

APPENDIX E

Quarried Aggregate Provenance Information

AGGREGATE PROPERTIES REPORT



Unit :-	Tunstead
Rock Type	Carboniferous Limestone
Aggregate Colour :-	

TARMAC A CRH COMPANY (Central)
The Hub, Loughborough Rd, Mountsorrel,
Leicestershire
LE12 7GZ
Tel: +44 (0)116 2465000
Fax: +44 (0)

	Test Standard	Test Result	Aggregate Size	Date
Aggregate Abrasion Value	EN 1097-8	5.7	6/14mm	Jan 2023
Los Angeles Coefficient	EN 1097-2	24	6/14mm	Jan 2023
Magnesium Sulfate Value	EN 1367-2	1	6/14mm	Jan 2023
Micro-Deval Coefficient	EN 1097-1	14	6/14mm	Jan 2023
PSV	EN 1097-8	41	4/10mm	Jan 2023

Acid Soluble Sulfate Content	EN 1744-1 cl12	<0.1 (SO3/SO4)	0/2mm / 0-4mm Washed	Jan 2023
Acid Soluble Sulfate Content	EN 1744-1 cl12	<0.1(SO3/SO4)	0/4mm	Jan 2023
Acid Soluble Sulfate Content	EN 1744-1 cl13	0.04 / 0.53 (SO4)	0/2mm / 0-4mm Washed	Jan 2023
Acid Soluble Sulfate Content	EN 1744-1 cl13	0.13	0/4mm	Jan 2023
Water Soluble Sulfate	EN 1744-1 cl10	<0.01(SO3/SO4)	0/2mm / 0-4mm Washed	Jan 2023
Water Soluble Sulfate	EN 1744-1 cl10	<0.01(SO3/SO4)	0/4mm	Jan 2023
Water Soluble Chloride	EN 1744-1 cl7	<0.001	0/2mm / 0-4mm Washed	Jan 2023
Water Soluble Chloride	EN 1744-1 cl7	0.007	0/4mm	Jan 2023
Total Sulfur	EN 1744-1 cl11	<0.1 / <0.1	0/2mm / 0-4mm Washed	Jan 2023
Total Sulfur	EN 1744-1 cl11	<0.1	0/4mm	Jan 2023
Carbon Dioxide	EN 196	38.68% / 37.8%	0/2mm / 0-4mm Washed	Jan 2023
Carbon Dioxide	EN 196	40.73%	0/4mm	Jan 2023
Calcium Carbonate Equivalent	EN 196	87.91% / 85.91%	0/2mm / 0-4mm Washed	Jan 2023
Calcium Carbonate Equivalent	EN 196	92.57%	0/4mm	Jan 2023
pH Value	BS 1377-3	8.3 / 8.4	0/2mm / 0-4mm Washed	Jan 2023
pH Value	BS 1377-3	8.5	0/4mm	Jan 2023

		0/2mm	0/4mm	0/4mm Washed	10-63 Feb22	20/32mm	Date
Loose Bulk Density	EN 1097-3	1.55	1.62	1.44	1.34	1.35	Jan-23
Compacted Bulk Density	EN 1097-3	1.8	1.82	1.81	1.49	1.52	Jan-23
Apparent Particle Density	EN 1097-6	2.69	2.71	2.68	2.7		Jan-23
S.S.D. Density	EN 1097-6	2.67	2.7	2.67	2.68		Jan-23
Oven Dry Density	EN 1097-6	2.67	2.69	2.67	2.67		Jan-23
Water Absorption	EN 1097-6	0.3	0.3	0.1	0.4		Jan-23
Void Content%	EN 1097-3				50		
Void Content Compacted%	EN 1097-3				44		

Chemical Analysis - XRF %				
0/2mm / 0/4mm / 0/4mm Washed	Al2O3	0.16 / 0.54 / 0.31	CaO	54.65 / 54.44 / 54.03
0/2mm Jan 2023	Fe2O3	0.24 / 0.14 / 0.55	K2O	<0.01 / 0.04 / 0.05
0/4mm 2023 & 0-4mm Wsh 2023	TiO2	<0.01 / <0.01 / 0.02	P2O5	0.03 / 0.03 / 0.03
0/4mm Loss on Ignition 43.1%	MgO	0.53 / 0.35 / 0.49	Mn2O3	0.02 / 0.01 / 0.03
0/4 Wsh Loss on Ignition 42.7%	SiO2	1.09 / 1.37 / 1.62	BaO	<0.01 / <0.01 / 0.03
0/2mm Loss on Ignition 43.2%	So3	0.15 / 0.06 / 0.23	Na2O	<0.02 / <0.02 / 0.02

