CARBINE RESOURCES
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ASX / MEDIA ANNOUNCEMENT **4 July 2022**

Maiden Muchea West Silica Sand Resource
93Mt @ 99.71% SiO_2

HIGHLIGHTS

- **Maiden Resource confirms the exceptional quality of the Muchea West Silica Sand Project**
  - **93 Million Tonnes of 99.71% SiO_2 with Fe_2O_3 at 250ppm, Al_2O_3 0.044% (Indicated: 39.89Mt of 99.73% SiO_2 with Fe_2O_3 at 250ppm, Al_2O_3 0.034%; Inferred 53.28Mt of 99.70% SiO_2 with Fe_2O_3 at 260ppm, Al_2O_3 0.052%)**
  - **Includes higher grade resource at Southeast Area of Interest of 21 Mt of 99.73% SiO_2 with Fe_2O_3 at 250ppm, Al_2O_3 0.023% (Indicated: 9.60Mt of 99.74% SiO_2 with Fe_2O_3 at 260ppm, Al_2O_3 0.022%; Inferred 11.22Mt of 99.72% SiO_2 with Fe_2O_3 at 250ppm, Al_2O_3 0.024%) and an Exploration Target of 152 Mt to 168 Mt of 99.6% to 99.8% SiO_2[1]**
- **Resource covers less than 5% of the Muchea West landholding and is confined to cleared tracks only**
- **Resource exceeds CRB's expectations based on the maiden Exploration Target of 800Mt - 1Bt at average grade of 99.6% - 99.9% SiO_2 across 100% of landholding[2]**
- **Size and grade of the Resource illustrates the potential for Muchea West to become a low impurity supplier of silica products to the burgeoning APAC glass markets**
- **Raw unprocessed product exceeds the quality of many processed products of other silica sand projects**
- **Scoping Study to be finalised utilising samples from the 2021 drilling**
- **Mining licence application process commenced**

Peter Batten, Managing Director of Carbine, stated *"The results of the Mineral Resource Estimate demonstrate the robustness and exceptional quality of the Muchea West Silica Sand deposit. This estimate combines the prior drilling from 2019 with Carbine's 2021 drilling over an area of less than 5% of the landholding at Muchea West. 100% of that landholding of 100km^2 is silica sand.*

"The high silica grade and the low levels of impurities of the raw, in situ, deposit places Carbine at the forefront of existing Australian silica sand projects. Preliminary process testwork has demonstrated that a simple process of wet attritioning alone can reduce the Muchea West Fe_2O_3 content by 65% with similar reductions in the other deleterious elements for the Muchea West silica sand[3]."

The potential quantity and grade of the Exploration Target for the Southeast Area of Interest is conceptual in nature. There has been insufficient exploration to estimate further Mineral Resources and it is uncertain if further exploration will result in the estimation of additional Mineral Resources.

[1] Refer to cautionary statement above.
[2] ASX announcement 29 July 2021 "Maiden Exploration Target Estimated for Muchea West Silica Sand Project"
[3] ASX announcement 29 July 2021 "Maiden Exploration Target Estimated for Muchea West Silica Sand Project"

Carbine Resources Limited (ASX: CRB) (**Carbine**, the **Company**) is pleased to present the results of a Mineral Resource Estimate (JORC 2012). The Resource is based on the results of drilling completed in 2019 (Ausco) and 2021 (Carbine) and was prepared by independent consultants, Widenbar and Associates (**Widenbar**).

Table 1: Muchea West Silica Sand Project – Mineral Resource Estimate – All Drilling

Material	Classification	SiO_2 Cutoff %	Volume million m^3	Tonnes million	Density t/m^3	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	K_2O %	TiO_2 %	LOI %
Main Sand	Indicated	99.00	25.90	39.89	1.54	99.73	0.034	0.025	0.003	0.052	0.135
Main Sand	Inferred	99.00	18.80	28.95	1.54	99.73	0.038	0.025	0.003	0.054	0.131
Main Sand	**Total**	**99.00**	**44.70**	**68.84**	**1.54**	**99.73**	**0.035**	**0.025**	**0.003**	**0.053**	**0.134**
Lower Sand	Indicated	99.00	-	-	1.54	-	-	-	-	-	-
Lower Sand	Inferred	99.00	15.80	24.32	1.54	99.66	0.069	0.029	0.006	0.057	0.165
Lower Sand	**Total**	**99.00**	**15.80**	**24.32**	**1.54**	**99.66**	**0.069**	**0.029**	**0.006**	**0.057**	**0.165**
Main + Lower	Indicated	99.00	25.90	39.89	1.54	99.73	0.034	0.025	0.003	0.052	0.135
Main + Lower	Inferred	99.00	34.60	53.28	1.54	99.70	0.052	0.026	0.005	0.056	0.147
Main + Lower	**Total**	**99.00**	**60.50**	**93.17**	**1.54**	**99.71**	**0.044**	**0.026**	**0.004**	**0.054**	**0.142**

A total of 315 drill holes were completed at the Muchea West project for a total of 2,737m over the course of the two drill campaigns. The drilling was performed using an Aircore (Vacuum) drill rig operated by Strataprobe WA Pty Ltd. All drilling to date has been located on existing, cleared tracks avoiding the need for clearing of the native vegetation and minimising any potential spread of jarrah dieback.

Drill holes were located using a handheld GPS and, prior to the commencement of drilling, the drill lines were searched for metal objects buried underground using ground GPR and magnetic surveys.

Assay and lithological data from these 315 drill holes were used to interpret the base and top of the silica sand horizon as presented in the drilling data. This defines the Main Sand horizon. A surface has also been generated at 3m above the water table, representing the likely true base of the silica sand; this zone is coded as the Lower Sand.

These surfaces have been used to constrain a block model of silica grades using an Ordinary Kriging interpolation methodology.

The Muchea West Silica Sand Mineral Resource has been classified in the Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (**JORC Code**) and has been reported at a 99.00 % SiO_2 cutoff.

Logging data from an additional 28 water bores (for a total of 1,315m) was also used as an aid to interpretation. No grade data from the water bores was used.

All samples were analysed by Intertek Genalysis Laboratories.

Collar, assay and lithological logging data was provided as Excel spreadsheets and imported into Micromine 2021 for further processing.

