

**LABORATORY REPORT:
EN 1177 (2008)**

**Assessment of Critical Fall Height on Murfitts Mulch
at a thickness of 100mm**

Report Number **LSUK.17-1019**

Client **Murfitts Industries**

Date(s) **19/10/2017**

This report contains 7 pages.

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SUMMARY

A sample of Murfitts Mulch at a thickness of 100mm has been tested in accordance with EN 1177:2008 "Impact Absorbing Playground Surfacing – Safety requirements and test methods". This report describes the sample tested, the method of the test employed and the results obtained are given.

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1. INTRODUCTION

A programme of testing has been carried out on a sample of Murfitts Mulch at a thickness of 100mm.

The product was tested to the method given in EN 1177:2008 "Impact Absorbing Playground Surfacing – Safety requirements and test methods". The method of test employed is described and the results obtained are given.

2. PRODUCT DETAILS & DESCRIPTION

- Murfitts Mulch loose laid at a thickness of 100mm.

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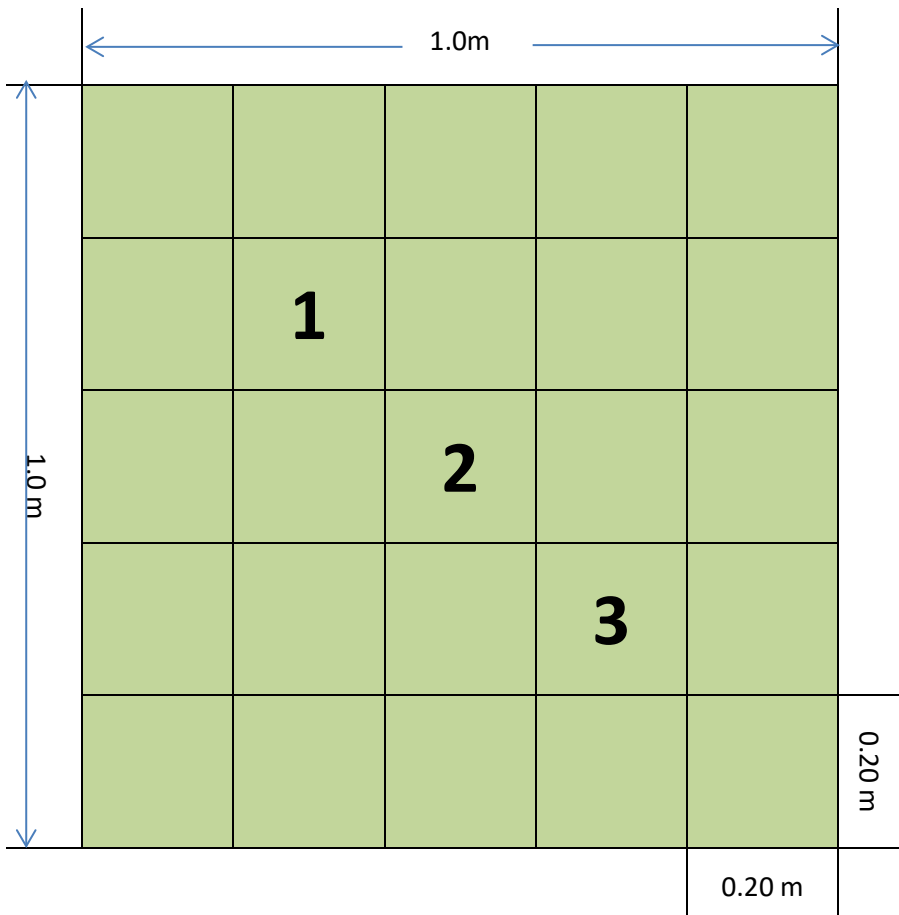
TEST PROCEDURE

The test procedure employed was that described in section 4 of EN 1177:2008 “Impact Absorbing Playground Surfacing – Safety requirements and test methods”. All samples were conditioned in a temperature controlled laboratory at 23 ± 2°C for 24 hours prior to testing and the air temperature maintained over the same range during testing. The samples were tested laid loose on the concrete laboratory floor.

Please note: testing on a rigid concrete substrate will provide a worst case scenario for HIC and hence the CFH values obtained in the laboratory will often be lower than one would expect or experienced in-situ when the systems are often placed on a macadam, unbound or naturally occurring base/formation.

