

Weathered chalk was encountered directly beneath the natural superficial deposits in all boreholes. These deposits were recorded to comprise soft to stiff white sandy gravelly clay and they were noted to be variable in consistency. The base of the weathered chalk was not encountered. However, these deposits were noted to extend to a minimum depth of 5.00mbgl.

Significant groundwater was not encountered in any of the exploratory holes during the investigation. However, the techniques used were rapid and may have masked small seepages.

Soakaway Drainage

Indicative soakaway testing targeted within the weathered chalk was undertaken in WS01. In summary, the testing has returned a tentative drainage value of **6.67x10**-6 within the weathered chalk. Therefore, soakaway drainage may be viable for the site. However, it is recommended that this initial value is confirmed by undertaking further testing in accordance with BRE 365.

Soakaway drainage is not considered to be viable in the superficial cohesive deposits overlying the chalk.

Contamination Assessment

Tier 1 Assessment Criteria for human health with regard to contamination within soils have been produced with reference to values published in LQM/CIEH S4UL and DEFRAS C4SLs. The Tier 1 Assessment Criteria are contained in **Appendix D**. The laboratory analysis results were reviewed against the assessment criteria for a residential with produce end use (considered to be the most stringent scenario). A SOM of 1% has been adopted for the PAH analysis.

An assessment of the analysis results for metals and inorganics contained in **Appendix C**, revealed that the majority of samples do not exceed the respective GAC for a residential with produce end use. However, a marginally elevated concentration of Nickel (198mg/kg) was encountered in the deeper natural soils WS04. However, it is noted that elevated Nickel was not recorded in the shallower sample of topsoil in WS04. Therefore, it is considered that the elevated concentration is encapsulated beneath cleaner material. The risk to end users of the site from this marginally elevated concentration is considered to be negligible. Therefore, further remediation with regard to contaminated soils will not be required.

It is understood that the pitch will be outdoors, and no buildings associated with the pitch development are proposed. Therefore, the risk of ground gas is considered to be negligible. However, should any enclosed buildings be proposed in future, the potential risk of ground gas may need to be assessed.

Waste Acceptance Criteria (WAC) Testing

Two selected samples of the shallow soils were sent for WAC analysis at a UKAS/MCERTS accredited laboratory. Copies of the WAC test results are included in **Appendix C**, for reference.

In summary, the WAC analysis has revealed that the shallow soils should be classified as non-hazardous for disposal. It is recommended that this assessment is confirmed with the chosen waste handler/operator should off-site disposal of waste soils be required.

Geotechnical Testing

Geotechnical testing of the shallow soils has illustrated PI values of between 11% to 53% and moisture contents of between 21% to 32%, indicating the underlying deposits to be of a low to high volume change potential. It is recommended that a high-volume change potential is assumed for the shallow soils across the site as a maximum (worst case) classification.

Water Soluble Sulphate and pH analysis revealed results of 13-52mg/ISO4 and 7.8-8.5, respectively.

Geotechnical test results detailing all of the above are contained in Appendix C, for reference.

Furthermore, in situ Standard Penetration Testing (SPTs) within the natural strata returned N-values of between 2 to 17 indicating a soft to stiff consistency. SPT results are included on the exploratory hole logs contained in **Appendix B**.

Foundation Design

It is not considered that significant foundations will be required for the proposed artificial sports pitch. It is also understood that no buildings are proposed for the redevelopment of the site. However, associated structures such as floodlight columns etc., will likely be constructed. Due to the basic construction and anticipated light loadings, it is considered that a reinforced concrete raft will be sufficient for these structures.

A presumed bearing capacity of $20kN/m^2$ is anticipated in the shallow natural deposits. Foundations should be deepened through any soft spots if they are encountered. A minimum foundation depth of 1.00mbgl shall apply for the site. It is possible that foundations terminating within the made ground may also be suitable for the proposed

erda Wet	l: <u>p.devi</u>	ww.erda-ltd.co.uk tt@erda-ltd.co.uk 07531 051197	Date: Ground Le	evel:	191	:h Janua	ry 20)22						BOREHOLE NO.
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Surfacing Standards Ltd.			Orientation	n:										Sheet No. I of I
SITE LOCATION			Coordinate	es:										Job No.
Lord Wandsworth College			Plant:		Wi	indow S	ampl	e Ri	g					EAL.178.21
Lord Walliamorul College	Reduced		Dimension Depth	SAMPL	ES/1	rests		S	PT I	Result	is		-	EAC:170:21
Description of Strata	level (m)	Legend	(Thickness)	Depth	No	Туре		ating 22	75mm	Test D	Prive	N' Value	Installation	Test Sample Details
MADE GROUND comprising dark brown slightly clayey slightly gravelly sand. Gravel is rounded to angular flint. Rare brick fragments.	0.10													
	0.20		0.30 (0.30)	0.20	1	ES								
MADE GROUND comprising light brown slightly gravelly clayey sand. Gravel is rounded to	0.40			-										
angualr flint. Rare brick fragments.	0.50													
	0.60													
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	0.80													
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	1.10						1		_		_	Ĭ.		
Stiff orangish brown silty sandy CLAY. Rare rounded to angular chalk and flint.	1.20			1.20	2	D								
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becoming firm from 4.00mbgl.	4.00		5.00 (2.10)				2	2	2	2	2	3 9		
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Remarks:			_						Logged By:	Checked By:	Date	Scale
I. Bo	rehole reinstated w	vith arisings upon co	ompletion.									
2. No	groundwater enco	ountered.							PD	PD	19.01.22	NTS
3. Bo	rehole remained st	able throughout dri	illing.						10	10	19.01.22	1413

