

TECHNICAL REPORT

Assessment of the synthetic turf Rugby League field
installed at **Widnes Vikings RLFC**

Report Number **LSUK.12-0050**

Client
**Desso Sports Systems
Robert Ramlotstraat 89
B-9200 Dendermonde
Belgium**

Date **01/02/2012**



This report contains 12 pages in total

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Labosport Limited is registered in England Number: 5185905 at Unit 3 Heanor Gate Road Heanor Derbyshire England DE75 7RJ

SITE DETAIL AND TEST INFORMATION

Type of test	Initial	X	Retest	<input type="checkbox"/>
Category of pitch	Stadium	X	Community	<input type="checkbox"/>
Club (if applicable)	Widnes Vikings RLFC			
Pitch location	Stobart Stadium Halton Lowerhouse Lane Widnes Cheshire WA8 7DZ			
Site contact	Chris Patino			
Tel.	07771 730238			
Email	chris.patino@halton.gov.uk			
Synthetic turf surface name	Desso iDNA 60 / ET25			
Surface manufacturer	Desso Sports Systems			
Installation contractor	J Mallinson (Ormskirk) Ltd. Lathom Vale Business Park Vale Lane Lathom Ormskirk L40 6JH			
Date of pitch construction	January 2012			

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TEST LABORATORY

Test laboratory	Labosport Ltd
Laboratory address	Unit 3 Heanor Gate Road Heanor Derbyshire DE75 7RJ UK
Test laboratory project reference	LSUK.12-0050
Laboratory email address	info@labosport.co.uk

TEST CONDITIONS

Date of test	23/01/2012			
General surface condition (dry or wet)	Dry			
Surface temperature (°C)	Min.	11.2	Max.	15.7
Humidity (%RH)	Min.	49.8	Max.	70.5

CONCLUSIONS

Stadium category pitch			
Pitch passed	X	Pitch failed	O
Community category pitch			
Pitch passed	X	Pitch failed	O
Criteria that failed (if any)			
Signed by Laboratory Director		<i>A.L. Go</i>	
Signed by Test Engineer		<i>Z.W.</i>	
Date		31/01/2012	

SITE RESULTS

Property	Specified range		Test Position								Pass / fail
	Stadium category	Community category	1	2	3	4	5	6	A1	A2	
Head Injury Criterion (m)	≥ 1.3	≥ 1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	Pass
Shock Absorption (%)	50 - 65	50 - 70	60	60	59	62	63	62	61	63	Pass
Vertical Deformation (mm)	3.0 – 8.5	≤11.0	7.5	7.5	7.5	7.0	7.5	7.5			Pass
Energy Restitution (target range non-mandatory) (%)	20 - 40	20 - 50	37	37	38	36	37	37			Pass
Rotational Resistance – studded sole (Nm)	35 – 50	25 – 55	42	42	40	40	41	43			Pass
Rotational Resistance - dimpled rubber sole (Nm)	Not applicable	25 – 50	29	30	28	31	29	28			Pass
Property	Specified range		Test Position								Pass / fail
			1	2	3	4	5	6	A1	A2	
Ball Rebound (m)	0.70 – 1.10	0.60 – 1.10	0.75	0.75	0.74	0.78	0.74	0.72			Pass

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INFILL DEPTH (MM)

Position	Manufacturer's declaration		40mm			Permitted range				36-44mm								
	End zone	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m	End zone						
10m	36	36	38	38	37	39	39	37	41	38	39	40						
Variation	4	4	2	2	3	1	1	3	-1	2	1	0						
20m	36	37	38	36	40	41	37	38	40	37	40	40						
Variation	4	3	2	4	0	-1	3	2	0	3	0	0						
30m	36	36	37	39	37	38	36	39	36	37	39	37						
Variation	4	4	3	1	3	2	4	1	4	3	1	3						
40m	37	36	38	36	36	37	36	41	38	40	39	39						
Variation	3	4	2	4	4	3	4	-1	2	0	1	1						
50m	38	36	39	37	38	40	39	40	36	37	40	36						
Variation	2	4	1	3	2	0	1	0	4	3	0	4						
60m	36	37	36	40	39	38	37	39	37	37	40	39						
Variation	4	3	4	0	1	2	3	1	3	3	0	1						
68m	37	36	38	39	36	37	40	37	38	38	38	38						
Variation	3	4	2	1	4	3	0	3	2	2	2	2						
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">Field passes</td> <td style="width: 33%; text-align: center;">X</td> </tr> <tr> <td></td> <td style="text-align: center;">Field fails</td> <td></td> </tr> </table>														Field passes	X		Field fails	
	Field passes	X																
	Field fails																	