Test floor	Concrete
Test location	Labosport laboratory
Method of attachment	Loose Laid
Surface condition	Dry
Surface temperature	22.5°C
Laboratory temperature	23.2°C

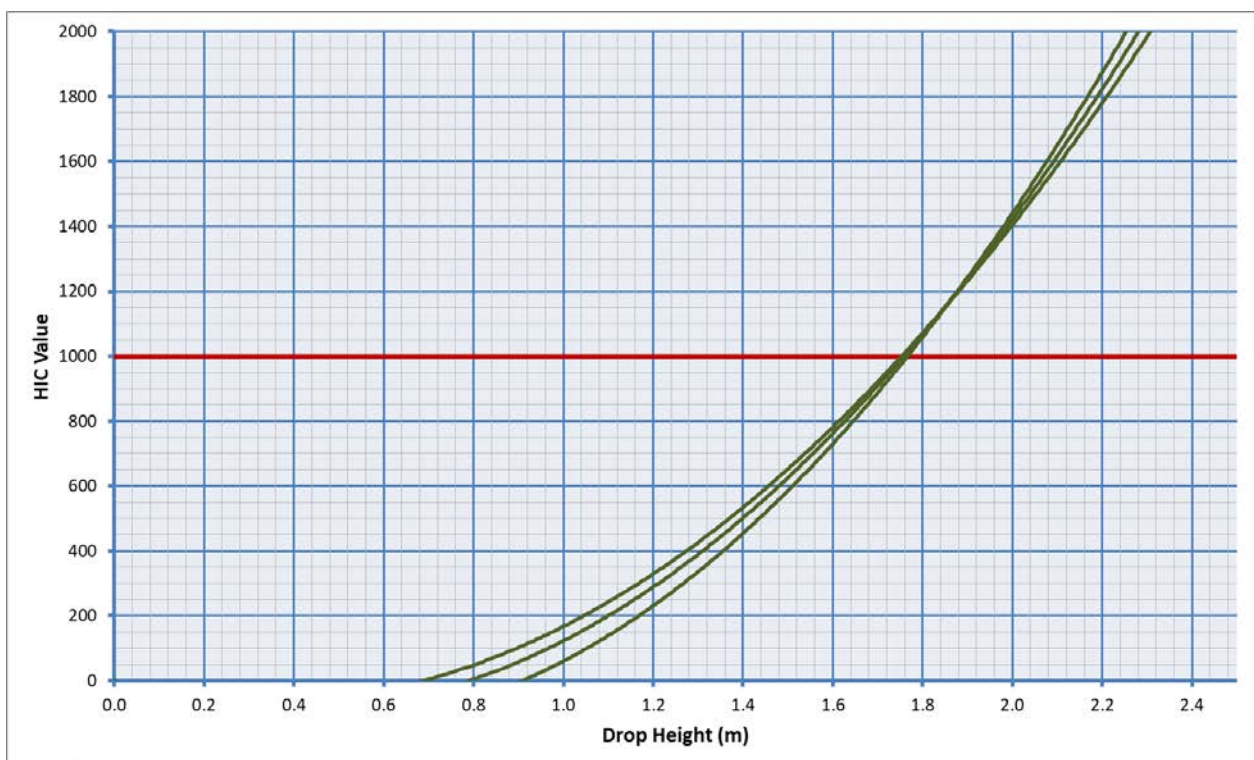
The sample was tested at the following locations (diagram not to scale):



3. TEST RESULTS

Murfitts Mulch at a thickness of 100mm

Drop Height (m)	Test Location									Average HIC (m)
	1			2			3			
	1	2	3	1	2	3	1	2	3	
0.00	0	0	0	0	0	0	0	0	0	1.7
1.70	597	764	951	614	784	962	582	784	931	
1.80	684	835	985	703	857	992	671	823	972	
1.90	869	883	1287	855	871	1275	883	897	1293	
2.00	1144	1283	1418	1125	1273	1402	1159	1298	1435	
Critical Fall Height (m)	1.9	1.8	1.7	1.9	1.8	1.7	1.9	1.8	1.7	



Murfitts Mulch at a thickness of 100mm
graph of HIC vs drop height

CONCLUSIONS

The sample of Murfitts Mulch at a thickness of 100mm was tested to the method given in EN 1177:2008 "Impact Absorbing Playground Surfacing – Safety Requirements and Test Methods.

The Murfitts Mulch at a thickness of 100mm was found to have a critical fall height value of:

Murfitts Mulch loose laid at a thickness of 100mm **1.7 m**

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Appendix A - Example of typical deceleration vs time curve

