

Mr Wes Bugg
Surfacing Standards Ltd.
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Empingham House
Ayston Road
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LE15 9NY

Dear Wes,

Re: Jubilee Park, Liverpool – Infiltration Testing to Assist with Soakaway Design

Background

Erda Associates Ltd. were requested by Surfacing Standards Ltd. (hereafter referred to as the client) to undertake infiltration testing to assist with the design of soakaway drainage for a proposed artificial sports pitch at the site known as *Jubilee Park, Liverpool*. The site currently comprises an open public park.

Site location and boundary plans are included in **Appendix A**.

Site Works

Erda Associates Ltd. (Erda) were asked to attend the subject site on 9th November 2023 to undertake the necessary infiltration testing works for the subject site.

A soakaway test pit (SA01) was excavated in an area where a previous site investigation had identified a granular layer in which an incomplete infiltration test was undertaken. An exploratory hole location plan is enclosed in **Appendix A**.

Ground Conditions

The investigation has identified that the site is underlain by topsoil to approximately 0.3mbgl, beneath which a sandy slightly gravelly clay was recorded. From 0.7mbgl a reddish brown fine to medium sand was encountered.

Soakaway Testing

The results of the soakaway testing are summarised in table 1.1 below;

Table 1.1 Soakaway Test Results

Pit Reference	Infiltration Rate (m/s)		
	Test 1	Test 2	Test 3
SA01	6.48 x 10 ⁻⁶	N/A	N/A

There was insufficient time to complete a second or third test run.

Full soakaway calculations for table 1.1, above, are included in **Appendix B**.

Conclusion and Recommendations

A single full infiltration test run was completed at the above with a calculated infiltration rate of 6.48 x 10⁻⁶m/s.

Should you have any queries, or require any further information, please do not hesitate to contact us.

Yours Sincerely

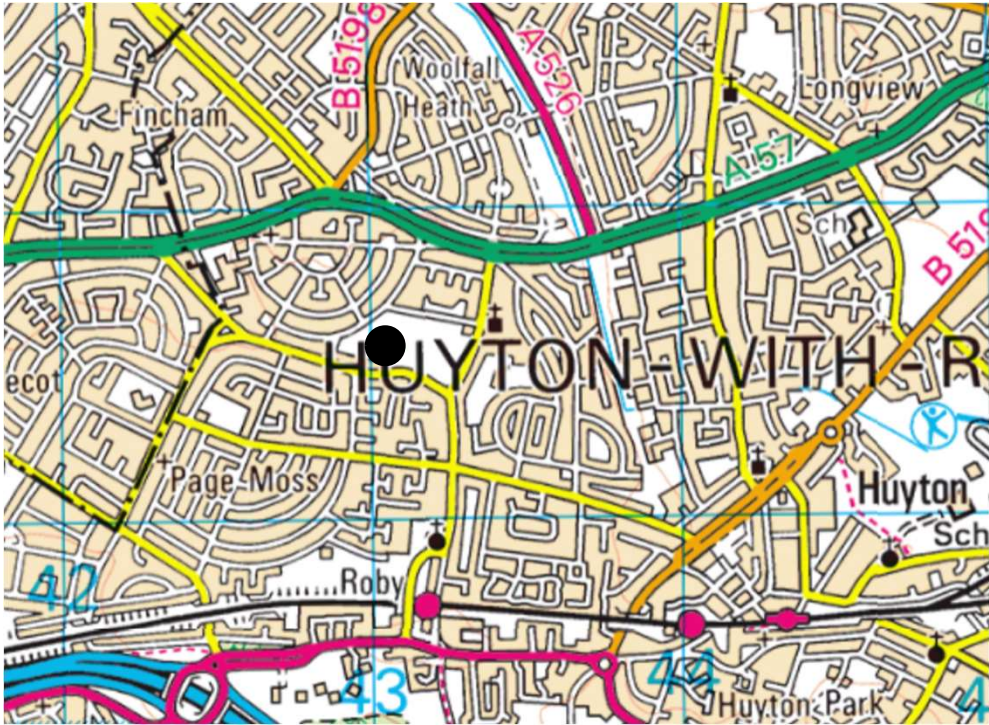
A handwritten signature in black ink, appearing to be 'D Wade'.