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FREE PILE (MM)

Position	Manufacturer's declaration			20mm			Permitted range			15-25mm				
	End zone	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m	End zone		
0m	24	24	22	22	23	21	21	23	19	22	21	20		
Variation	-4	-4	-2	-2	-3	-1	-1	-3	1	-2	-1	0		
10m	24	23	22	24	20	19	23	22	20	23	20	20		
Variation	-4	-3	-2	-4	0	1	-3	-2	0	-3	0	0		
20m	24	24	23	21	23	22	24	21	24	23	21	23		
Variation	-4	-4	-3	-1	-3	-2	-4	-1	-4	-3	-1	-3		
30m	23	24	22	24	24	23	24	19	22	20	21	21		
Variation	-3	-4	-2	-4	-4	-3	-4	1	-2	0	-1	-1		
40m	22	24	21	23	22	20	21	20	24	23	20	24		
Variation	-2	-4	-1	-3	-2	0	-1	0	-4	-3	0	-4		
50m	24	23	24	20	21	22	23	21	23	23	20	21		
Variation	-4	-3	-4	0	-1	-2	-3	-1	-3	-3	0	-1		
60m	23	24	22	21	24	23	20	23	22	22	22	22		
Variation	-3	-4	-2	-1	-4	-3	0	-3	-2	-2	-2	-2		
68m	23	24	22	21	24	23	20	23	22	22	22	22		
Variation	-3	-4	-2	-1	-4	-3	0	-3	-2	-2	-2	-2		
Field passes						X			Field fails					

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PRODUCT IDENTIFICATION

Component	Property	Site sample	Manufacturer's declaration	Variation	Tolerance	Pass / Fail
Artificial turf	Mass per unit area	3317	3285	1%	$\leq \pm 10\%$	Pass
	Tufts per unit area	9449	9629	2%	$\leq \pm 10\%$	Pass
	Tuft withdrawal	34	30	113%	$\geq 90\%$ of reference	Pass
	Pile length above backing	62	60	3%	$\leq \pm 5\%$	Pass
	Total Pile weight	1946	2040	5%	$\leq \pm 10\%$	Pass
	Dtex	15587	16000	3%	$\leq \pm 10\%$	Pass
	Yarn characterisation	PE	PE	Same polymer	Same polymer	Pass

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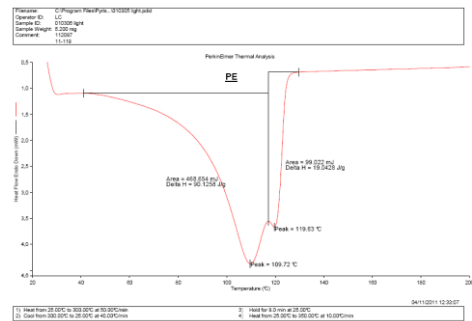
INFILL IDENTIFICATION

Component	Property	Site sample	Manufacturer's declaration	Variation	Tolerance	Pass / Fail
Performance infill	Particle size	0.5 - 2.0mm	0.5 - 2.0mm	0%	$\leq \pm 20\%$	Pass
	Particle shape	Irregular	Irregular	Similar shape	Similar shape	Pass
	Bulk density	0.46g/cm ³	0.45g/cm ³	2%	$\leq \pm 15\%$	Pass
Stabilising infill	Particle size	0.2 – 0.8mm	0.2 – 0.8mm	0%	$\leq \pm 20\%$	Pass
	Particle shape	80% round	80% round	Similar shape	Similar shape	Pass
	Bulk density	1.53g/cm	1.5g/cm ³	2%	$\leq \pm 15\%$	Pass

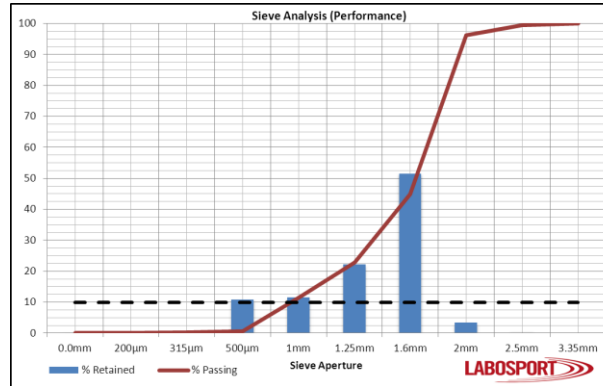
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Site sample identification

