

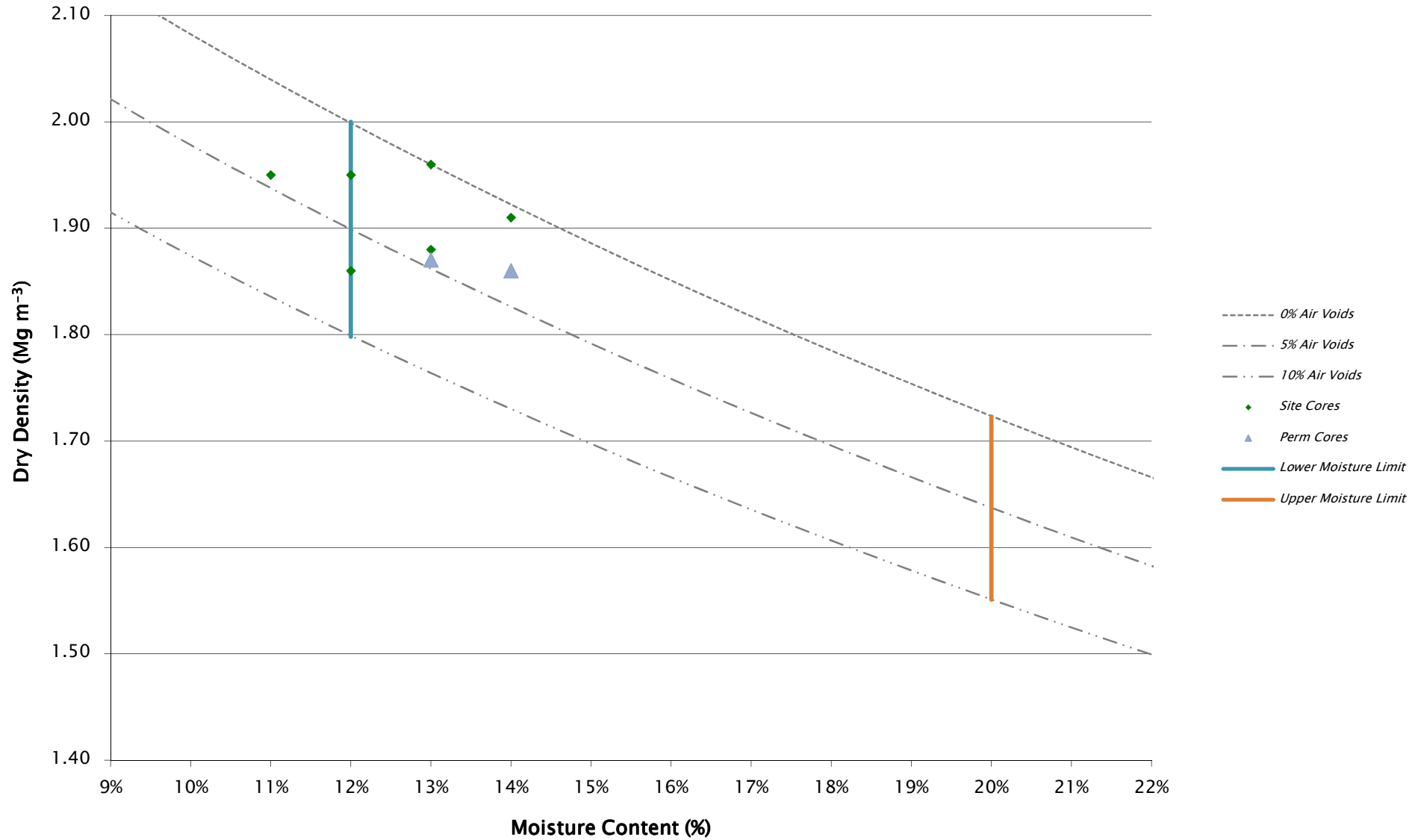
HAFOD PHASE 3 UPPER WEST SIDEWALL CQA SAMPLES