A Micromine format drill hole database was created and the data validated and checked, including:

- Checks for duplicate collars
- Checks for missing samples
- Checks for down hole from-to interval consistency

- Checks for overlapping samples
- Checks for samples beyond hole depth

The base of white to off-white silica sand (generally > 99.6% SiO2) was digitised along section lines and in the region around water bores where that information was available in the down hole logging. A Data Terrain Model (DTM) surface was then generated honouring the known data points.

Tenure

The Muchea West Project covers a land area of 102km^2 and consists of a single granted exploration licence, E70/4905. The Muchea West Project is located directly adjacent to VRX Silica Ltd's Muchea Project.

Project Geology

The Project is underlain by the Bassendean Sand Formation, which extends over large areas of the Swan Coastal Plains of the Perth Basin from about 23 km north of Jurien, to about 15km southwest of Busselton. The Bassendean Sand Formation is considered to have a maximum thickness of about 45 m, and the unit is found as a strip parallel to the coast, having a width of about 10-20 km, and its western edge about 5-10km inland. Concretionary ferruginous material, locally known as "coffee rock", is developed discontinuously in the sand near the groundwater table. In the Tenement, good quality silica sand overlies iron rich brown sand, occasionally interspersed with ferruginous nodules.

The upper units of the Bassendean Sand Formation are typically clean, well-rounded and well sorted sands. At depth, it is commonly brown to dark brown with high iron contents, however closer to the surface the sand is cream/white. The physical, chemical and mineralogical characteristics of the Bassendean Sands can vary considerably, resulting in variation in the quality of the sand regionally as well as locally. In general, the Bassendean Sand Formation is covered with very little or no overburden.

The region surrounding the Project has been explored for both silica sand and mineral sands.

Rock Model

An "empty" block model is first generated beneath the topography using the following block parameters:

Table 2: Block Model Setup Parameters

	Block Model Centroids		
	Minimum	Maximum	Size
East	394000	404000	20
North	6500000	6510000	20
RL	57.5	132.5	5

The top of sand, base of sand and 3m above water table surfaces are assigned to the initial block model to form a rock model with blocks coded as shown below.

Table 3: Block Model Material Coding

Surface	Material
Topography	
	Surficial
Top of Sand	
	Main Sand
Base of Sand	
	Basal Sand
3m Above Water Table	
	Waste

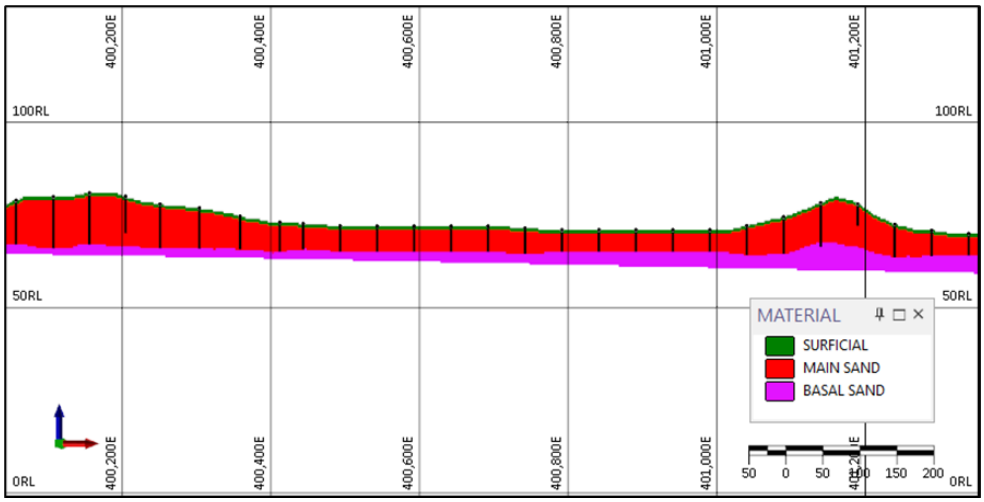

Figure 1: Carbine Section Line 1 - Block Model Material Coding

Model Interpolation

Model interpolation has been carried out using Ordinary Kriging in Micromine 2022. A check model has also been generated using Inverse Distance Squared interpolation.

Kriging and search parameters are shown below.

Tables 4 and 5: Kriging Parameters

Search			Minimum	Maximum	Minimum	Maximum	Minimum
East	North	RL	Number of Samples	Number of Samples	per Hole	per Hole	Number of Holes
500	500	10	2	10	2	2	2

Variances	Single Spherical Scheme Model Parameters Nugget	Partial Sill	Total Sill
	0.15	0.85	1
	Direction 1	Direction 2	Downhole
	Az 0° Dip 0°	Az 90° Dip 0°	Az 0° Dip 90°
Ranges	211	505	5.30

Resource Classification

The Muchea West Silica Sand Mineral Resource has been classified in the Indicated and Inferred categories, in accordance with the JORC Code. A range of criteria has been considered in determining this classification including:

- Geological continuity;
- Data quality;
- Drill hole spacing;
- Modelling technique; and
- Estimation properties including search strategy, number of informing data and average distance of data from blocks.

Geological Continuity

Geological continuity is understood with high confidence. The classification reflects this level of confidence.

Data Quality

Resource classification is based on information and data provided to Widenbar from the Carbine database. Descriptions of drilling techniques, survey, sampling/sample preparation, analytical techniques and database management/validation provided by Carbine indicate that data collection and management is well within industry standards. Widenbar considers that the database represents an accurate record of the drilling undertaken at the Project.

Drill Hole Spacing

Drill hole location plots have been used to ensure that local drill spacing conforms to the minimum expected for the resource classification. Indicated material is confined to areas within 50m of the Ausco section lines and 100m of the Carbine section lines. Inferred material is restricted to areas within 100m of the Ausco section lines and 150m of the Carbine section lines. Material has been estimated up to 400m from all section lines, but is not classified as part of the JORC 2012 Compliant Mineral Resource.

Due to the restrictions on Native Vegetation Clearance and to avoid the potential spreading of jarrah dieback, all drilling to date has been confined to cleared tracks only and only in areas devoid of jarrah dieback.

Modelling Technique

The resource model was generated using an Ordinary Kriging interpolation method.

The number of holes and samples used, the kriging variance, the kriging efficiency, the slope of regression and the average distance of samples from each block, were all stored in the block model.

