

**Project Name:** Soil Carbon Paired Sites project  
**Project Code:** SC2                   **Site ID:** NHL4                   **Observation ID:** 1  
**Agency Name:** Agriculture Western Australia

#### Site Information

<b>Desc. By:</b>	Bill Verboom	<b>Locality:</b>	
<b>Date Desc.:</b>	24/10/00	<b>Elevation:</b>	No Data
<b>Map Ref.:</b>		<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6889536 AMG zone: 50	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	239116 Datum: AGD84	<b>Drainage:</b>	Well drained

#### Geology

<b>ExposureType:</b>	Soil pit	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Landform

<b>Rel/Slope Class:</b>	Undulating rises 9-30m 3-10%	<b>Pattern Type:</b>	Rises
<b>Morph. Type:</b>	Mid-slope	<b>Relief:</b>	30 metres
<b>Elem. Type:</b>	Hillslope	<b>Slope Category:</b>	No Data
<b>Slope:</b>	3 %	<b>Aspect:</b>	315 degrees

#### Surface Soil Condition

Loose

#### Erosion (wind); (scald) (sheet) (rill) (gully)

#### Soil Classification

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Basic Regolithic Yellow-Orthic Tenosol		<b>Principal Profile Form:</b>	N/A
<b>ASC Confidence:</b>	All necessary analytical data are available.	<b>Great Soil Group:</b>	N/A

#### Site Disturbance Complete clearing. Pasture, native or improved, cultivated at some stage

#### Vegetation

#### Surface Coarse Fragments No surface coarse fragments; No surface coarse fragments

#### Profile Morphology

A1        0 - 0.1 m consistence;	Greyish brown (10YR5/2-Moist); ; Sand; Single grain grade of structure; Dry; Very weak Clear change to -
A2        0.1 - 0.4 m consistence; Diffuse	Brownish yellow (10YR6/6-Moist); ; Sand; Massive grade of structure; Dry; Weak change to -
B1        0.4 - 1 m moist; Firm	Brownish yellow (10YR6/8-Moist); ; Clayey sand; Massive grade of structure; Moderately consistence; Diffuse change to -
B2        1 - 1.6 m moist; Firm	Brownish yellow (10YR6/8-Moist); ; Clayey sand; Massive grade of structure; Moderately consistence;

#### Morphological Notes

A1	ROOTS MANY VERY FINE
A2	FEW VERY FINE ROOTS
B1	medium to coarse sand, VERY FEW TO NO ROOTS
B2	medium to coarse sand, NO ROOTS

#### Observation Notes

#### Site Notes

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**Laboratory Test Results:**

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0 - 0.1	5B 5.9H	5B	1.76H	0.3	0.08	0.05	0.04J	2.19D		
0.1 - 0.2	4.6B 5.7H	2B	0.92H	0.19	0.03	<0.02	0.1J	1.15D		
0.1 - 0.2	4.6B 5.7H	2B	0.92H	0.19	0.03	<0.02	0.1J	1.15D		
0.1 - 0.2	4.6B 5.7H	2B	0.92H	0.19	0.03	<0.02	0.1J	1.15D		
0.1 - 0.2	4.6B 5.7H	2B	0.92H	0.19	0.03	<0.02	0.1J	1.15D		
0.1 - 0.2	4.6B 5.7H	2B	0.92H	0.19	0.03	<0.02	0.1J	1.15D		
0.1 - 0.2	4.6B 5.7H	2B	0.92H	0.19	0.03	<0.02	0.1J	1.15D		
0.2 - 0.3	4.4B 5.5H	1B	0.49H	0.13	0.04	<0.02	0.08J	0.67D		
0.2 - 0.3	4.4B 5.5H	1B	0.49H	0.13	0.04	<0.02	0.08J	0.67D		
0.2 - 0.3	4.4B 5.5H	1B	0.49H	0.13	0.04	<0.02	0.08J	0.67D		
0.2 - 0.3	4.4B 5.5H	1B	0.49H	0.13	0.04	<0.02	0.08J	0.67D		
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J	0.04J 0.04J	0.61D 0.61D		
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J	0.04J 0.04J	0.61D 0.61D		
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J	0.04J 0.04J	0.61D 0.61D		
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J	0.04J 0.04J	0.61D 0.61D		

