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SLIP RESISTANCE ASSESSMENT AT CHISWICK PARK STATION.

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THE OPINIONS AND INTERPRETATIONS EXPRESSED HEREIN ARE OUTSIDE THE SCOPE OF THE UKAS ACCREDITATION

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FURTHER INFORMATION.

REQUESTS FOR ADDITIONAL INFORMATION ON THE SUBJECT OF THIS REPORT OR OTHER QUERIES SHOULD BE ADDRESSED TO THE AUTHOR.

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1. Introduction

4-RAIL Services Limited was requested by Mr. James Waller of AGS Limited to carry out a slip resistance assessment at Chiswick Park following the application of an anti-slip treatment.

2. Test Methods

Slip resistance was measured in accordance with 4-RAIL Services Limited Test Procedure 4R-M126 Issue 6, which is based on the guidelines recommended by the UK Slip Resistance Group in the booklet 'The Measurement of Floor Slip Resistance'.

Slip resistance was measured with a portable slip tester designed by the Transport Research Laboratory (TRL). Testing was carried out under both dry and wet conditions, using the standard Four S contact rubber as specified by the Rubber and Plastics Research Association.

Each test location was slip tested in three directions; along a defined principal axis and at 90° and 45° to the principal axis. Each individual test comprised testing of the flooring material eight times under both dry and wet conditions, with the first three readings being discarded and an average calculated from the last five.

3. Test Locations

One location was assessed within the ticket hall at Chiswick Park station. The location was tested as found, the client then applied an anti-slip treatment (*Traction Plus Pro*, supplied by AD Goddard) to the flooring and the slip resistance was then measured 30 minutes, 40 minutes and 1 hour after application.

See attached station plans for exact test location.

4. Results

Testing was carried out by Mr. M. Cimminiello in engineering hours on 26th/27th June 2007. Full results are given in Table 1 of this report.

5. Comments

LUL Engineering Standards state that flooring to public areas shall achieve a mean Slip Resistance Value of greater than 40 when tested under both wet and dry conditions.

Prior to treatment the flooring within the ticket hall achieved an average slip resistance value of 38 under dry conditions and 8 under wet conditions, therefore failing to meet the requirements normally employed by LUL.

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After the application of the anti-slip treatment the average slip resistance values achieved under dry conditions rose to 60 after 30 minutes, 64 after 40 minutes and 65 after 1 hour. The average slip resistance values achieved under wet conditions rose to 25 after 30 minutes, 40 after 40 minutes and 45 after 1 hour.

Therefore 40 minutes after the application of the anti-slip treatment, *Traction Plus Pro* the flooring area met the normal LUL requirements under both dry and wet test conditions.

Results are presented for final comments AGS Limited and Metronet Alliance Limited.

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Table 1: Results of Slip Test Measurements Performed at Chiswick Park Station, Circulation Area 1/001

Date Tested:	26 th /27 th June 2007
Air Temperature:	16.1 – 17.1°C
Floor Temperature:	14.0 – 15.1°C
Humidity:	60%RH
Flooring Description	Ceramic tiles. See Figure 1 for illustrative photograph

LOCATION OF TEST	TEST DIRECTION	TEST CONDITION	SLIP RESISTANCE VALUES	AVERAGE VALUE	OVERALL AVERAGE
As found	Principal Axis	Dry	35, 35, 35, 35, 35	35	Dry: 38 Wet: 8
		Wet	8, 8, 8, 8, 8	8	
	90° to Principal Axis	Dry	40, 40, 40, 40, 40	40	
		Wet	8, 8, 8, 8, 8	8	
30 minutes after anti-slip treatment	Principal Axis	Dry	60, 60, 60, 60, 60	60	Dry: 60 Wet: 25
		Wet	25, 25, 25, 25, 25	25	
40 minutes after anti-slip treatment	Principal Axis	Dry	64, 64, 64, 64, 64	64	Dry: 64 Wet: 40
		Wet	40, 40, 40, 40, 40	40	
1 hour after anti-slip treatment	Principal Axis	Dry	65, 65, 65, 65, 65	65	Dry: 65 Wet: 45
		Wet	45, 45, 45, 45, 45	45	

The anti-slip treatment applied was *Traction Plus Pro*, supplied by AD Goddard

* Testing was carried out along the Principal Axis only at the request of the client

See attached station plan for definition of principal axis (P.A)

Figure 1: *Illustrative Photograph of Ceramic Tiles in Ticket Hall 1/001*