In general, the kriging variance, search pass and average distance are all broadly correlated with drill hole spacing.

The above parameters were used as a guide in combination with drill spacing to arrive at a final resource classification.

Final Classification

A plan showing the distribution of the resource classification for the Main Sand material is shown below.

Figure 2: Main Sand Resource Classification

The Lower Sand unit (between the base of the Main Sand and the 3m-above-water-table surface) has also been estimated and classified using the same distance parameters as for the Main Sand unit, but at one level of classification lower, due to the sparseness of data in this zone; this has resulted in this zone only having Inferred and Unclassified material.

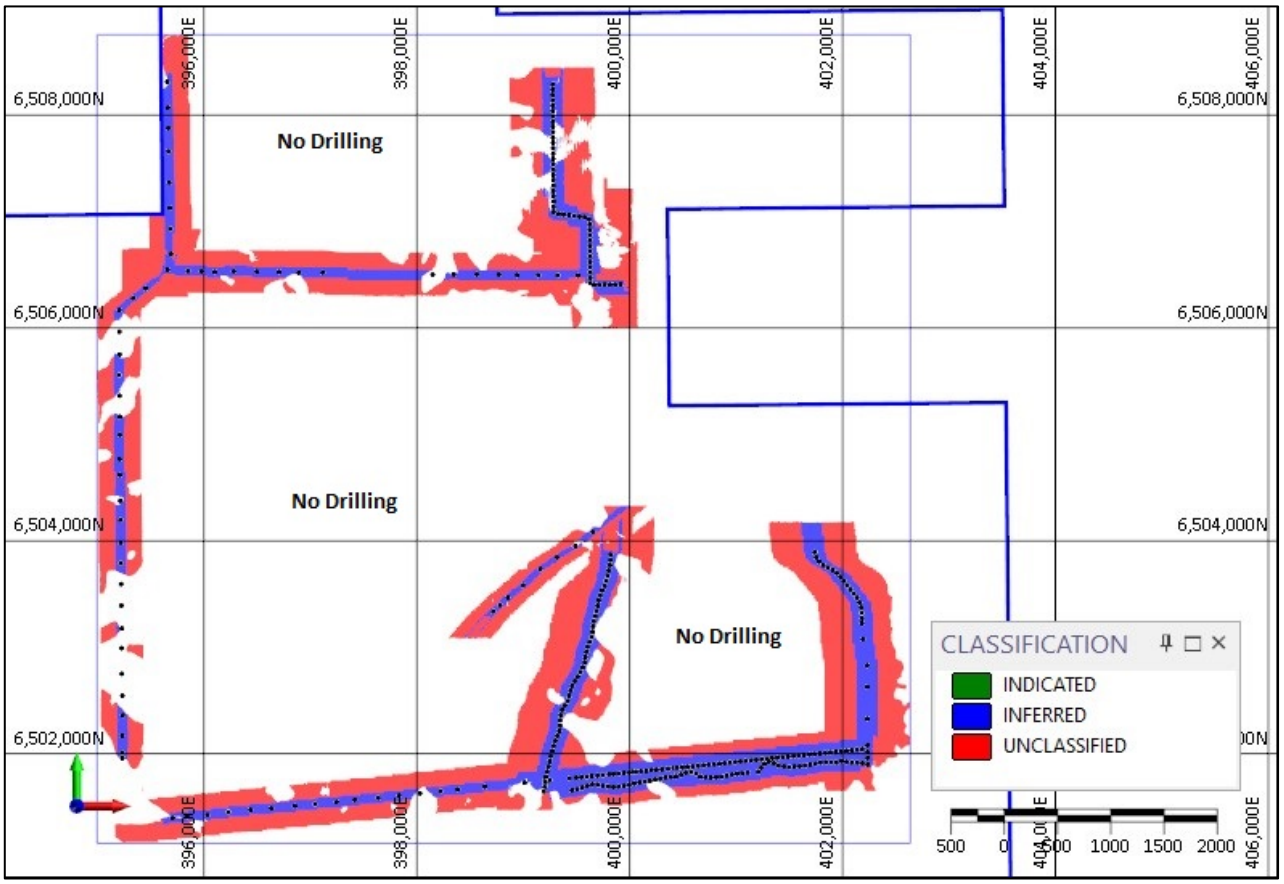

Figure 3: Lower Sand Resource Classification

The JORC Code requires that industrial minerals are reported "in terms of the mineral or minerals on which the project is to be based and must include the specification of those minerals" and that "it may be necessary, prior to the reporting of a Mineral Resource or Ore Reserve to take particular account of certain key characteristics or qualities such as likely product specifications, proximity to markets and general product marketability".

The high purity silica sands at Muchea West with over 99.6% SiO_2 and low levels of impurity (Fe_2O_3 and Al_2O_3) exceed the requirements for Float and Container glass. This unusually high grade can result, following a simple processing route, in a number of products at the premium end of the silica glass market including the ultra clear, high-tech glass market.

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Resource Estimates

The Muchea West Mineral Resource has been reported at various cutoffs for various combinations of material and classification category.

