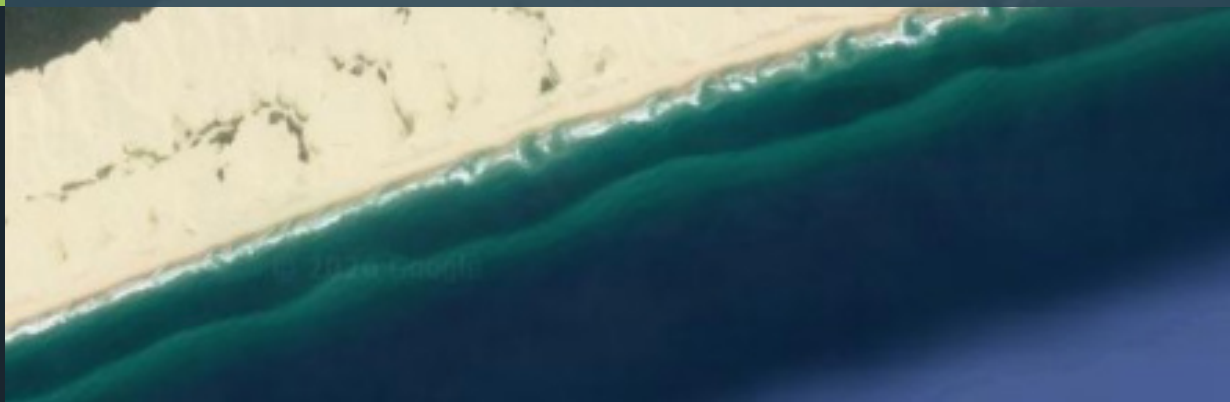




April 2026

Bobs Farm Sand Quarry Geological and Resource Assessment



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Bobs Farm Sand Quarry		
Name of Quarry	Bobs Farm Sand Quarry	
Site Owner	Newcastle Sand Pty Limited	
Contact Details	Rob Drew Senior Planner ADW Johnson Pty Ltd	
Author	Greg Thomson Director VGT Environmental Compliance Solutions Pty Ltd	
Version History	Date / Version	Description
	04/03/2026 I0	VGT Internal draft report
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Acronyms and Terms Used Throughout the Report

Through this document, a number of Acronyms and reference terms are frequently used. To assist the reader, the following lists are provided.

Acronyms and Glossary

Word	Meaning
Acid Sulphate Soils (ASS)	Naturally acid clays, mud and other sediments usually found in swamps and estuaries. They may become extremely acidic when drained and exposed to oxygen, and may produce acidic leachate and run-off which can pollute receiving waters and liberate toxins. ASS is classified as materials which are above the groundwater, are undergoing oxidation and have a pH of less than 4.0.
Alluvial Soil	Juvenile soils formed by deposition from still or moving water. Little pedological development beyond some accumulation of organic matter at the surface.
AHD – Australian Height Datum	A height of zero was assigned to the mean sea level determination at 30 tide gauges around the Australian Mainland coastline, measured over a three year period from 1966 to 1968. Ref 2.
Aquifer	A soil or rock layer or group of layers that is sufficiently saturated and permeable to yield significant quantities of water.
Bed Rock	The unweathered rock that lies below loose surface deposits of soil and alluvium.
Earthworks	The process of extracting, moving and depositing earth during construction.
Embankment	A mound or bank of earth or stone formed to support a roadway, serve as a protective barrier, or the like.
Erosion	The natural process where wind or water detaches a soil particle and provides energy to move the particle.
Excavation	The act or process of digging out earth during construction.
Floodplain	Large flat area of alluvium adjacent to a watercourse, characterised by frequent active erosion and aggregation by channelled and overbank stream flow.
Groundwater	All waters occurring below the land surface. The upper surface of the soils saturated by groundwater in any particular area is called the water table.
Hydrology	The study of rainfall and surface water runoff processes.
Palaeosol	Ancient soil
pH	A measure of the degree of acidity or alkalinity expressed on a logarithmic scale of 1-14, on which 1 is most acid, 7 is neutral and 14 is most basic.
Rehabilitation	The restoration of a landscape and especially the vegetation following its disturbance.
Remnant vegetation	Native vegetation remaining after widespread clearing has taken place.
RL	Relative Level above sea level

Word	Meaning
Rudite	Crushed stone, debris or rubble. This is a general term for a sedimentary rock composed of rounded or angular pebbles, cobbles and / or boulders. Rudites are mostly composed of siliciclastic gravel or conglomerates. Ref 4.
Sand	Are categorised as particles that range between 0.0625 mm to 2.00 mm. Ref 1. These can be made from quartz, limestone, feldspar, basalts, latites, organic particles and olivine. These deposits are found on beaches, dunes, rivers, glacial outwash and volcanic slopes.
Sediment	Material of varying sizes that has been or is being moved from its site of origin by the action of wind, water or gravity.
Sedimentation basin	An area where run-off is ponded to allow sediment to be deposited. The longer the period that run-off is held, the smaller the size of the sediment deposited. Such basins have to be cleaned regularly.
Silt	Are categorised as particles that range between 0.0625 mm to 0.0039 mm. Ref 1
Soil	That part of the upper weathered layer of the earth's crust that can support plant growth. Any naturally occurring loose or soft deposit forming part of the earth's crust and resulting from weathering or breakdown of rock formation or from the decay of vegetation.
Soil Texture Group	An important attribute of soils that affects the effectiveness of sediment retention structures is the proportion of particles finer than 0.02 mm. Particles that are finer than 0.02 mm are relatively difficult to trap in simple sediment retention basins, while those that are coarser are not.
T – Tonnes	Weight measurement being 1000 kilograms.
Unconsolidated Sediments	Loose, uncompacted natural material derived from rocks by weathering and erosion, ie sand and gravel.
Waste	Includes any matter (whether liquid, solid, gaseous or radioactive) that is discharged, emitted or deposited in the environment in such volume, constituency, or manner as to cause an alteration to the environment.