SAMPLE IDENTIFICATION							LABORATORY											
	S/N	AREA	LIFT	REPORT REF	SAMPLE DESIGNATION	REPORTED	M/C	BD	DD	VOID RATIO	AIR VOIDS	L/L	P/L	PI	PD	CC	HSV	PERM
TRIAL PAD 1 :INCLINED TRIAL PAD, 8 PASSES	1		1	PSL15/0995	TL1/C1A/L1	Y	12%	2.18	1.95	0.35	2.5%							
	2		1	PSL15/0995	TL1/C2A/L1	Y	12%	2.08	1.86	0.41	7.0%							
	3		1	PSL15/0995	TL1/C3A/L1	Y	11%	2.16	1.95	0.35	4.4%							
	4		1	PSL15/0995	TL1/C3B/L1	Y	13%	2.11	1.87	0.41	4.6%							5.00E-10
	5		2	PSL15/0995	TL1/C4A/L2	Y	13%	2.22	1.96	0.34	0.0%							
	6		2	PSL15/0995	TL1/C5A/L2	Y	13%	2.12	1.88	0.40	4.1%							
	7		2	PSL15/0995	TL1/C6A/L2	Y	14%	2.18	1.91	0.38	0.6%							
	8		2	PSL15/0995	TL1/C6B/L2	Y	14%	2.13	1.86	0.41	3.2%							3.90E-10
	9		1	PSL15/0995	TL1/L1/Bulk 1	Y	13%					33%	18%	15	2.68	21.0%		
	10		2	PSL15/0995	TL1/L2/Bulk 2	Y	13%					33%	18%	15	2.69	26.0%		

M/C	BD	DD	VOID RATIO	AIR VOIDS	L/L	P/L	PI	PD	CC	UD-TX-SS	PERM
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COUNT	COUNT	0	0	0	0	0	2	2	2	2	2	0	2
SUM	SUM	0.0	0.00	0.00	0.00	0.00	1	0	30	5.37	47.0%	0	8.90E-10
MEAN	MEAN	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	33%	18%	15	2.69	23.5%	#DIV/0!	4.45E-10
MAX	MAX	0%	0.00	0.00	0.00	0.0%	33%	18%	15	2.69	26.0%	0	5.00E-10
MIN	MIN	0%	0.00	0.00	0.00	0.0%	33%	18%	15	2.68	21.0%	0	3.90E-10