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		Reduced		Dimensions Depth	SAMPL	ES/T	ESTS		SI	PT R	esult	s	0	5	
Description of Strata		level (m)	Legend	(Thickness)	Depth	No	Туре	Seat		E	Test D		N' Value	Installation	Test Sample Details
MADE GROUND comprising dark brown slightly clayey slightly gravelly sand. Gravel is r	ounded		***					75m	75mm	75m	75m	75	EC/		
to angular flint. Rare brick fragments.		0.10		0.40 (0.40)											
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MADE GROUND comprising white sandy gravelly clay. Gravel is fine to coarse sub-angu angular chalk.	ılar to	0.50													
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MADE GROUND comprising brown slightly sandy gravelly clay. Gravel is fine to coarse is angular quartzite and flint.	rounded	1.90													
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Stiff orangish brown silty sandy CLAY. Rare rounded to angular chalk and flint.		3.10													
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Stiff white sandy gravelly CLAY. Gravel is fine to coarse sub-angular to angular chalk lithe	orelicts.	3.40 3.50													
Completely weathered chalk.		3.60													
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Remarks:			_						Logged By:	Checked By:	Date	Scale
I. Bo	rehole reinstated w	vith arisings upon co	ompletion.									
2. No	groundwater enco	ountered.							PD	PD	19.01.22	NTS
3. Bo	rehole remained st	able throughout dri	illing.						10	10	19.01.22	1413

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Description of Strata		level (m)	Legend	(Thickness) m	Depth	No	Туре	Sea	ting	mm	Test I	Drive wws/	N' Value	Installation	Test Sample Details
MADE GROUND comprising dark brown slightly clayey slightly gravelly sand. Gravel is rou	unded	0.10			0.10		ES	75	75	7.5	7.5	27.	2		
to angular flint.		0.20		0.30 (0.30)											
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MADE GROUND comprising white sandy gravelly clay. Gravel is fine to coarse sub-angula angular chalk.	r to	0.40													
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MADE GROUND comprising brown slightly sandy gravelly clay. Gravel is fine to coarse ro	unded	2.00							1	2	2	2	3 9	,	
to angular quartzite and flint.		2.10													
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Firm orangish brown silty sandy CLAY. Rare rounded to angular chalk and flint.		2.50			2.50	2	D								
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becoming firm from 4.00mbgl.		4.00		5.00 (2.00)				1	0	1	3	2	1 7	'	
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	Casing reco	rd		Chiselling records								
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Remarks:									Logged By:	Checked By:	Date	Scale
I. Bor	ehole reinstated v	vith arisings upon co	ompletion.						3	,		
2. No	groundwater enc	ountered.							PD	PD	19.01.22	NTS
3. Bor	ehole remained st	able throughout dri	lling.						10	10	19.01.22	1413

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Dark brown slightly gravelly sandy clayey TOPSOIL. Gravel is fine to coarse rounded to angular flint.	0.10													
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Firm to stiff orangish brown silty sandy CLAY. Rare rounded to angular chalk and flint.	0.40													
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Soft white sandy gravelly CLAY. Gravel is fine to coarse sub-angular to angular chalk lithorelicts.	1.80	-,												
Completely weathered chalk.	1.90													
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becoming firm from 3.00mbgl.	3.00						1	3	2	2	2	3 9		
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Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level	(after 20mins)	Flow	Standing level	Remarks
Remarks:									Logged By:	Checked By:	Date	Scale
I. Bore	ehole reinstated v	vith arisings upon co	ompletion.									
2. No g	groundwater ence	ountered.							PD	PD	19.01.22	NTS
3. Bore	ehole remained st	able throughout dri	lling.						.0		17.01.22	1413

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	ob:	07531 051197	Ground Lev	vol:										WS05
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Description of Strata	level	Legend	(Thickness)	Depth	No	Туре	Seat	ing		Test D	rive	N' Value	Installation	Test Sample Details
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Dark brown slightly gravelly sandy clayey TOPSOIL. Gravel is fine to coarse rounded to angula lint.	0.10													
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Stiff orangish brown silty sandy CLAY. Rare rounded to angular chalk and flint.	0.40													
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Date	Diameter (mm)	Depth (m)	Time	From (m)	To (m)	Date	Water strike	Water level	(after 20mins)	Flow	Standing level	Remarks
Remarks:			-			-			Logged By:	Checked By:	Date	Scale
I. Bor	ehole reinstated w	rith arisings upon co	ompletion.							Circulation by:	Julio	Gearc
2. No	groundwater enco	ountered.							PD	PD	19.01.22	NTS
3. Bor	ehole remained st	able throughout dri	illing.						10	"	19.01.22	1413