Table 6: Main Sand Indicated and Inferred Resource

		SiO_2 Cutoff	Volume	Tonnes	Density	SiO_2	$Al2O_3$	Fe_2O_3	K_2O	TiO_2	LOI
Material	Classification	%	m^3 (millions)	(millions)	t/m^3	%	%	%	%	%	%
Main Sand	Indicated	99.70	20.51	31.59	1.54	99.77	0.023	0.022	0.002	0.049	0.116
Main Sand	Indicated	99.60	24.04	37.02	1.54	99.76	0.025	0.024	0.003	0.050	0.125
Main Sand	Indicated	99.50	24.90	38.35	1.54	99.75	0.027	0.024	0.003	0.051	0.128
Main Sand	Indicated	99.40	25.29	38.94	1.54	99.74	0.029	0.025	0.003	0.051	0.130
Main Sand	Indicated	99.30	25.51	39.28	1.54	99.74	0.030	0.025	0.003	0.052	0.132
Main Sand	Indicated	99.20	25.75	39.65	1.54	99.74	0.032	0.025	0.003	0.052	0.133
Main Sand	Indicated	99.10	25.82	39.76	1.54	99.73	0.033	0.025	0.003	0.052	0.134
Main Sand	Indicated	99.00	25.90	39.89	1.54	99.73	0.034	0.025	0.003	0.052	0.135
Main Sand	Indicated	98.80	25.97	39.99	1.54	99.73	0.035	0.025	0.003	0.053	0.136
Main Sand	Indicated	98.60	25.99	40.02	1.54	99.73	0.035	0.025	0.003	0.053	0.137
Main Sand	Indicated	98.50	25.99	40.03	1.54	99.73	0.035	0.025	0.003	0.053	0.137
Main Sand	Indicated	98.25	26.01	40.06	1.54	99.73	0.035	0.025	0.003	0.053	0.138
Main Sand	Indicated	98.00	26.02	40.08	1.54	99.73	0.035	0.025	0.003	0.053	0.138
Main Sand	Indicated	97.00	26.05	40.12	1.54	99.73	0.036	0.025	0.003	0.053	0.139
Main Sand	Inferred	99.70	14.95	23.03	1.54	99.77	0.024	0.021	0.002	0.050	0.113
Main Sand	Inferred	99.60	17.31	26.65	1.54	99.76	0.027	0.023	0.003	0.052	0.120
Main Sand	Inferred	99.50	17.89	27.56	1.54	99.75	0.030	0.023	0.003	0.052	0.123
Main Sand	Inferred	99.40	18.24	28.09	1.54	99.75	0.032	0.024	0.003	0.053	0.125
Main Sand	Inferred	99.30	18.45	28.41	1.54	99.74	0.033	0.024	0.003	0.053	0.128
Main Sand	Inferred	99.20	18.66	28.74	1.54	99.74	0.036	0.024	0.003	0.054	0.129
Main Sand	Inferred	99.10	18.73	28.85	1.54	99.73	0.037	0.024	0.003	0.054	0.130
Main Sand	Inferred	99.00	18.80	28.95	1.54	99.73	0.038	0.025	0.003	0.054	0.131
Main Sand	Inferred	98.80	18.85	29.02	1.54	99.73	0.039	0.025	0.003	0.054	0.132
Main Sand	Inferred	98.60	18.86	29.04	1.54	99.73	0.039	0.025	0.003	0.054	0.133
Main Sand	Inferred	98.50	18.86	29.04	1.54	99.73	0.039	0.025	0.003	0.054	0.133
Main Sand	Inferred	98.25	18.87	29.06	1.54	99.73	0.039	0.025	0.003	0.054	0.133
Main Sand	Inferred	98.00	18.88	29.07	1.54	99.73	0.040	0.025	0.003	0.054	0.133
Main Sand	Inferred	97.00	18.91	29.12	1.54	99.72	0.041	0.025	0.004	0.054	0.135
Main Sand	Total	99.70	35.46	54.61	1.54	99.77	0.024	0.021	0.002	0.050	0.115
Main Sand	Total	99.60	41.35	63.68	1.54	99.76	0.026	0.023	0.003	0.051	0.123
Main Sand	Total	99.50	42.79	65.90	1.54	99.75	0.028	0.024	0.003	0.052	0.126
Main Sand	Total	99.40	43.52	67.03	1.54	99.75	0.030	0.024	0.003	0.052	0.128
Main Sand	Total	99.30	43.95	67.69	1.54	99.74	0.031	0.025	0.003	0.052	0.130
Main Sand	Total	99.20	44.41	68.39	1.54	99.74	0.034	0.025	0.003	0.053	0.132
Main Sand	Total	99.10	44.55	68.61	1.54	99.73	0.034	0.025	0.003	0.053	0.132
Main Sand	Total	99.00	44.70	68.84	1.54	99.73	0.035	0.025	0.003	0.053	0.134
Main Sand	Total	98.80	44.81	69.01	1.54	99.73	0.036	0.025	0.003	0.053	0.134
Main Sand	Total	98.60	44.85	69.06	1.54	99.73	0.036	0.025	0.003	0.053	0.135
Main Sand	Total	98.50	44.85	69.08	1.54	99.73	0.037	0.025	0.003	0.053	0.135
Main Sand	Total	98.25	44.88	69.12	1.54	99.73	0.037	0.025	0.003	0.053	0.136
Main Sand	Total	98.00	44.90	69.15	1.54	99.73	0.037	0.025	0.003	0.053	0.136
Main Sand	Total	97.00	44.96	69.23	1.54	99.72	0.038	0.025	0.003	0.053	0.137

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Table 7: Main + Lower Sand Indicated and Inferred Resource