Trial Pad 1 Compaction : Particle Density 2.63 Mg m⁻³

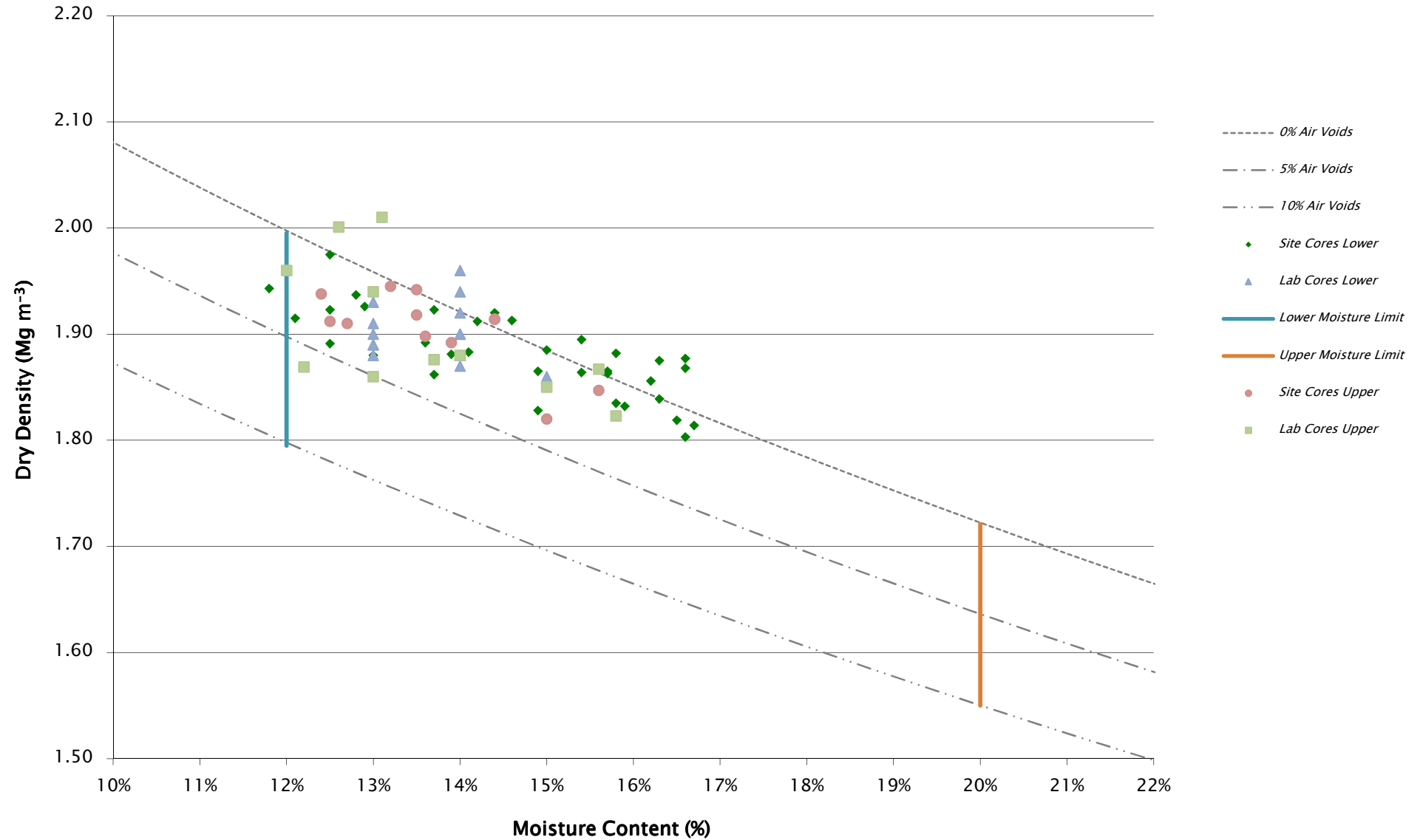


HAFOD PHASE 3 UPPER WEST SIDEWALL CQA SAMPLES

	SAMPLE IDENTIFICATION					LABORATORY														
	S/N	AREA	LAB REPORT REF	SAMPLE DESIGNATION	REPORTED	M/C	BD	DD	VOID RATIO	AIR VOIDS	L/L	P/L	PI	PD	CC	UDX	FAIL STRAIN	MODE	PERM	
	1		PSL15/0995	A2/L1/C8A	Y	12%	2.19	1.96	0.34	2.0%										
	2		PSL15/0995	A4/L1/C10A	Y	14%	2.14	1.88	0.40	2.2%										
	3		PSL15/0995	A1/L1/Bulk 3	Y	13%					34%	19%	15	2.68	25.0%					
	4		PSL15/0995	A3/L1/Bulk 4	Y	16%					34%	18%	16	2.70	26.0%					
	5		PSL15/0995	A5/L1 /Bulk 5	Y	15%					32%	18%	14	2.71	23.0%					
	6		PSL15/0995	A1/L2/C12A	Y	13%	2.19	1.94	0.36	1.0%										
	7		PSL15/0995	A2/L2/Bulk 6	Y	15%					32%	17%	15	2.68	22.0%					
	8		PSL15/0995	A3/L2/C14A	Y	13%	2.10	1.86	0.41	5.1%										3.70E-10
	9		PSL15/0995	A4/L2/C15A	Y	15%	2.13	1.85	0.42	1.9%										
	10		STR 407593	CT1	Y											20.6%				
	11		STR 407592	CT1	Y										2.70					
	12		STR 407591	CT1	Y						43%	17%	26							
	13		STR 407590	USS1	Y	14%	2.13	1.88	0.40	3.0%							182	20.0%	Plastic	
	14		STR 407589	P1	Y	16%	2.16	1.87	0.41	-0.1%										1.60E-10
	15		STR 407596	CT2	Y											25.8%				
	16		STR 407595	CT2	Y										2.72					
	17		STR 407594	CT2	Y						35%	16%	19							
	18		STR 407597	P2	Y	13%	2.25	2.00	0.31	-1.3%										1.10E-10
	19		STR 407598	USS2	Y	16%	2.11	1.82	0.44	1.9%							145	20.0%	Plastic	
	20		STR 407601	CT3	Y											19.9%				
	21		STR 407600	CT3	Y										2.73					
	22		STR 407599	CT3	Y						35%	15%	20							
	23		STR 407604	CT4	Y											22.2%				
	24		STR 407603	CT4	Y										2.72					
	25		STR 407602	CT4	Y						37%	16%	21							
	26		STR 407605	CT5	Y						34%	16%	18							
	27		STR 407606	CT5	Y										2.73					
	28		STR 407607	CT5	Y											24.2%				
	29		STR 407612	CT6	Y											25.9%				
	30		STR 407611	CT6	Y										2.73					
	31		STR 407610	CT6	Y							45%	17%	28						
	32		STR 407609	USS3	Y	12%	2.09	1.87	0.41	6.1%							195	8.5%	Brittle	
	33		STR 407608	P3	Y	13%	2.27	2.01	0.31	-2.8%										1.10E-10
	34		SITE	C1	Y	14%	2.19	1.91	0.37	-0.3%										
	35		SITE	C2	Y	14%	2.15	1.89	0.39	1.8%										
	36		SITE	C3	Y	14%	2.18	1.92	0.37	1.2%										
	37		SITE	C4	Y	14%	2.21	1.94	0.35	-0.1%										
	38		SITE	C5	Y	13%	2.15	1.91	0.38	3.1%										
	39		SITE	C6	Y	16%	2.14	1.85	0.42	1.0%										
	40		SITE	C7	Y	12%	2.16	1.94	0.36	2.3%										
	41		SITE	C8	Y	13%	2.20	1.95	0.35	0.4%										
	42		SITE	C9	Y	14%	2.19	1.91	0.37	-0.3%										
	43		SITE	C10	Y	14%	2.16	1.90	0.39	2.0%										
	44		SITE	C11	Y	15%	2.09	1.82	0.45	3.5%										
	45		SITE	C12	Y	13%	2.15	1.91	0.38	3.4%										
	46				N															