Additional Tests	Test Standard	Test Result	Aggregate Size	Date
Methylene Blue Value	BS:933-9	0.5 / 0.5	0/2mm / 0/4mm Washed	Jan 2023
Methylene Blue Value	BS:933-9	1.3	0/4mm	Jan 2023
Bond Work Index	EPRI	9.6kWhr/t	14mm-dust FGD	Feb 2023
Mass of lightweight particles	BS:1744-1	<0.1	0/2mm / 0/4mm Washed	Jan 2023
Mass of lightweight particles	BS:1744-1	<0.1	0/4mm	Jan 2023
Organic Content	BS:1377-3	0.2 / 0.3 / 0.2	0/2mm / 0/4mm / 0/4mm Washed	Feb 2019
Organic Contaminators (Mortar)	BS:1744-1 CL15.3	on request	0/2mm / 0/4mm / 0/4mm Washed	Jan 2023

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 LE12 7GZ
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	Test Standard	Test Result	Aggregate Size	Date
Acid Soluble Sulfate Content	EN 1744-1 cl12	<0.1	4/20mm	Jan 2023
Acid Soluble Sulfate Content	EN 1744-1 cl13	<0.03 (SO ₄)	4/20mm	Jan 2023
Water Soluble Sulfate	EN 1744-1 cl10	<0.01(SO ₃ /SO ₄)	4/20mm	Jan 2023
Water Soluble Sulphate	BS 1377(TRL 447)	62mg/L (SO ₄)	4/20mm	Mar 2020
Water Soluble Chloride	EN 1744-1 cl7	<0.001	4/20mm	Jan 2023
Total Potential Sulphate	BS 1377(TRL 447)	0.06	4/20mm	Mar 2020
Total Sulphur	BS 1377(TRL 447)	0.02	4/20mm	Mar 2020
Total Sulfur	EN 1744-1 cl11	<0.1	4/20mm	Jan 2023
Oxidisable Sulphides	BS 1377(TRL 447)	0.02	4/20mm	Mar 2020
Carbon Dioxide	EN 196	41.32%	4/20mm	Jan 2023
Calcium Carbonate Equivalent	EN 196	93.91%	4/20mm	Jan 2023
pH Value	BS 1377-3	8.5	4/20mm	Jan 2023

	Test Standard	4/20mm	2/6mm	4/10mm	6/14mm	10/20mm	Date
Loose Bulk Density	EN 1097-3	1.42	1.36	1.33	1.36	1.36	Jan-23
Compacted Bulk Density	EN 1097-3	1.6	1.53	1.50	1.53	1.5	Jan-23
Apparent Particle Density	EN 1097-6	2.69	2.7	2.67	2.7	2.69	Jan-23
S.S.D. Density	EN 1097-6	2.67	2.61	2.64	2.68	2.67	Jan-23
Oven Dry Density	EN 1097-6	2.66	2.55	2.63	2.67	2.65	Jan-23
Water Absorption	EN 1097-6	0.4	2.2	0.6	0.5	0.5	Jan-23
Flakiness Index	EN 933-3						
Shape	EN 933-4						
Void Content %	EN 1097-3						
Void Content Compacted %	EN 1097-3						

Additional Tests	Test Standard	Test Result	Aggregate Size	Date
Mass of lightweight particles	BS:1744-1	<0.1	4/20mm	Jan 2023
MSV	DWFS	12	0/4mm	March 2019
MSV	DWFS	3	2/6mm	March 2019
MSV	DWFS	2	4/10mm	July 2021
MSV	DWFS	2	6/14mm	March 2019
MSV	DWFS	1	10/20mm	July 2021
Petrographic Report	EN 932-3	Limestone	6/14mm	June 2022
Major>10%		LOW ASR		
Dry Shrinkage	EN 1367-4	0.026%	0/2mm	Jan 2023
Dry Shrinkage	EN 1367-4	0.016%	0/4mm washed	Jan 2023
Dry Shrinkage	EN 1367-4	0.007%	Tunstead Coarse/Washed Fines	Aug 2020
Dry Shrinkage	EN 1367-4	0.023%	0/4mm	Jan 2022