		SiO_2 Cutoff	Volume	Tonnes	Density	SiO_2	$Al2O_3$	Fe_2O_3	K_2O	TiO_2	LOI
Material	Classification	%	m^3 (millions)	(millions)	t/m^3	%	%	%	%	%	%
Main+Lower	Indicated	99.70	20.51	31.59	1.54	99.77	0.023	0.022	0.002	0.049	0.116
Main+Lower	Indicated	99.60	24.04	37.02	1.54	99.76	0.025	0.024	0.003	0.050	0.125
Main+Lower	Indicated	99.50	24.90	38.35	1.54	99.75	0.027	0.024	0.003	0.051	0.128
Main+Lower	Indicated	99.40	25.29	38.94	1.54	99.74	0.029	0.025	0.003	0.051	0.130
Main+Lower	Indicated	99.30	25.51	39.28	1.54	99.74	0.030	0.025	0.003	0.052	0.132
Main+Lower	Indicated	99.20	25.75	39.65	1.54	99.74	0.032	0.025	0.003	0.052	0.133
Main+Lower	Indicated	99.10	25.82	39.76	1.54	99.73	0.033	0.025	0.003	0.052	0.134
Main+Lower	Indicated	99.00	25.90	39.89	1.54	99.73	0.034	0.025	0.003	0.052	0.135
Main+Lower	Indicated	98.80	25.97	39.99	1.54	99.73	0.035	0.025	0.003	0.053	0.136
Main+Lower	Indicated	98.60	25.99	40.02	1.54	99.73	0.035	0.025	0.003	0.053	0.137
Main+Lower	Indicated	98.50	25.99	40.03	1.54	99.73	0.035	0.025	0.003	0.053	0.137
Main+Lower	Indicated	98.25	26.01	40.06	1.54	99.73	0.035	0.025	0.003	0.053	0.138
Main+Lower	Indicated	98.00	26.02	40.08	1.54	99.73	0.035	0.025	0.003	0.053	0.138
Main+Lower	Indicated	97.00	26.05	40.12	1.54	99.73	0.036	0.025	0.003	0.053	0.139
Main+Lower	Inferred	99.70	24.61	37.89	1.54	99.77	0.024	0.021	0.002	0.049	0.114
Main+Lower	Inferred	99.60	28.87	44.45	1.54	99.76	0.027	0.023	0.003	0.051	0.124
Main+Lower	Inferred	99.50	30.99	47.73	1.54	99.74	0.030	0.024	0.003	0.052	0.132
Main+Lower	Inferred	99.40	32.18	49.55	1.54	99.73	0.035	0.025	0.003	0.053	0.136
Main+Lower	Inferred	99.30	32.95	50.74	1.54	99.72	0.040	0.025	0.004	0.054	0.138
Main+Lower	Inferred	99.20	33.88	52.17	1.54	99.71	0.046	0.026	0.004	0.055	0.142
Main+Lower	Inferred	99.10	34.32	52.86	1.54	99.70	0.050	0.026	0.004	0.055	0.145
Main+Lower	Inferred	99.00	34.60	53.28	1.54	99.70	0.052	0.026	0.005	0.056	0.147
Main+Lower	Inferred	98.80	34.77	53.54	1.54	99.69	0.054	0.027	0.005	0.056	0.148
Main+Lower	Inferred	98.60	34.83	53.63	1.54	99.69	0.054	0.027	0.005	0.056	0.149
Main+Lower	Inferred	98.50	34.85	53.66	1.54	99.69	0.054	0.027	0.005	0.056	0.150
Main+Lower	Inferred	98.25	34.86	53.69	1.54	99.69	0.055	0.027	0.005	0.056	0.150
Main+Lower	Inferred	98.00	34.88	53.72	1.54	99.69	0.055	0.027	0.005	0.056	0.150
Main+Lower	Inferred	97.00	34.93	53.80	1.54	99.69	0.056	0.027	0.005	0.056	0.152
Main+Lower	Total	99.70	45.12	69.48	1.54	99.77	0.023	0.021	0.002	0.049	0.115
Main+Lower	Total	99.60	52.91	81.48	1.54	99.76	0.026	0.023	0.003	0.050	0.125
Main+Lower	Total	99.50	55.90	86.08	1.54	99.75	0.029	0.024	0.003	0.051	0.131
Main+Lower	Total	99.40	57.46	88.49	1.54	99.74	0.032	0.025	0.003	0.052	0.133
Main+Lower	Total	99.30	58.45	90.02	1.54	99.73	0.035	0.025	0.003	0.053	0.135
Main+Lower	Total	99.20	59.62	91.82	1.54	99.72	0.040	0.025	0.004	0.054	0.138
Main+Lower	Total	99.10	60.14	92.62	1.54	99.72	0.042	0.026	0.004	0.054	0.140
Main+Lower	Total	99.00	60.50	93.17	1.54	99.71	0.044	0.026	0.004	0.054	0.142
Main+Lower	Total	98.80	60.73	93.53	1.54	99.71	0.045	0.026	0.004	0.054	0.143
Main+Lower	Total	98.60	60.82	93.66	1.54	99.71	0.046	0.026	0.004	0.054	0.144
Main+Lower	Total	98.50	60.84	93.69	1.54	99.71	0.046	0.026	0.004	0.054	0.144
Main+Lower	Total	98.25	60.87	93.75	1.54	99.71	0.046	0.026	0.004	0.054	0.145
Main+Lower	Total	98.00	60.91	93.80	1.54	99.71	0.047	0.026	0.004	0.054	0.145
Main+Lower	Total	97.00	60.98	93.92	1.54	99.70	0.048	0.026	0.004	0.055	0.146

South East Resource

The South East Area of Interest at the deposit will be a focus for the Company to convert it to the initial mining area, and has a separate high-grade resource reported. The unclassified material in the block model has been extended in this area (see Figure 4) and has been reported as an Exploration Target reflecting the greater confidence related to this material.

Samples from this drilling have been used to compile a bulk sample that is representative of the characteristrics of the silica sand in the drilling that produced the Resource Estimate. The bulk sample is the feed for a series of Scoping Studies that are underway and should result in a proposed flow sheet and final product characteristics.