References

1. Sand and Sandstone, 1972, Pettijohn F.J, Potter, P.E. and Siever R.
2. G.C. Luton and G.M Johnson 2001
3. Penguin Geology Dictionary, Whitten and Brooks 1982
4. Minview Version: 2025.12.08 (<https://minview.geoscience.nsw.gov.au>)
5. Coastal Geomorphology and Quaternary Geology of the Port Stephens-Myall Lakes area, B.G. Thom et al, 1992

1 **Executive Summary**

This report details the geological context and results of geological investigations for the Bob's Farm Quarry in order to evaluate the sand resources available on site to an extraction depth of 700mm above groundwater level. The site is accessed off Nelsons Bay Road at Bobs Farm within Lot 254 DP 753204, Parish of Tomaree. County Gloucester, located at 3631 Nelsons Bay Road, Bobs Farm, NSW.

The site consists of Holocene sand dunes deposited within the last 10,000 years. Data from drilling and exploration activities conducted in 2013 were used to assess the sand resource across the site.

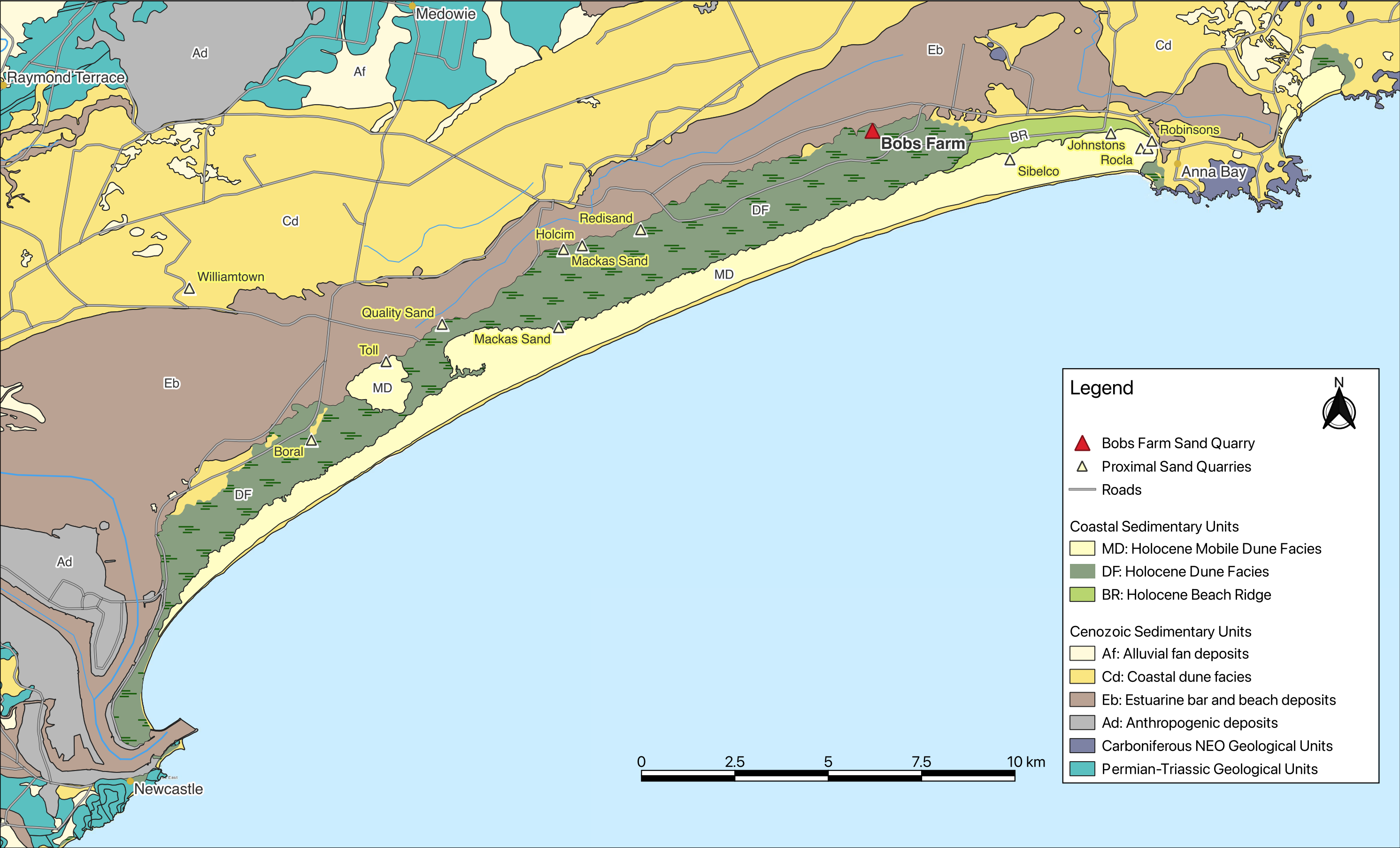
The total volume to be extracted is approximately 4,400,000 tonnes down to 700mm above groundwater level.

Initial geological and resource investigations at were undertaken by VGT Pty Limited in 2013, commissioned by QMS Pty Limited. These investigations extended to a depth of -15m AHD, including data on water table level, quality and type of material below the water table.