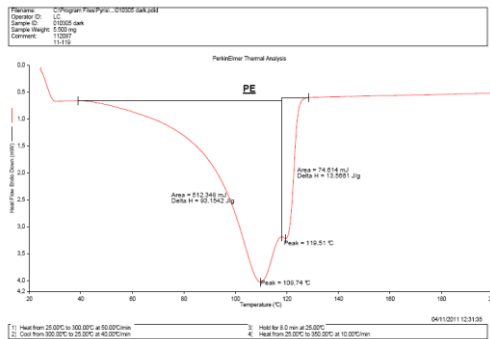
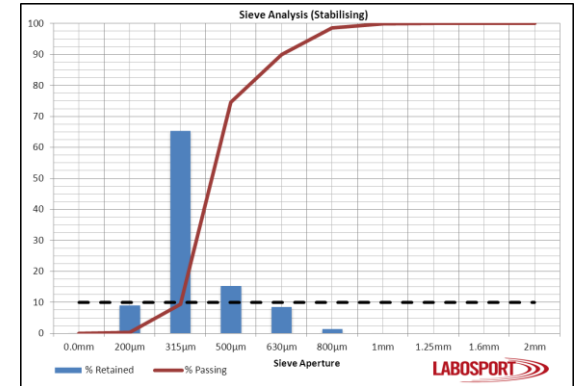
Pile yarn characterisation (DSC)