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0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B	0.41H 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J		0.61D 0.61D
0.35 - 0.45									
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B	0.41H 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J		0.61D 0.61D
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B	0.41H 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J		0.61D 0.61D
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B	0.41H 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J		0.61D 0.61D
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B	0.41H 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J		0.61D 0.61D
0.3 - 0.5	4.5B 5.6H 4.5B 5.6H	1B	0.41H 0.41H	0.15 0.15	0.04 0.04	<0.02 <0.02	0.04J 0.04J		0.61D 0.61D
0.35 - 0.45									
0.5 - 0.8	4.8B 5.9H	1B	0.4H	0.23	0.04	<0.02	0.02J		0.68D
0.5 - 0.8	4.8B 5.9H	1B	0.4H	0.23	0.04	<0.02	0.02J		0.68D
0.5 - 0.8	4.8B 5.9H	1B	0.4H	0.23	0.04	<0.02	0.02J		0.68D
0.6 - 0.7									
0.8 - 1.1	5B 5.8H	2B	0.4H	0.32	0.04	<0.02	<0.02J		0.77D
0.8 - 1.1	5B 5.8H	2B	0.4H	0.32	0.04	<0.02	<0.02J		0.77D
0.8 - 1.1	5B 5.8H	2B	0.4H	0.32	0.04	<0.02	<0.02J		0.77D
0.9 - 1									
1.1 - 1.4	5.3B 5.9H	2B	0.33H	0.28	0.03	<0.02	<0.02J		0.65D
1.1 - 1.4	5.3B 5.9H	2B	0.33H	0.28	0.03	<0.02	<0.02J		0.65D
1.1 - 1.4	5.3B 5.9H	2B	0.33H	0.28	0.03	<0.02	<0.02J		0.65D
1.1 - 1.4	5.3B 5.9H	2B	0.33H	0.28	0.03	<0.02	<0.02J		0.65D
1.1 - 1.4	5.3B 5.9H	2B	0.33H	0.28	0.03	<0.02	<0.02J		0.65D
1.2 - 1.3									

Depth	CaCO3	Organic C Clay %	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m3	Particle GV	Size CS	Analysis FS	Silt %
m	%	%									

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0 - 0.1 4.1	0.82D	59F	0.055B	0.026B	2.2
0 - 0.1 4.1	14.2D 0.82D	720F 59F	0.818B 0.055B	0.026B	2.2
0 - 0.1 4.1	14.2D 0.82D	720F 59F	0.818B 0.055B	0.026B	2.2
0 - 0.1 4.1	14.2D 0.82D	720F 59F	0.818B 0.055B	0.026B	2.2
0 - 0.1 4.1	14.2D 0.82D	720F 59F	0.818B 0.055B	0.026B	2.2
0 - 0.1 4.1	14.2D 0.82D	720F 59F	0.818B 0.055B	0.026B	2.2
0.1 - 0.2 5.3	0.28D	31F	0.022B	0.025B	1.5
0.1 - 0.2 5.3	2.57D 0.28D	93F 31F	0.126B 0.022B	0.025B	1.5
0.1 - 0.2 5.3	2.57D 0.28D	93F 31F	0.126B 0.022B	0.025B	1.5
0.1 - 0.2 5.3	2.57D 0.28D	93F 31F	0.126B 0.022B	0.025B	1.5
0.1 - 0.2 5.3	2.57D 0.28D	93F 31F	0.126B 0.022B	0.025B	1.5
0.2 - 0.3 7.8	0.17D	93F 18F	0.126B 0.013B	0.027B	1.5
0.2 - 0.3 7.8	0.17D	18F	0.013B	0.027B	1.5
0.2 - 0.3 7.8	0.17D	18F	0.013B	0.027B	1.5
0.3 - 0.5 9.8	0.11D	20F	0.011B	0.037B	1.6
0.3 - 0.5 9.8	0.31D 0.11D	42F	0.023B 0.011B	0.13B	1.6
0.3 - 0.5 9.8	0.31D 0.11D	42F	0.023B 0.011B	0.13B	1.6
0.3 - 0.5 9.8	0.31D 0.11D	42F	0.023B 0.011B	0.13B	1.6
0.3 - 0.5 9.8	0.31D 0.11D	42F	0.023B 0.011B	0.13B	1.6
0.3 - 0.5 9.8	0.31D 0.11D	42F	0.023B 0.011B	0.13B	1.6

0.3 - 0.5 9.8	0.11D 0.31D 0.11D 0.31D	20F 42F 20F 42F	0.011B 0.037B 0.023B 0.13B 0.011B 0.037B 0.023B 0.13B	1.6
0.35 - 0.45 0.3 - 0.5 9.8	0.11D 0.31D 0.11D 0.31D	20F 42F 20F 42F	0.011B 0.037B 0.023B 0.13B 0.011B 0.037B 0.023B 0.13B	1.6
0.3 - 0.5 9.8	0.11D 0.31D 0.11D 0.31D	20F 42F 20F 42F	0.011B 0.037B 0.023B 0.13B 0.011B 0.037B 0.023B 0.13B	1.6
0.3 - 0.5 9.8	0.11D 0.31D 0.11D 0.31D	20F 42F 20F 42F	0.011B 0.037B 0.023B 0.13B 0.011B 0.037B 0.023B 0.13B	1.6