Plan of:	Bobs Farm Local Geology	Location:	3631 Nelsons Bay Road, Bobs Farm, NSW	Source:	Geological Survey of New South Wales. NSW Seamless Geology, MinView Version 2025.12.08. NSW Department of Primary Industries and Regional Development https://minview.geoscience.nsw.gov.au/	Our Ref:	12786_BF_GA2024_Q003_V1_F2.pdf
Figure:	TWO	Council:	Port Stephens	Survey:	N/A	Plan By:	RG
Sheet:	1 of 1	Tenures:	N/A	Projection:	GDA2020	Project Manager:	GT
Version/Date:	V1 13/03/2026	Client:	Newcastle Sand	Contour Interval:	N/A	Office:	Thornton

This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.

This figure is used as a working site plan and is not Quality Assured.



Legend

- Bobs Farm Sand Quarry
- Proximal Sand Quarries
- Roads

Coastal Sedimentary Units

- MD: Holocene Mobile Dune Facies
- DF: Holocene Dune Facies
- BR: Holocene Beach Ridge

Cenozoic Sedimentary Units

- Af: Alluvial fan deposits
- Cd: Coastal dune facies
- Eb: Estuarine bar and beach deposits
- Ad: Anthropogenic deposits
- Carboniferous NEO Geological Units
- Permian-Triassic Geological Units

Plan of: **Bobs Farm Sand Quarry Geological Assessment: Drillhole Plan**

Figure: **Three**

Version/Date: V0 20/04/2026

Our Ref: 12786_BF_GRA2026_Q002_V1_F3

Location: 3631 Nelson Bay Road, Bobs Farm, NSW

Council: Port Stephens

Tenure: Not Applicable

Client: Newcastle Sand

Source: Nearmap 24/07/2025. Drillholes sourced from previous reporting.

Survey: 2025 Centurion Survey Pty Ltd

Projection: GDA2020/MGA Zone 56 EPSG:7856

Contour Interval: 1m

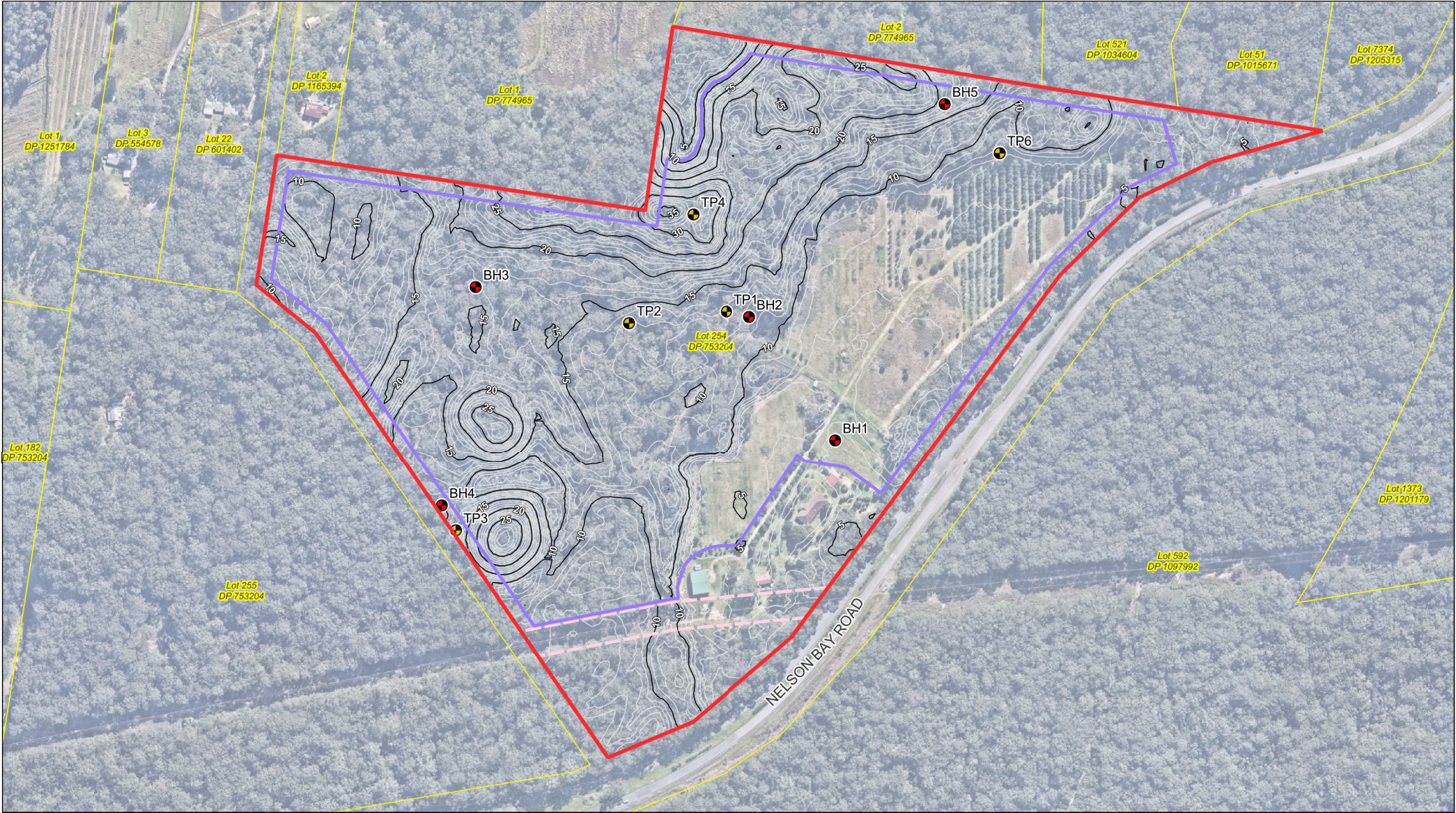
Plan By: SK

Project Manager: GT


0 25 50 75 100 m



This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.