Daniel Wade
Senior Geo-environmental Engineer

Encl.
Appendix A – Site Plans
Appendix B – Soakaway Results

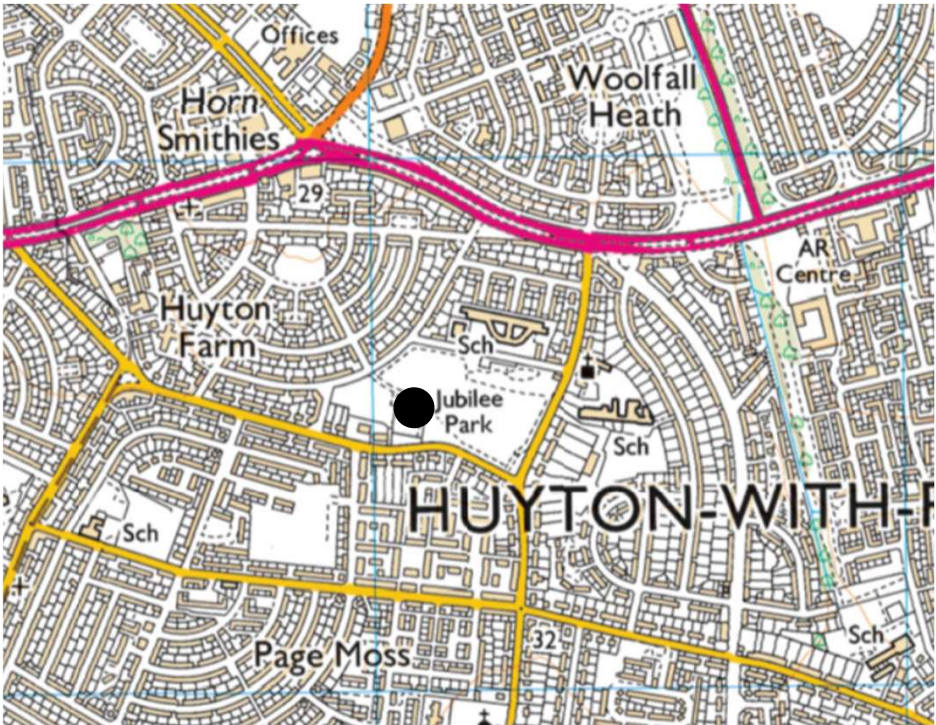
Appendix A





KEY:
 ● Approximate Site Location

DO NOT SCALE



TITLE:
 Site Location Plan

PROJECT:
 Jubilee Park, Liverpool

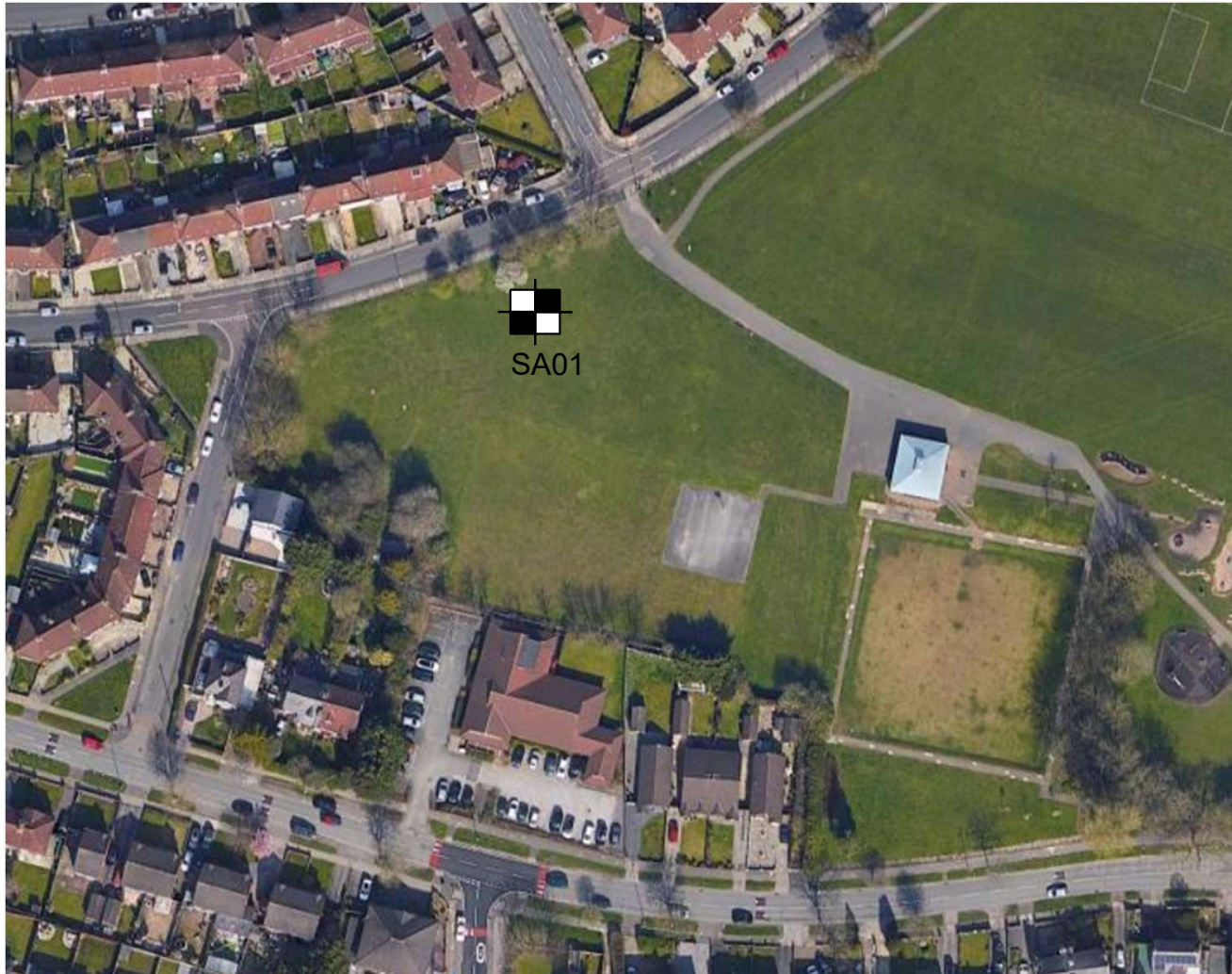
PROJECT No: EAL.208.23	DATE: 11/2023
SCALE : NTS	DRAWN : DW
DWG No: Figure 1	