Performance infill particle grading and shape

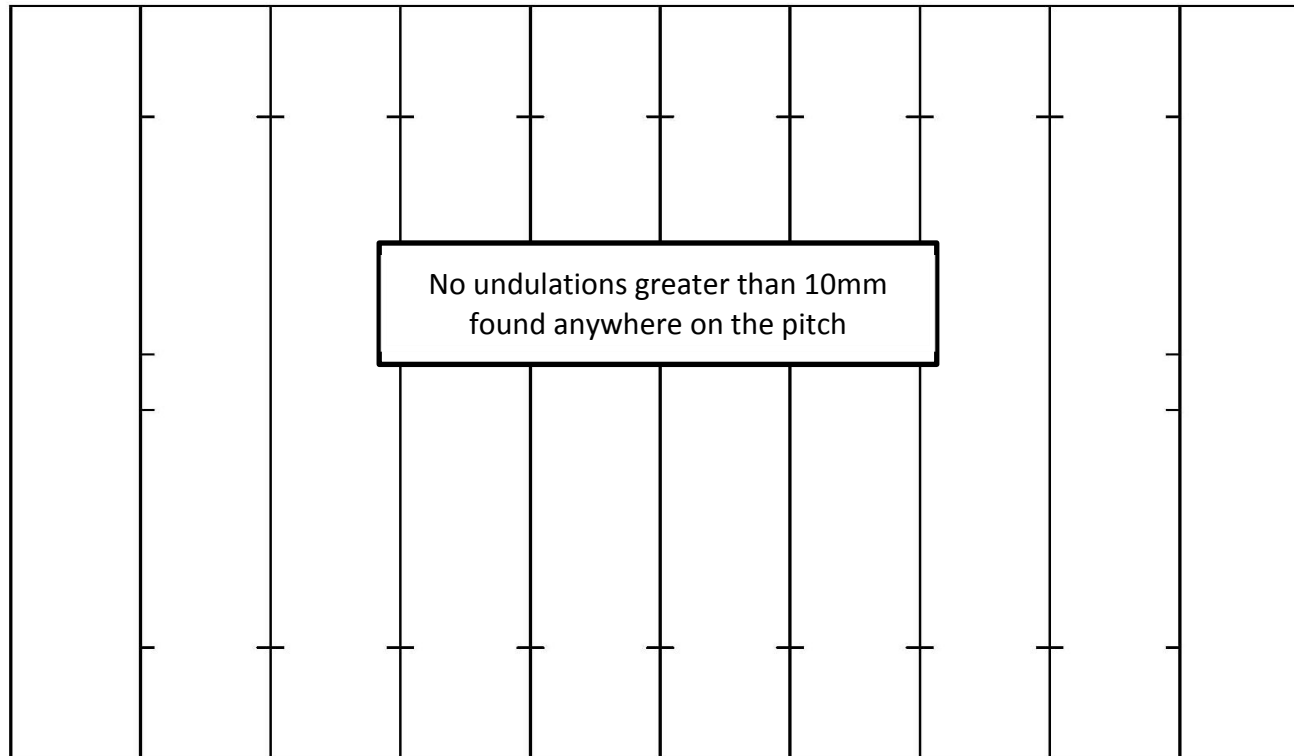


Stabilising infill particle grading and shape



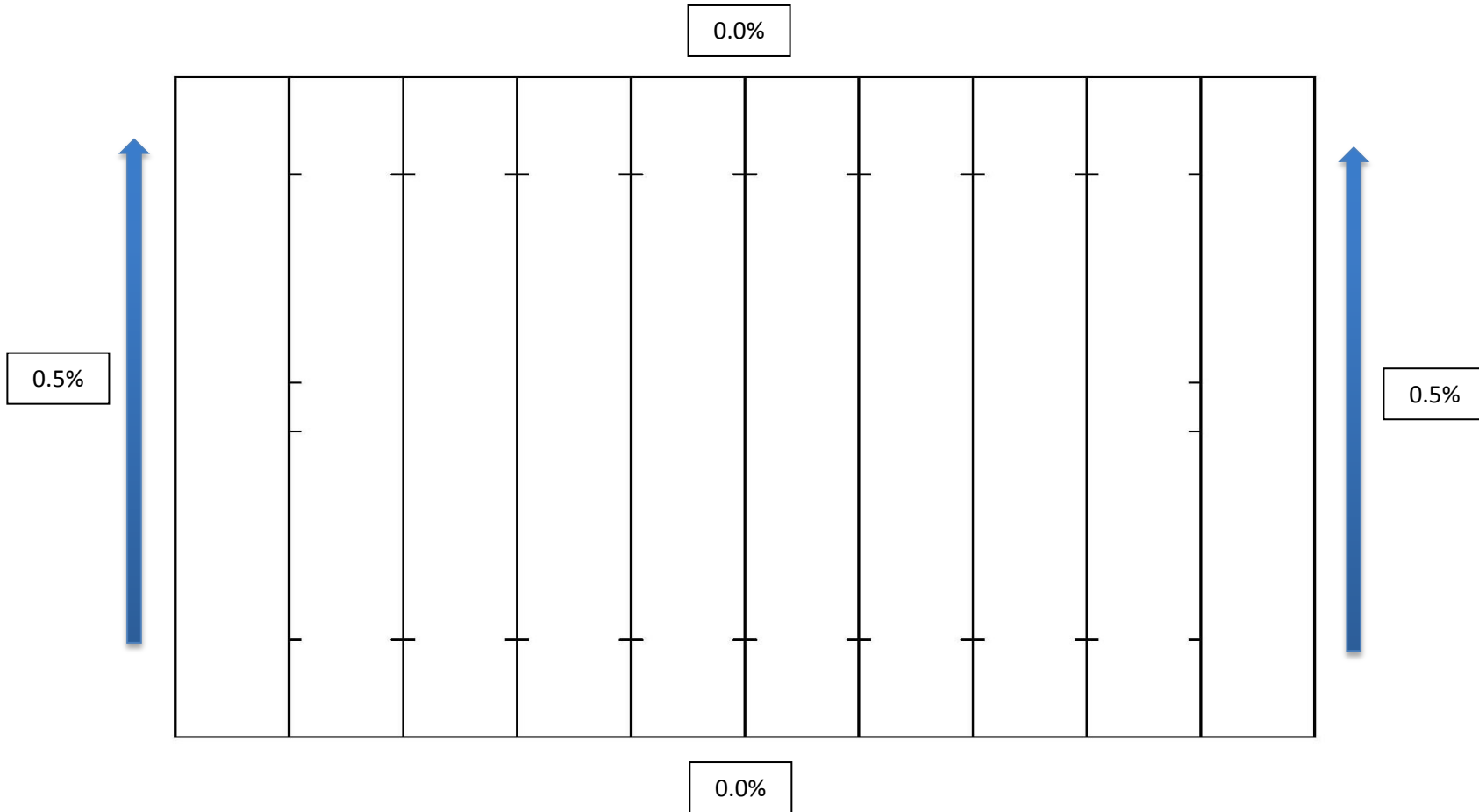
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PLAN SHOWING SURFACE UNDULATIONS EXCEEDING 10MM



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PLAN SHOWING PRINCIPLE GRADIENTS



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APPENDIX A - TEST POSITIONS