Legend

Lot Boundaries

Project Boundary

Top of Cut Final

Electricity Easement

Existing Topography

5m

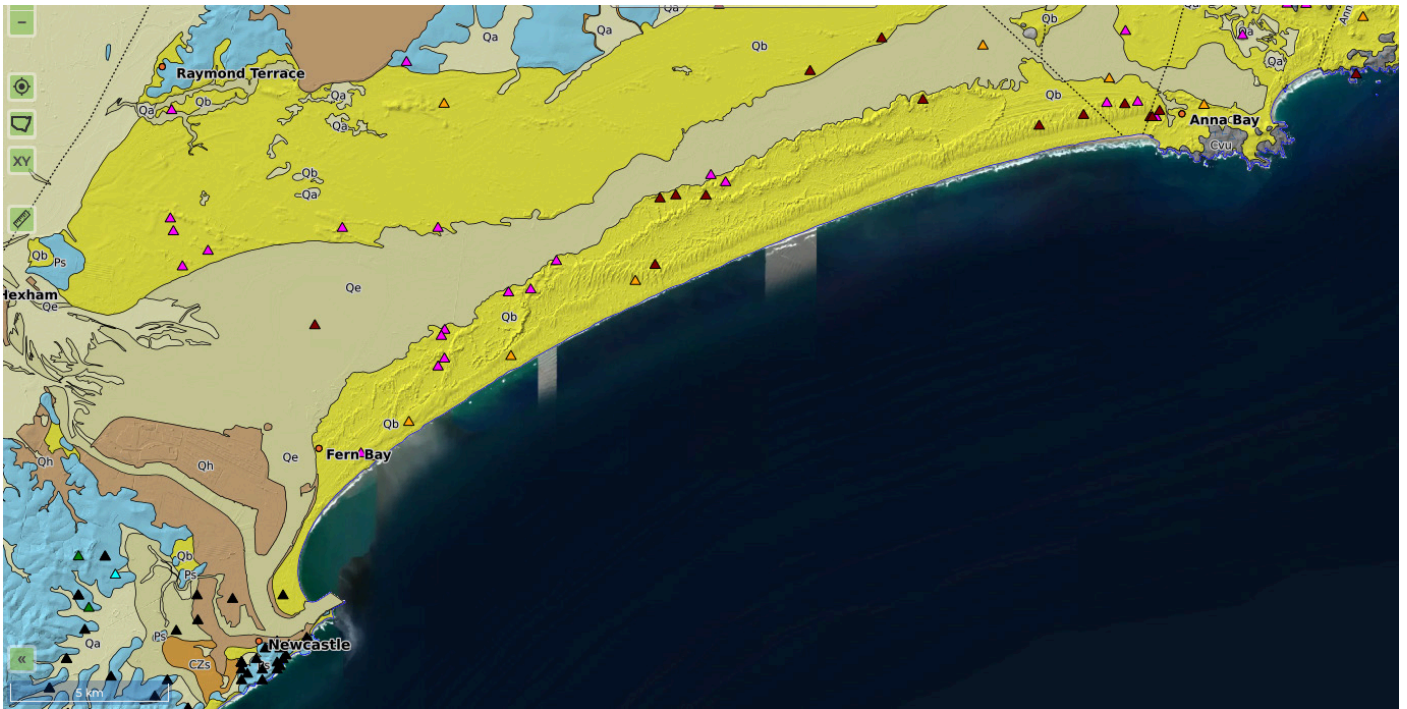
1m

Drillholes and Test Pits

BH

TP

Figure 3: Site Plan



2 Introduction

2.1 BACKGROUND

Quarry Mining Systems Pty Limited engaged VGT Pty Limited to evaluate the sand resources at 51 Nelson Bay Road, Bobs Farm in 2013. Refer to *Figure 1* for site location. Data from this geological assessment has been retained but the resource assessment has been modified to meet the current extraction parameters down to 700mm above groundwater level.

2.2 RESOURCE CONSTRAINTS

The estimated extraction floor level is 700mm above groundwater level, this ranges from approximately 2.1 – 3.7m AHD. To ensure a comprehensive site assessment, drilling was conducted to a maximum depth of -15m AHD. The lateral extent of the study was defined by property boundaries and easements as shown in *Figure 1*.

2.3 REGIONAL GEOLOGY

The site is located within the Newcastle Bight coastal sand dune system, located in the outer barrier dune field of transgressive sand dunes which are up to 24km long and run parallel to the shoreline (*Figure 2*). These dunes have been deposited by wind and wave action within the last 10,000 years of the Holocene Epoch, and are stabilised by eucalyptus and melaleuca scrub. The dunes obscure the underlying geology, overlaying the contact between the Permian Newcastle Coal Measures and Carboniferous Nerong Volcanics (4,5). *Figure 2* details the surface geology of the area with locations of proximal sand extraction operations.

3 Geological Investigation

Geological investigations were undertaken in 2013, broken into two stages.

3.1 STAGE 1: TEST PIT INVESTIGATIONS

Five test pit holes were dug using a long reach excavator, see *Figure 3* for site locations. Depth was restricted by the collapsible nature of the unconsolidated sand. TP 1 and 2 had the largest areas at approx. 18 metres by 15 metres, to allow testing at lower depths.