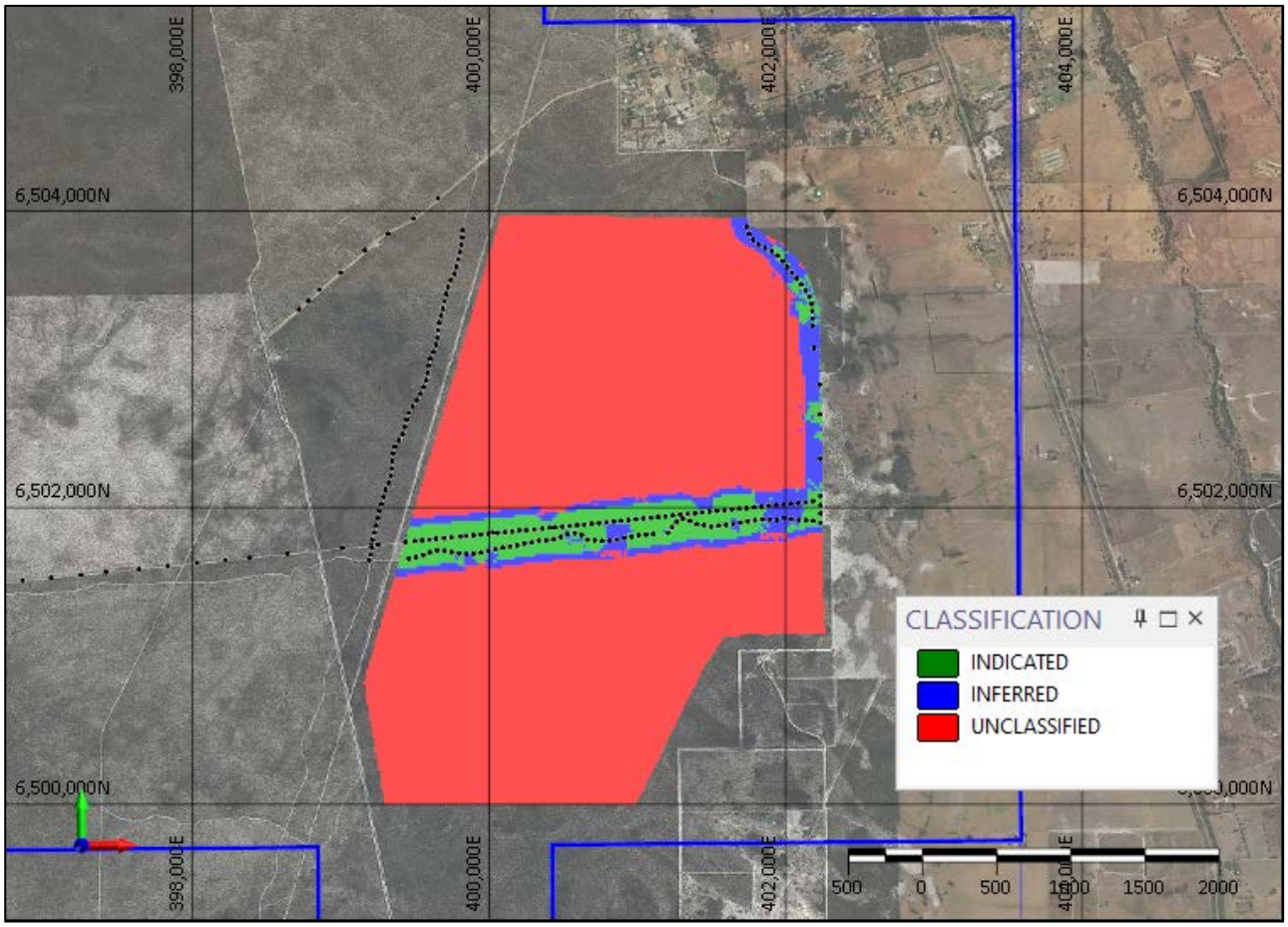

Figure 4 South East Area Sand Resource Classification

Table 8: Main + Lower Sand Indicated and Inferred Resource for South East drilling only

Classification	SiO_2 Cutoff %	Volume million m^3	Tonnes million	Density t/m^3	SiO_2 %	Al_2O_3 %	Fe_2O_3 %	K_2O %	TiO_2 %	LOI %
Indicated	99.00	6.23	9.60	1.54	99.74	0.022	0.026	0.003	0.043	0.148
Inferred	99.00	7.29	11.22	1.54	99.72	0.024	0.025	0.003	0.044	0.167
Total	**99.00**	**13.52**	**20.82**	**1.54**	**99.73**	**0.023**	**0.025**	**0.003**	**0.043**	**0.158**

Revised Exploration Target

The Mineral Resource Estimate is defined from within the maiden Exploration Target reported to the ASX on 29 July 2021 and has the affect of removing that area from the Exploration Target and upgrading it to a Resource. Subsequently the Exploration Target is reduced.

The subsetting of the South East Resource and the South East Exploration Target changes the reporting of the Exploration Target.

In addition to the maiden Resource of 93 Mt @ 99.7% SiO_2, the Exploration Target for the Muchea West Silica Sand Project is now reported as:

- Western Area: 400Mt to 500 Mt of Silica Sand at an average grade of 99.6% to 99.8 % SiO_2
- Eastern Area: 210Mt to 270 Mt of Silica Sand at an average grade of 99.6% to 99.8 % SiO_2
- **South Eastern Area 152 Mt to 168 Mt of Silica Sand at an average grade of 99.6% to 99.8% SiO_2**

The potential quantity and grade of the Exploration Targets are conceptual in nature. There has been insufficient exploration to estimate further Mineral Resources and it is uncertain if further exploration will result in the estimation of additional Mineral Resources.

Ongoing Work

Following the receipt of the final assays in March 2022, a representative bulk sample was compiled from selected samples (different holes and different depths) spaced across the south east drill lines 1 and 2. The samples were taken from both the 2019 drill program and the 2021 drill program.

This bulk sample was delivered to Independent Metallurgical Operations Pty Ltd (**IMO**) and will be utilised in the testwork required to refine the proposed process flowsheet and deliver processed material that will be used in any future offtake discussions reagarding silica sand products from the Muchea West Project. IMO will produce a costed flowsheet and operating parameters that will be fed into a financial model for the assessment of the project.

IMO have engaged Orelogy Pty Ltd to undertake the mining, transport and port components of the study.

The initial fauna studies have been completed but this is an ongoing study and is not anticipated to be reported until H2 2022. The initial botanical study has been deferred at this time until a clearer understanding of the proposed drilling is completed.

Early rains means that Carbine cannot access the Muchea West Project during the 2022 winter to avoid the spread of jarrah dieback and comply with tenement conditions.

ASX Listing Rule 5.8.1 Summary

The following summary presents a fair and balanced representation of the information contained within the Mineral Resource Estimation Technical Report for the Muchea West Silica Sand Project:

- Silica sand at Muchea West occurs within the upper units of the Bassendean Sand Formation. These upper units are typically clean, well-rounded and well sorted sands. At depth, it is commonly brown to dark brown with high iron contents, however closer to the surface the sand is cream/white. The physical, chemical and mineralogical characteristics of the Bassendean Sands can vary considerably, resulting in variation in the quality of the sand regionally as well as locally. In general, the Bassendean Sand Formation is covered with very little or no overburden. (ASX LR 5.8.1 Geology & Geological Interpretation)
- Samples were obtained from vacuum tube drilling. The quality of the drilling, sampling methodology and analysis for this method was assessed by the Competent Person and is of an acceptable standard for the use in a Mineral Resource Estimation publicly reported in accordance with the JORC 2012 Edition Guidelines. (ASX LR 5.8.1 Sampling & Drilling)