Issued By :

Date of Issue : 28 February 2023

David St Dennis

Technical Systems Manager

Notes

1. The above data is provided in good faith as a guide to typical values and does not constitute a specification
2. The company reserves the right to revise the data at any time
3. Individual Certification available on request

APPENDIX F

Site Visit Records and Photographs

SITE VISIT RECORD

Site Name: Star Academy, Radcliffe
(Temps)

Job No: C5394

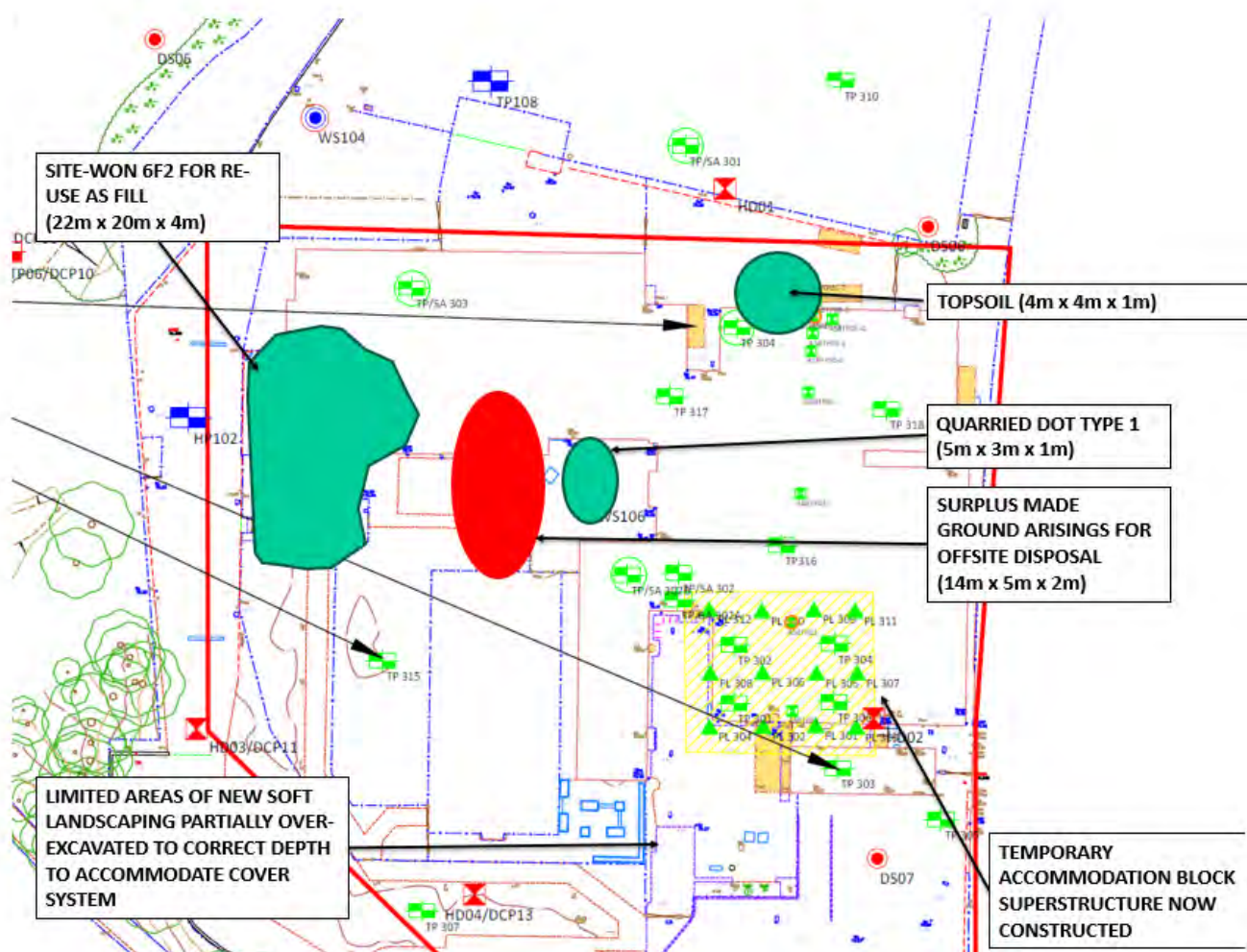
Engineer(s): Tim Mayall

Date of Visit: 30/07/2024

Visit Purpose: Inspect Topsoil and Quarried MOT Type 1 post-import to inform interim validation report for temporary accommodation.

Secondary visit purpose was a general site progress visit / MMP verification visit to view engineered fill in situ and review stockpile volumes.

Drawing detailing current stockpile locations and other observations made during the site visit:



Stockpiles inspected:

1. Imported topsoil – approximately 16m³ (1 load delivered on 29/07/24). From discussions with Chartrange a further 2 loads are due to be delivered for all soft landscaping – no subsoil being used within the temporary accommodation.
Topsoil described as a dark brown fine to coarse sand topsoil with fine rootlets with no evidence of contamination, no anthropogenic constituents.
TM satisfied that topsoil matches description within the laboratory testing report and associated

Form No	Revision	Date
CMR 04	0.1	Nov 18

certification provided by Tim O'Hare Associates.

2. Imported DOT Type 1 – approximately 15m³, confirmed clean, quarried limestone by visual inspection. No anthropogenic constituents. Being used as sub-base for footpaths and proposed hard standing.
3. Site won 6F2 – dimensions equate to 1760m³ (likely significant overestimate, more realistic estimate is circa 800-1000m³ due to irregular shape and spalling of sides). For re-use as general fill across external areas, works ongoing.
4. Surplus made ground, for offsite disposal.