Table 1. Test Pit Summary Data

Hole Number	Easting	Northing	Ground Level (m)	Hole Depth
TP 1	406568.0	6373292.5	12.65	6.0
TP 2	406462.5	6373280.0	12.30	6.5
TP 3	406276.0	6373056.0	11.90	5.5
TP 4	406532.0	6373998.0	31.05	4.7
TP 6	406863.0	6373463.0	7.00	4.0

Note: Test Pit 5 was deleted. All data provided by Tatersall Lander Pty Ltd, job no. 212434

The stratum that were identified in the initial 2013 investigations are listed below. Depths were measured from the existing surface.

Unit 1: Top Soil – Light sandy soil (0 - 0.1m)

Unit 2: Sand - Grey, Light Brown, fine to medium grained, with roots (0.1 - 1.0m)

Unit 3: Sand - Dark Brown, with orange mottles (1.0 - 3.0m)

Unit 4: Blonde Sand - Yellow to Light Orange, Medium grained (below 3.0m)

The thickness of Unit 4 is unknown as all of the holes did reach the basement of this unit.

This investigation indicates there are construction sands available on the site below a depth of 1m. Unit one is light coloured sand mixed with high levels of organic matter. While not useable as construction material this could have application as landscaping material. Unit two is good quality sand but would require removal of plant roots. Unit three is a clean yellow gold colour ranging from medium to coarse grained sand, this is the most attractive sand and similar to that produced as construction sand in surrounding quarries.

The deepest hole was TP 2 which was 6.5 metres, all holes were terminated due to hole collapse.

3.2 STAGE 2: DRILLING PROGRAM

This 2013 drilling program was designed to evaluate the sand resource available on site below depths accessible from test pits. Drilling depth targets were planned to approximately 16 metres below the water table.

Methodology

The unconsolidated nature of these sediments required specialised drilling techniques ensuring high quality representative samples with accurate depth measurements in order to accurately characterise the resource.

Total Drilling Services were engaged to drill the holes. Solid flight augers were used until the samples became damp. Once the water table was intersected hollow flight augers were used to ensure the hole did not collapse and samples were collected using a specifically designed bailer constructed by Total Drilling. VGT assisted on the first day of drilling, Quarry Mining Services took all samples and prepared the sand trays to represent each hole with depth.

Drilling Results

Five bore holes were sunk at the locations shown on *Figure 3*. Drill logs can be found attached to this document as appendices.

Sampling was conducted by QMS and logged by VGT. Photos of sample trays are included in this report as an appendix. Colours were determined using the AS 2700 – 1985 Munsell colour chart for comparison and consistency.

Samples from bore hole 1 above the water table are useable but below the water table the samples are mixed and considered unreliable due to an poor sample retrieval. Bore holes 2 to 5 adopted an alternative sampling system which provided good sample return below the water table, as described in Methodology above.

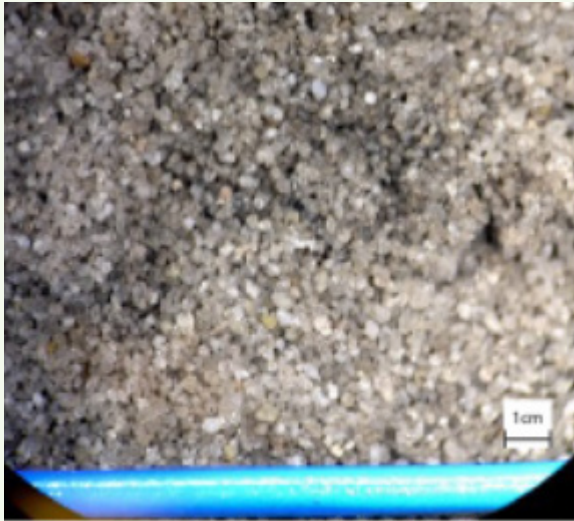
Table 2 records the drillhole locations and water table levels, *Figure 6* shows comparisons of the drill hole results with unit depths and water table levels. *Table 3* lists the different sand units encountered in drilling above the extraction base level of 700mm above groundwater level and defining characteristics.

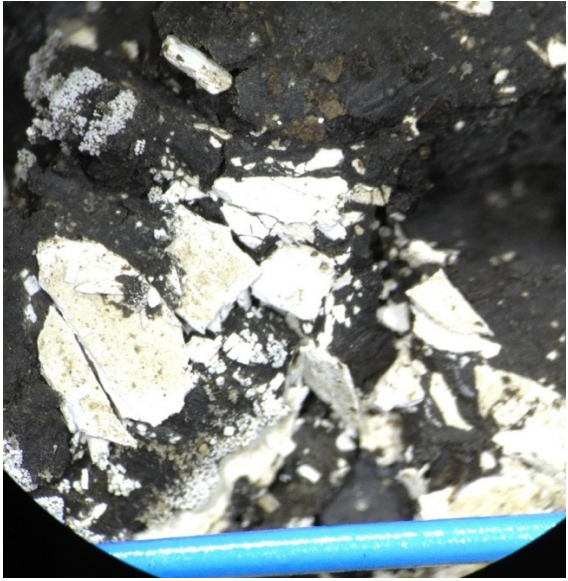
Table 2. Drill Hole Co-ordinates and Measured Water Table Depth

Hole Number	Easting	Northing	Ground Level (m AHD)	Hole Depth (m)
BH 1	406685.6	6373153.8	5.824	19.00
BH 2	406592.8	6373286.7	11.719	26.50
BH 3	406297.2	6373318.9	15.478	26.50
BH 4	406260.7	6373082.8	9.452	24.00
BH 5*	406803.7	6373515.8	18.249	26.50