KEY:



Soakaway Location



DO NOT SCALE



TITLE:

Site Layout & Exploratory Hole Location

PROJECT:

Jubilee Park, Liverpool

PROJECT No:

EAL.208.23

DATE:

11/2023

SCALE :

NTS

DRAWN :

DW

DWG No:

Figure 2

Appendix B



INSITU SOAKAWAY TEST RESULTS

Page 1 of 1

Trial pit No.: SA01

Soil Profile:

Depth (m)	Description
From: To:	
0.00 0.30	MADE GROUND: Topsoil
0.30 0.70	Reddish brown sandy slightly gravelly CLAY. Gravel is fine to coarse, rounded to subrounded mixed lithologies.
0.70 1.10	Reddish brown fine to medium SAND.

Sketch plan of test zone

Not to scale

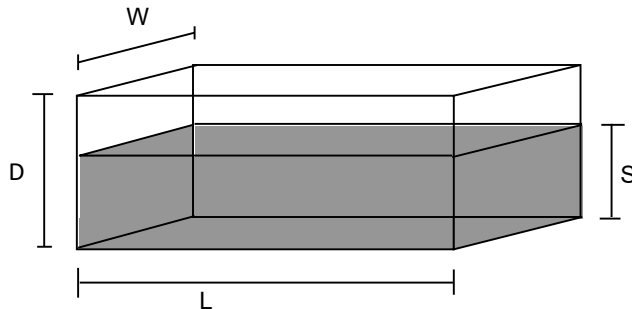
All dimensions in metres.

D = Depth of test pit = 1.05

W = Width of test pit = 0.40

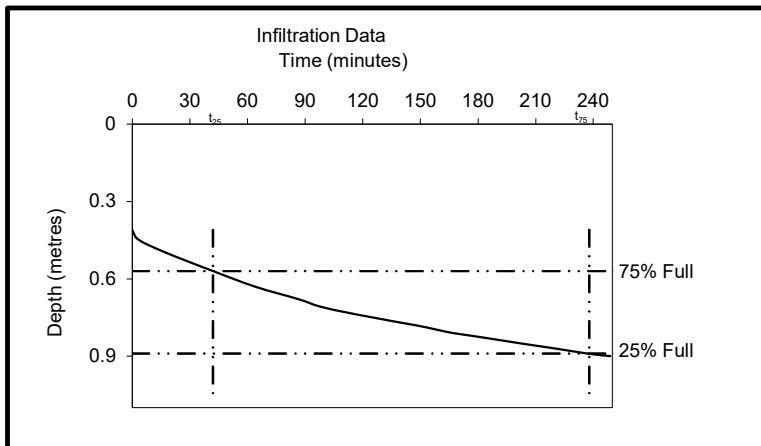
L = Length of test pit = 0.40

S = Storage depth = 0.64



Soakaway Test Run 1

Test Date: 09.11.2023



Time (minutes)	Depth (m)
0	0.41
2	0.44
6	0.46
18	0.50
42	0.57
64	0.63
87	0.68
99	0.71
125	0.75
148	0.78
167	0.81
185	0.83
202	0.85
220	0.87
237	0.89
249	0.90

Notes:

Therefore:

$$S = 0.64 \quad n \quad a_{p50} = 0.67 \quad m^c \quad V_{p75-25} = 0.0512 \quad m^c$$

From the above graph,

$$t_{p25} = 42 \quad (\text{min}) \quad t_{p75} = 238 \quad (\text{min})$$

$$\text{Soil Infiltration Rate, } i = \frac{V_{p75-25} \times N}{a_{p50} \times t_{p75-25}} = 6.48E-06 \quad T_{run1} = 6.48 \times 10^{-6} \quad m/s$$
$$\text{or } = 2.33E-02 \quad \text{or } 2.33 \times 10^{-2} \quad m/hr$$

Test and analysis carried out in general accordance with BRE Digest 365 : 2007

Job No.: EAL.208.23

Site: Jubilee Park, Liverpool

Client: Surfacing Standards