Other elements inspected include proposed new planting areas which have been dug down by at least 450mm to accommodate new planters. There is a further area of new soft landscaping which will comprise new hedge planting along the south-western boundary – this area has been significantly overdug to circa 600-800mm below ground level.

Contractor Chartrange is aware of the cover system requirements – 450mm underlain by barrier membrane.

Photographs:

Form No	Revision	Date
CMR 04	0.1	Nov 18

Time of Visit From: 11:25 To: 13:30

Photos Taken: N

Form No	Revision	Date
CMR 04	0.1	Nov 18



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

Photo Descriptions

PHOTO NO.	DETAILS
1	Overview of 3 No. Stockpiles. Left to right / front to back: Imported Quarried Limestone (MOT Type 1), Surplus Made Ground for disposal off-site, Site won crushed material for re-use as general fill.
2	Site won crushed material for re-use as general fill
3	
4	Imported Quarried Limestone MOT Type 1

REV	DATE	DESCRIPTION	BY	CKD



CLIENT	MORGAN SINDALL
PROJECT TITLE	STAR ACADEMY, RADCLIFFE
TITLE	TEMPS VALIDATION VISIT 30/07/24
Associated Document Ref No.	PAGE
TM/C5394/13333	1 of 2
COMPLIED BY	CHECKED BY
TM	DRAFT



PHOTO 5



PHOTO 6



PHOTO 7



PHOTO 8

Photo Descriptions

PHOTO NO.	DETAILS
5	Imported topsoil stockpile. No anthropogenic constituents noted during physical inspection and topsoil is as expected based on samplers description.
6	
7	New soft landscaping areas being over-excavated, ready for placement of clean topsoil over membrane
8	Membrane geotextile to be placed at base of clean cover system to provide physical barrier and prevent soils mixing.

REV	DATE	DESCRIPTION	BY	CKD



CLIENT	MORGAN SINDALL
PROJECT TITLE	STAR ACADEMY, RADCLIFFE
TITLE	TEMPS VALIDATION VISIT 30/07/24
Associated Document Ref No.	PAGE
TM/C5394/13333	2 of 2
COMPLIED BY	CHECKED BY
TM	DRAFT

APPENDIX G

Delivery Notes

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