Note: All survey data provided by Tattersall Lander Pty Ltd, job no. 212434

Table 3. Sand Units between Surface level and Proposed Extraction Floor

Resource Unit	Photo
Top Soil Organic rich fine quartz sand Grain size: approximately 0.25mm. Colours observed: Cloud Grey, Pearl Grey, Oyster, Koala grey. Photograph from BH 3, 0.0-0.3 metres.	 Photoplate 1. Top Soil

Resource Unit	Photo
Upper Grey Sand No organics Fine to Medium grained quartz sand Grain size: approximately 0.25mm. Colours observed: Lead Grey, Cloud Grey, Pearl Grey, Oyster, Koala grey. Grains are fine grained, clear and opaque. Photographed interval: BH2, 1.5 - 2m Scale: 1mm thick blue paper clip.	 <i>Photoplate 2.</i> <i>Upper Grey Sand</i>
Blonde Sand Fine to medium grained well sorted quartz sand. Grain size: approximately 0.25mm. Colours observed: Tan, Raffia, Buff, and Pale Ochre. Photographed interval: BH5, 9.5 – 10.5m Scale: 1mm thick blue paper clip.	 <i>Photoplate 3.</i> <i>Blonde Sand</i>
Black Band Black organic rich clay, sand and shells. Strong sulphur smell. This unit is found close to the water table, as seen in Figure 6. Four holes located this band below the water table. Photographed interval: BH5, 20.5-21.0m Scale: 1mm thick blue paper clip.	 <i>Photoplate 4.</i> <i>Black Carbonaceous Band</i>

Resource Unit	Photo
Lower Grey Sand Quartz dominated sand with majority clear grains with some opaque colours. Occasional heavy mineral grains appear black. Grain size: approximately 0.1 - 0.25mm Photographed interval: BH2, 17.5-18.5m Scale: 1mm thick blue paper clip.	A photomicrograph showing a dense collection of small, angular to sub-angular grains. Most grains are clear or light-colored, consistent with quartz. There are some darker, more opaque grains scattered throughout. A bright blue, cylindrical object, identified as a 1mm thick paper clip, is positioned vertically on the left side of the image to provide a scale reference. <i>Photoplate 5. Lower Grey Sand</i>

4 Resource Assessment

4.1 RESOURCE CALCULATION DETAILS

This resource assessment has been calculated to the following parameters:

- Elevation LiDAR survey from Centurion Survey Pty Ltd 2025;
- Site boundaries provided by Centurion Survey Pty Ltd 2025;
- Total extraction area is 314,300m²
- 3H:1V batters;
- Resource extraction floor of 700mm above groundwater level;
- Topsoil thickness is estimated to be 0.5 metres thick; and
- Volume calculation undertaken on 12D 3D software.

4.2 RESOURCE CALCULATION

Utilising the parameters set out in Section 4.1 the total volume of material to be extracted is approximately 4,400,000 tonnes down to the resource extraction floor.

Appendix A

Drill Logs

Drillhole Core Log

Hole ID: BH1

Project: 12746 Bob's Farm Assistance

Page: 1 of 1

Collar RL: 5.824m
Eastings: 406685.6
Northing: 6373153.8
Drill Type:

Job No.: 12762
Logged By: VGT
Driller: Total Drill
Date: 08/13

Client: Civitas Lifestyle Pty Ltd
Address: Marsh Road, Bobs Farm NSW



Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
0		0.6			Sand	With roots, solid flight augers colours from AS 2700-1985	Cloud Grey	m
5		0.4			Sand		Pearl Grey	m
2		2.8			Sand	Water Table at 3.0; moist samples; minor heavy mineral?	Tan	m
4		0.5			Sand	Sulphur smell	Black	m
1		0.2			Paleosol		Black	f
6		1.5			Sand	Sulphur smell	Dark earth	m
13		13			Sand	Hollow flight augers; mixed sample; could not retrieve samples	Dark earth	mc

Lithology	Grain Size	Water Table
Paleosol Sand	A: Aphanitic (grains not visible) VF: Very Fine (0.05 - 0.25mm) F: Fine (0.25 - 1mm) M: Medium (1 - 2mm) C: Coarse (>2mm)	

Drillhole Core Log

Hole ID: BH2

Project: 12746 Bob's Farm Assistance

Page: 1 of 2

Collar RL: 11.719m
Eastings: 406592.8
Northing: 6373286.7
Drill Type:

Job No.: 12762
Logged By: VGT
Driller: Total Drill
Date: 08/13

Client: Civitas Lifestyle Pty Ltd
Address: Marsh Road, Bobs Farm NSW



Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
0								
2	10	2			Sand	Minor organics;	Oyster	m
2		0.5			Sand	Vegetation matter	Lead Grey	m
		0.5			Sand		Grey	m
		0.5			Sand		Oyster	m
4	8	0.7			Sand		Chocolate	m
		0.8			Sand		Wombat	m
6	6							
8	4	5.5			Sand	Water Table at 10.0m	Buff	m
10	2							
12	0	1.5			Clay	Silty, firm, and wet; cores retrieved from drill	Black	
14	-2							
16	-4	6.5			Sand		Cloud Grey with black fleck (<1%)	mc
18	-6							
20	-8							

Lithology		Grain Size	Water Table
	Clay	A: Aphanitic (grains not visible) VF: Very Fine (0.05 - 0.25mm) F: Fine (0.25 - 1mm) M: Medium (1 - 2mm) C: Coarse (>2mm)	
	Sand		