		M/C	BD	DD	VOID RATIO	AIR VOIDS	L/L	P/L	PI	PD	CC	UDX	FAIL STRAIN	MODE	PERM
COUNT	COUNT	27	23	23	23	23	10	10	10	10	10	3	3		4
SUM	SUM	3.7	49.74	43.79	8.80	0.37	4	2	192	27.10	234.6%	522	48.5%		7.50E-10
MEAN	MEAN	14%	2.16	1.90	0.38	1.6%	36%	17%	19	2.71	23.5%	174	16.2%		1.88E-10
MAX	MAX	16%	2.27	2.01	0.45	6.1%	45%	19%	28	2.73	26.0%	195	20.0%		3.70E-10
MIN	MIN	12%	2.09	1.82	0.31	-2.8%	32%	15%	14	2.68	19.9%	145	8.5%		1.10E-10

AEGB + ECL Compaction : Particle Density 2.63 Mg m⁻³



HAFOD PHASE 3 UPPER WEST SIDEWALL CQA SAMPLES

GRAVEL DRAINAGE MEDIA

S/N	REPORT REF	SAMPLE DESIGNATION	REPORTED	GRADING				10% FINES (TFV)	Permeability
				63mm	50mm	40mm	31.5mm		
1	PSL14/4019	DG/01	Y	100%	98%	56%	38%		
2	PSL14/4518 – STR 384853	DG/01 BAGS 2-10	Y	100%	98%	78%	35%		
3	PSL14/4518 – STR 384854	DG/01 BAGS 2-10	Y					230	
4	PSL14/4518 – STR 384855	DG/01 BAGS 2-10	Y						1.7E-01
				COUNT	COUNT	2	2	2	1
				SUM	SUM	200%	196%	134%	230
				MEAN	MEAN	100%	98%	67%	230
				MAX	MAX	100%	98%	78%	230
				MIN	MIN	100%	98%	56%	230

TESTED AS PART OF
LOWER SECTION WORKS
IN 2014

GEOCOMPOSITE

S/N	REPORT REF	SAMPLE DESIGNATION	REPORTED	TENSILE STRENGTH (MD)	ELONGATION (MD)	TENSILE STRENGTH (CD)	ELONGATION (CD)	CBR	O ₉₀	PERMEABILITY	THICKNESS	IN-PLANE WATER FLOW
1	BS-K115/c	C1 LAB	Y	15.7	36.8%	14.3	46.4%	2.45	97	88	7.16	1.35
2	BS-K115/c	C2 LAB	Y	13.6	34.6%	14.1	33.0%	2.39	88	94	6.7	1.28
				COUNT	COUNT	2	2	2.00	2	2	2	2
				SUM	SUM	29.3	0.714	4.84	185	182	13.86	2.63
				MEAN	MEAN	14.7	35.7%	2.42	93	91	6.93	1.32
				MAX	MAX	15.7	36.8%	2.45	97	94	7.16	1.35
				MIN	MIN	13.6	34.6%	2.39	88	88	6.70	1.28

FILTRATION GEOTEXTILE

S/N	REPORT REF	SAMPLE DESIGNATION	REPORTED	Tensile Strength M-way (kN/m)	M-way Extension (%)	Tensile Strength X-way (kN/m)	X-way Extension (%)	CBR (N)	O ₉₀	Permeability Perpendicular
1	BS-K114a	C3 LAB	Y	9.9	47.40%	9.80	57.7%	1.44	145	52
				COUNT	COUNT	1	1	1.00	1	1
				SUM	SUM	9.9	47.40%	1.44	145	52
				MEAN	MEAN	9.9	47.40%	1.44	145	52
				MAX	MAX	9.9	47.40%	1.44	145	52
				MIN	MIN	9.9	47.40%	1.44	145	52

Terrex NW9