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0.3 - 0.5 9.8	0.11D	20F	0.011B 0.037B		1.6
	0.31D 9.8	42F	0.023B 0.13B		1.6
	0.11D	20F	0.011B 0.037B		
	0.31D	42F	0.023B 0.13B		
0.3 - 0.5 9.8	0.11D	20F	0.011B 0.037B		1.6
	0.31D 9.8	42F	0.023B 0.13B		1.6
	0.11D	20F	0.011B 0.037B		
	0.31D	42F	0.023B 0.13B		
0.3 - 0.5 9.8	0.11D	20F	0.011B 0.037B		1.6
	0.31D 9.8	42F	0.023B 0.13B		1.6
	0.11D	20F	0.011B 0.037B		
	0.31D	42F	0.023B 0.13B		
0.35 - 0.45 0.5 - 0.8 10.9	0.1D	22F	0.01B 0.044B		1.5
0.5 - 0.8 10.9	0.1D	22F	0.01B 0.044B		1.5
0.5 - 0.8 10.9	0.1D	22F	0.01B 0.044B		1.5
0.6 - 0.7 0.8 - 1.1 12.4	0.08D	22F	0.007B 0.046B		1.7
0.8 - 1.1 12.4	0.08D	22F	0.007B 0.046B		1.7
0.8 - 1.1 12.4	0.08D	22F	0.007B 0.046B		1.7
0.9 - 1 1.1 - 1.4 11.3	0.06D	19F	<0.005B 0.052B		1.7
1.1 - 1.4 11.3	0.07D	17F	<0.005B 0.05B		
1.1 - 1.4 11.3	0.06D	19F	<0.005B 0.052B		1.7
1.1 - 1.4 11.3	0.07D	17F	<0.005B 0.05B		
1.1 - 1.4 11.3	0.06D	19F	<0.005B 0.052B		1.7
1.1 - 1.4 11.3	0.07D	17F	<0.005B 0.05B		
1.1 - 1.4 11.3	0.06D	19F	<0.005B 0.052B		1.7
1.2 - 1.3	0.07D	17F	<0.005B 0.05B		

#### Laboratory Analyses Completed for this profile

12_NR_FE	Total element - Fe(%) - Not recorded
15_NR_BSa	Exchangeable bases (Ca++) - meq per 100g of soil - Auto calculated from available
15_NR_CMR	Exchangeable bases (Ca/Mg ratio) - Not recorded
15E1_AL	Exchangeable Al - by compulsive exchange, no pretreatment for soluble salts
15E1_CA salts	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) by compulsive exchange, no pretreatment for soluble salts
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MN	Exchangeable bases (Mn <sup>2+</sup> ) by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15J_BASES	Sum of Bases
15N1_b	Exchangeable sodium percentage (ESP) - Auto calculated from available using Sum of Cations
17A_NR	Total element - K (%) - Not recorded
2A1	Air-dry moisture content
3_NR	Electrical conductivity or soluble salts - Not recorded

4_NR	pH of soil - Not recorded
4B_AL_NR	Aluminium in 1:5 soil/0.01M calcium chloride extract - method not recorded
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7_NR	Total nitrogen (%) - Not recorded
9A_NR	Total element - P(%) - Not recorded
P10_1m2m	1000 to 2000u particle size analysis, (method not recorded)
P10_20_75	20 to 75u particle size analysis, (method not recorded)
P10_75_106	75 to 106u particle size analysis, (method not recorded)
P10_gt2MI	> 2mm particle size analysis mineral fragments, (method not recorded)

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P10\_gt2OM > 2mm particle size analysis organic fragments, (method not recorded)  
P10\_NR\_C Clay (%) - Not recorded  
P10\_NR\_Saa Sand (%) - Not recorded arithmetic difference, auto generated  
P10\_NR\_Z Silt (%) - Not recorded  
P10106\_150 106 to 150u particle size analysis, (method not recorded)  
P10150\_180 150 to 180u particle size analysis, (method not recorded)  
P10180\_300 180 to 300u particle size analysis, (method not recorded)  
P10300\_600 300 to 600u particle size analysis, (method not recorded)  
P106001000 600 to 1000u particle size analysis, (method not recorded)  
P3A1\_C4 Bulk density - core, 100mm by 81mm dia  
TE\_NR\_AL Total Element Al - Not recorded  
TE\_NR\_AL2O Total Element Al<sub>2</sub>O<sub>3</sub> - Not recorded  
TE\_NR\_FE20 Total Element Fe<sub>2</sub>O - Not recorded