Drillhole Core Log

Hole ID: BH2

Project: 12746 Bob's Farm Assistance

Page: 2 of 2

Collar RL: 11.719m
Eastings: 406592.8
Northing: 6373286.7
Drill Type:

Job No.: 12762
Logged By: VGT
Driller: Total Drill
Date: 08/13

Client: Civitas Lifestyle Pty Ltd
Address: Marsh Road, Bobs Farm NSW



Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
22	-10	8			Sand		Grey with black fleck (1-3%)	
24	-12							
26	-14							

Lithology
 Clay Sand

Grain Size
A: Aphanitic (grains not visible)
VF: Very Fine (0.05 - 0.25mm)
F: Fine (0.25 - 1mm)
M: Medium (1 - 2mm)
C: Coarse (>2mm)

Water Table



Drillhole Core Log
Hole ID: BH3
Project: 12746 Bob's Farm Assistance

Page: 1 of 2

 Collar RL: 15.478m
 Eastings: 406297.2
 Northing: 6373286.7
 Drill Type:

 Job No.: 12762
 Logged By: VGT
 Driller: Total Drill
 Date: 08/13

 Client: Civitas Lifestyle Pty Ltd
 Address: Marsh Road, Bobs Farm NSW

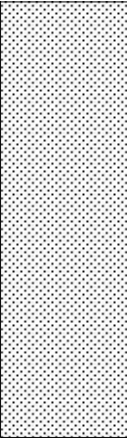

Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
0		0.3	*		Sandy Loam Soil		Grey	m
		0.7	*		Loam Soil		Pearl Grey	m
14		1			Sand		Wombat	m
2		1			Sand		Tan	m
12		1			Sand		Buff	m
4		10			Sand		Raffia	m
10		0.6			Sand		Pearl Grey	m
14		1			Clay	Silty	Black / Dark Grey	
16		0.4			Sand		Lead Grey with black fleck (5%)	
18								
20								

Lithology

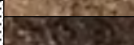
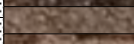
- Clay
- Sand
- Sandy Loam Soil

Grain Size

- A: Aphanitic (grains not visible)
- VF: Very Fine (0.05 - 0.25mm)
- F: Fine (0.25 - 1mm)
- M: Medium (1 - 2mm)
- C: Coarse (>2mm)

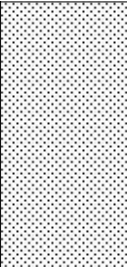
Drillhole Core Log		Hole ID: BH3		Project: 12746 Bob's Farm Assistance			Page: 2 of 2	
Collar RL: 15.478m		Job No.: 12762		Client: Civitas Lifestyle Pty Ltd				
Eastings: 406297.2		Logged By: VGT		Address: Marsh Road, Bobs Farm NSW				
Northing: 6373286.7		Driller: Total Drill						
Drill Type:		Date: 08/13						
Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
22 -6 -8 -10 24 26		10.5			Sand		Grey with black fleck (5%)	c

Lithology		Grain Size	
	Clay	A: Aphanitic (grains not visible)	
	Sand	VF: Very Fine (0.05 - 0.25mm)	
	Sandy Loam Soil	F: Fine (0.25 - 1mm)	
		M: Medium (1 - 2mm)	
		C: Coarse (>2mm)	

Drillhole Core Log		Hole ID: BH4		Project: 12746 Bob's Farm Assistance			Page: 1 of 2	
Collar RL: 9.452m		Job No.: 12762		Client: Civitas Lifestyle Pty Ltd		 vgt environmental compliance solutions and laboratories		
Eastings: 406260.7		Logged By: VGT		Address: Marsh Road, Bobs Farm NSW				
Northing: 6373082.8		Driller: Total Drill						
Drill Type:		Date: 08/13						
Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
0		0.2			Sand	Sandy loam soil	Grey	m
8		2.8			Sand		Tan	m
2								
6		2			Sand	Minor buff mottles	Raffia	m
4								
4		0.6			Sand		Oyster / Black	m
6		0.9			Sand	Silty; high organics?	Black	
2		2			Sand		Driftwood	m
8								
0		1			Sand		Tan	m
10		0.5			Sand		Buff	m
		1.5			Sand		Driftwood	mc
-2								
12								
-4								
14								
-6								
16								
-8		12.5			Sand		Cloud Grey with black fleck (2-4%)	mcg
18								
-10								
20								

Lithology
 Sand

Grain Size
A: Aphanitic (grains not visible)
VF: Very Fine (0.05 - 0.25mm)
F: Fine (0.25 - 1mm)
M: Medium (1 - 2mm)
C: Coarse (>2mm)

Drillhole Core Log		Hole ID: BH4		Project: 12746 Bob's Farm Assistance			Page: 2 of 2	
Collar RL: 9.452m		Job No.: 12762		Client: Civitas Lifestyle Pty Ltd				
Eastings: 406260.7		Logged By: VGT		Address: Marsh Road, Bobs Farm NSW				
Northing: 6373082.8		Driller: Total Drill						
Drill Type:		Date: 08/13						
Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
-12 -14 22 24								

Lithology

Sand

Grain Size

A: Aphanitic (grains not visible)

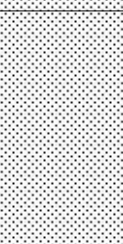
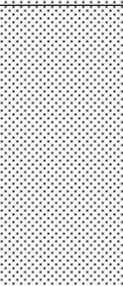
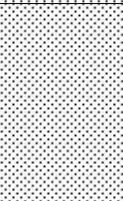
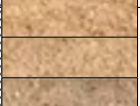
VF: Very Fine (0.05 - 0.25mm)

