CUSTOMER/SITE SAMPLE REF | Client 3

CLIENT | Stema Shipping (UK) Ltd
SITE | Northfleet
TYPE OF MATERIAL | Type 3
AGGREGATE TYPE | Granite
NOMINAL SIZE | N/A
SPECIFICATION | SHW Series 800 Table 8/7
SUPPLIER/SOURCE | Insitu
SAMPLING LOCATION | Type 3 Blend:
40% Type 1, 40% 20/32mm,
20% Track Ballast
SAMPLING METHOD | DIHM 2.1
SAMPLED BY | Xtratec
DATE SAMPLED | 18 May 2022
DATE RECEIVED | 18 May 2022
DATE TESTED | 19 May 2022

TEST RESULTS			
Sieve Size	Percent.	Specified Limits (%)	
		lower	upper
125	100		
80	100	100	
63	100		
40	96	80	99
31.5	94		
20	74	50	78
16	66		
14	57		
10	37	31	60
8	31		
6.3	27		
4	19	18	46
2	13	10	35
1	9	6	26
0.5	7	0	20
0.25	6		
0.125	6		
0.063	5	0	5

Water Content (%) | 1.1



REMARKS: A certificate of sampling is available

ISSUE TO: Stema Shipping (UK) Ltd
Crete Hall Road
Northfleet
DA11 9AA

DATE: 20 May 2022

AUTHORISED BY: A Schofield Quality Manager

The results reported represents only the material tested supplied to the laboratory or if the material has been sampled by Xtratec the quantity of the material represented by the sample. This report shall not be reproduced, except in full, without approval of the laboratory