F: Fine (0.25 - 1mm)

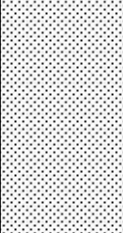
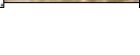
M: Medium (1 - 2mm)

C: Coarse (>2mm)

Drillhole Core Log	Hole ID: BH5	Project: 12746 Bob's Farm Assistance	Page: 1 of 2
Collar RL: 18.249m	Job No.: 12762	Client: Civitas Lifestyle Pty Ltd	
Eastings: 406803.7	Logged By: VGT	Address: Marsh Road, Bobs Farm NSW	
Northing: 6373515.8	Driller: Total Drill		
Drill Type:	Date: 08/13		

Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
0	18	1			Sand		Grey (darker at top)	m
		1			Sand	Silty in part	Tan / Buff	m
2	16							
		3.5			Sand		Buff	m
4	14							
6	12							
		9			Sand	No silt	Raffia	m
8	10							
10	8							
12	6							
14	4							
		3			Sand		Pale Ochre	mc
16	2							
		1.5			Sand		Cloud Grey (minor pale ochre)	mc
18	0							
		1			Sand		Cloud	
20								

Lithology Clay Sand	Grain Size A: Aphanitic (grains not visible) VF: Very Fine (0.05 - 0.25mm) F: Fine (0.25 - 1mm) M: Medium (1 - 2mm) C: Coarse (>2mm)
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Drillhole Core Log		Hole ID: BH5		Project: 12746 Bob's Farm Assistance			Page: 2 of 2	
Collar RL: 18.249m		Job No.: 12762		Client: Civitas Lifestyle Pty Ltd				
Eastings: 406803.7		Logged By: VGT		Address: Marsh Road, Bobs Farm NSW				
Northing: 6373515.8		Driller: Total Drill						
Drill Type:		Date: 08/13						
Depth (m)	Elevation (RL)	Thickness (m)	Graphic Log	Chip Tray	Lithology	Comments	Colour	Grain Size
22	-2	2.4			Clay	Shells common	Grey with black fleck (5-10%)	mc
	-4	0.2			Sand	Shells	Black Lead Grey	
	-6	3.9			Sand	Minor shell grit	Light Grey with balck fleck (1-2%)	
26	-8							

Lithology		Grain Size	
	Clay		Sand
		A: Aphanitic (grains not visible)	
		VF: Very Fine (0.05 - 0.25mm)	
		F: Fine (0.25 - 1mm)	
		M: Medium (1 - 2mm)	
		C: Coarse (>2mm)	

Appendix B

Sample Photos

Plan of:	Bobs Farm Drilling Samples	Location:	3631 Nelsons Bay Road, Bobs Farm, NSW	Our Ref:	12786_BF_GA2024_Q003_V1_A2.pdf
Figure:	A2	Council:	Port Stephens	DWG By:	RG
Sheet:	1 of 1	Tenures:	N/A	Project Manager:	GT
Version/Date:	V1 05/03/2026	Client:	Newcastle Sand	Office:	Thornton

Figure:	A2	Council:	Port Stephens	DWG By:	RG
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Sheet:	1 of 1	Tenures:	N/A	Project Manager:	GT
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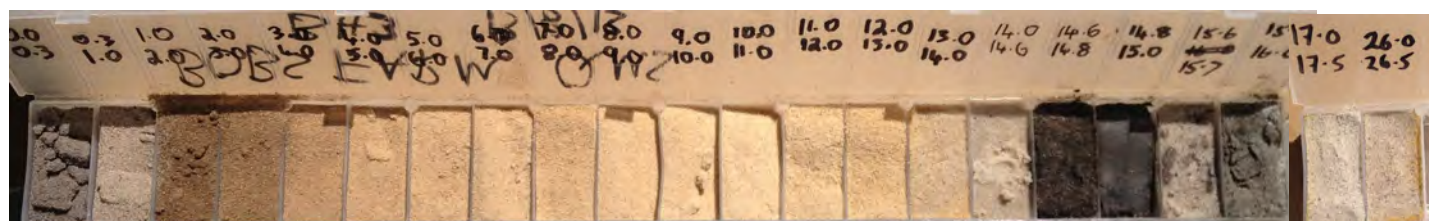
Version/Date:	V1 05/03/2026	Client:	Newcastle Sand	Office:	Thornton
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BH1



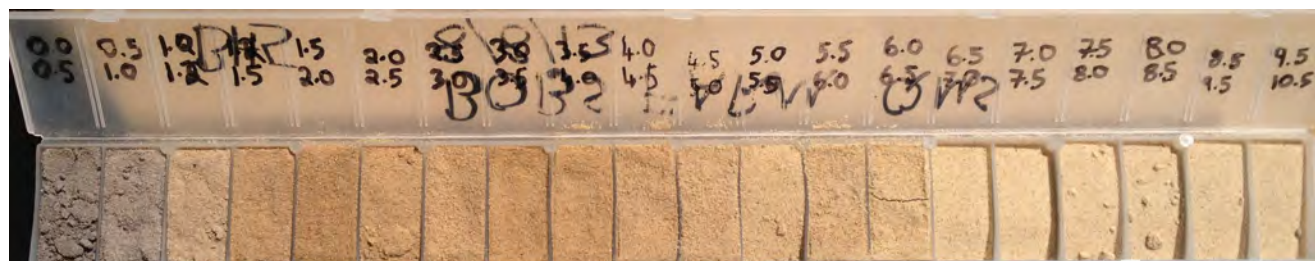
BH2



BH3



BH4



BH5



BH6



Beyond Compliance

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