- Major and trace elements with the exception of SiO_2 were analysed using a four acid digestion method followed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry (ICP-OES) analysis by Intertek's Perth Laboratory. Loss on Ignition at 1000º C (LOI) was analysed by a Thermal Gravimetric Analyser. SiO_2 was back calculated by subtracting all ICP major and trace elements plus LOI from 100%, as this is the most accurate way of determining the SiO_2 content of material with very high SiO_2 content.
- Mineral Resources were estimated by the use of a 3D wireframe of the base surface for the Main Sand and Lower Sand, above the water table and constrained by a DTM surface. The soil layer was excluded from the resource on the basis of it being stockpiled in the future for rehabilitation purposes. (ASX LR 5.8.1 Estimation Methodology)
- Grade estimation was completed using ordinary kriging with hard boundaries applied between identified layers. No grade cuts were applied to the data. (ASX LR 5.8.1 Estimation Methodology)
- For reporting purposes a SiO_2 cutoff grade of 99.0% was selected. There is, within the data, a natural cutoff at 99.0% SiO_2 and this reflects the homogeneous nature of the Muchea West sand dunes. The exploitation of Silica Sand is a bulk commodity exercise and using the natural cutoff ensures all portions of the dune are represented in the resource,
- The Mineral Resource Estimation is quoted from all classified blocks above the basal layer wireframes for Main Sand and Lower Sand and below the soil surface layer (ASX LR 5.8.1 Classification)
- The Mineral Resource categories have been determined using the distance away from the data points, see Figure 2. The drill spacing at Muchea West is set at a maximum distance of 200m. The nominal spacing for a Measured category in Silica Sand is 100m x 50m, Indicated 200m x 200m and Inferred 400m x 400m. (ASX LR 5.8.1 Classification)
- The Mineral Resource Estimation is classified as Indicated and Inferred on the basis of the drill hole logging, drill hole sampling analytical results, drill spacing, statistical analysis, confidence in geological continuity and metallurgical testing results (ASX LR 5.8.1 Classification)
- The likelihood of eventual economic extraction was considered on the basis of its indicative product specifications based on metallurgical testing performed, infrastructure access with respect to road/rail/port, product marketing capacity and potential open pit mining scenarios and concluded that the Muchea West Silica Sand Project is an Industrial Mineral Resource in accordance with the terms of Clause 49 of the JORC Code. (ASX LR 5.8.1 Mining, Metallurgy and Economic Modifying Factors)

This announcement is approved for release by the Board of the Company.

For further information, please contact:

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COMPETENT PERSON'S STATEMENT

The information in this report that relates to technical assessment of the Mineral Resource Estimate and Exploration Target for the Muchea West Silica Sand Project is based on, and fairly represents, information and supporting documentation prepared by Mr Lynn Widenbar BSc(Hons), MSc, DIC, a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Widenbar is an employee of Widenbar and Associates Pty Ltd. Mr Widenbar has sufficient experience that is relevant to the technical assessment of the mineral assets under consideration, the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Mr Widenbar consents to the inclusion of the matters based on his information in the form and context in which it appears in this Presentation and has not withdrawn his consent before lodgement of this report.

Appendix 1: JORC Code, 2012 Table 1. Muchea West Silica Sand Project

(Criteria in this section apply to all succeeding sections.)

JORC Code, 2012 Table 1. Muchea West Silica Sand Project

Section 1 Sampling Techniques and Data

Criteria	JORC Code exploration	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• Aircore Vacuum drilling and sampling was completed by Ausco in October 2019. • Aircore Vacuum drilling and sampling was also completed by Carbine in December 2021. • All sand samples were collected via a cyclone in a plastic tub and homogenised, rotary split into a larger sample bag (~3kg) and 2 smaller subsamples. Sampling was carried out at 1 m intervals. • One of the subsamples is prepared for laboratory and the other is retained for repeat analysis and QA/QC purposes. The bulk sample is retained for later metallurgical test work. Drilled samples for each 1 m interval were also placed into chip trays. • The first metre of all the drill holes is mainly the humus layer and not considered for lab analysis. • The samples were analysed by Intertek Genalysis Laboratories. • Major and trace elements in exception to SiO_2 were analysed using a four-acid digest followed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry (ICP-OES) analysis.
Drilling techniques	• Drill type (e.g. core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face sampling bit or other type, whether core is oriented and if so, by what method, etc).	• A total of 82 air-core drill holes were drilled by Ausco • A total of 233 air-core drill holes were drilled by Carbine to varying depths, with the deepest hole ending at 22m. • Aircore Vacuum drilling was undertaken using a tractor mounted drill rig operated by Strataprobe Pty Ltd. All holes were drilled vertically.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Each sample bag was weighed to determine the indirect record of sample recovery. • All the samples were visually checked for recovery, moisture and contamination. • The sample splitter and cyclone are cleaned regularly to prevent sample contamination.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	• All the holes were logged by a geologist. Sand colour, roundness, sorting and composition was recorded. • Logging was qualitative in nature. • All logged results were plotted in a spreadsheet. All the Chip tray samples for each hole were photographed.

	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged	
Subsampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all subsampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Two sub-samples weighing ~1 kg were collected using rotary split. The remainder was retained for metallurgical test work. • Subsample collected from every 2m were composited and submitted to Intertek Genalysis Laboratories in Perth for drying and pulverization in a zircon bowl and disk pulveriser. • QC procedures involved the use of certified and non-certified reference materials and field duplicates. The field duplicates have accurately reflected the original assay. • Sample sizes are considered appropriate to correctly represent the bulk tonnage mineralisation based on the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and assay value ranges for silica sand.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• 2m composite samples were submitted to the Intertek Genalysis Laboratory in Perth. The assay method for multi-element analysis consisted of a four-acid digest including hydrofluoric, nitric, perchloric and hydrochloric acids in Teflon beakers, with inductively coupled plasma (ICP)-optical (atomic) emission spectrometry finish. Silica is reported by difference. • Laboratory QAQC includes the use of internal standards using certified reference material, laboratory duplicates and pulp repeats. The field duplicates have accurately reflected the original assay. Certified standards have generally reported within acceptable limits. A full analysis of all the quality control data has been undertaken. • No geophysical tools were utilised for the exploration.
Location of data Points	• Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control	• The position of the drill holes were located using a GPS in MGA coordinates with the expected relative accuracy. Down hole surveys have not been carried out as drill holes are less than 25 m in depth and drilled vertically through the predominantly flat lying sand deposits. • The collars have been located in UTM, MGA94, Zone 50K co-ordinates. • The topographic surface was based on LiDAR digital elevation model obtained from the DWER, Western Australia.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the	• The drilling was spread evenly across the project area. A total of 82 drill holes were drilled at a nominal 200m spacing along six lines, and 233 drill holes were drilled at nominal 50m spacing on six drill lines along existing tracks.

	Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied	• The adopted spacing for the drilling investigation was sufficient based on the geological continuity of the sand formation being tested, and sufficient to be applied for resource estimation • All samples were taken at even 1 m intervals, and compositing of every 2m was required for assays.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• The vertical air-core drilling program has systematically covered the areas of interest within the tenement, It only covers some sections of an extensive dune system. • The orientation of the drilling (vertical) is approximately perpendicular to the sub-horizontal mineralisation and is unlikely to have introduced any significant sampling bias. • No sampling bias has been identified in the data.
Sample security	• The measures taken to ensure sample security	• All samples have been bagged and removed from site and are under the care of the senior field assistant and stored at a secure Subiaco storage unit.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• There has been no audit or review of the drilling, sampling or analysis at this time.

Section 2: Reporting of Exploration Results

Criteria	JORC Code exploration	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The drilling was completed on E70/4905, a granted Exploration Licence. 100% owned by Carbine Resources Ltd. The tenement area falls within the Whadjuk People claim (managed by SWALSC). • No impediments on a licence to operate at time of reporting.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The region surrounding the Project has been explored for both silica sand and mineral sands. Between 1986 and 2005 ACI Operations Pty Ltd (ACI) owned and operated a silica sands mine within the tenure producing 7,000 to 10,000t of silica for container glass applications.
Geology	• Deposit type, geological setting and style of mineralisation.	• The tenement is underlain by the Bassendean Sand, which extends over large areas of the Swan Coastal Plains of the Perth Basin from about 23 km north of Jurien, to about 15km southwest of Busselton. • The Bassendean Sand is considered to have a maximum thickness of about 45 m, and the unit is found as a strip parallel to the coast, having a width of about 10-20 km, and its western edge about 5-10km inland. • The Bassendean Sands is typically clean, well-rounded and well sorted. At depth, it is commonly brown to dark brown with high

		iron contents, however closer to the surface the sand is cream/white. The physical, chemical and mineralogical characteristics of the Bassendean Sands can vary considerably, resulting in variation in the quality of the sand regionally as well as locally. In general, the Bassendean Sands is covered with very little or no overburden.
Drill hole information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: -easting and northing of the drillhole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar - dip and azimuth of the hole - downhole length and interception depth - hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case	• Exploration results are not being reported.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Exploration results are not being reported.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. • If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	• All drill holes are vertical and intersect the tabular, flat lying mineralisation orthogonally, and represent close to true thickness.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	• Relevant diagrams have been included in this report.
Balance Reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be	• Exploration results are not being reported.

	practiced to avoid misleading reporting of Exploration Results	
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Groundwater was intersected in some holes. Holes were terminated on encountering the water table.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	• Planned to conduct further drilling in potential target areas.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• The Carbine drill hole database is managed and validated by iSpatial. Drill hole data was provided to Widenbar in Micromine format. • All drill hole data was validated, including: o Checks for duplicate collars o Checks for missing samples o Checks for down hole from-to interval consistency o Checks for overlapping samples o Checks for samples beyond hole depth
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The Competent Person made a site visit on 5th May 2022.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The confidence in the overall geological interpretation is very good. • The resource is within a sand dune and geological continuity is visual at surface and confirmed from drilling • The grade continuity is seen in the drill samples where >90% of assays are >90.5% SiO_2
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and	• The silica sand deposit over an area approximately 8km by 8 km. • The sand Mineralisation typically extends 10 to 15m below the surface.

	lower limits of the Mineral Resource.	
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• A block model was constructed using Micromine 2022 software. A parent cell size of 20m E x 20m N x 2.5m RL was used, and sub-blocking to 2 x 2 x 0.5m. cc • Grades were interpolated into blocks using 1m composites by an Ordinary Kriging methodology. • An Inverse Distance Squared interpolation was used as a check estimate. • The search ellipse was 500 x 500m x 10m. • The minimum number of samples is 2 and maximum number of samples is 10. • Minimum number of holes is 1. Minimum number of samples per hole is 2; maximum number of samples per hole is 4. • The interpreted top and base of sand surfaces are used as hard boundaries for estimation. • The estimation process was validated by comparing global block grades with the average composite grades, visual checks comparing block grades with raw assay data and swathe plots. All methods showed good correlation between drill data and block model.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• All tonnages are estimated on a dry basis and moisture content is not considered in the resource estimate.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• A nominal cutoff of 99% SiO_2 has been used for reporting purpose, to exclude some areas of lower grade material in the parts of the north-west of the deposit. For the most part, use of a cutoff is irrelevant because of the very high level of purity of the silica sand.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made	• It is assumed that mining will be by open pit methods.

		regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	•	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• The Muchea West silica sand can, by a simple attrition process, produce a final product that exceeds the requirements set for the high purity silica sand market (ASX Announcement 29 July 2021). • Independent Metallurgical Operations (IMO) are undertaking beneficiation process optimisation studies utilising the drill samples produced from the recent programme and, if necessary, the samples from the earlier 82 holes completed prior to Carbine's acquisition of the Muchea West Silica Sand project.
Environmental factors or assumptions	•	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• PGV Environmental have been contracted to commence a botanical survey and Terrestrial Ecosystems have been engaged to complete the fauna studies with commencement. • These surveys are a prerequisite for the lodging of a Program of Work (PoW) with the Department of Mines, Industry Regulation and Safety (DMIRS) and will be continued to complete the requirements for the lodging of a MLA.
Bulk density	•	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• The bulk density for the sand is 1.54 t/m^3, based on values known from similar nearby deposits.
Classification	•	The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been	• The Mineral Resource has been classified in the Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore

	taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	Reserves (JORC Code). • A range of criteria has been considered in determining this classification including: o Geological continuity; o Data quality; o Drill hole spacing; o Modelling technique; o Estimation properties including search strategy, number of informing data and average distance of data from blocks. • The mineral resource estimate appropriately reflects the Competent Person's views of the deposit.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• The current model has not been audited by an independent third party.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The resource estimate is deemed to be an accurate reflection of the geological interpretation. • The mineral resource statement relates to a global tonnage and grade estimate. Grade estimates have been made for each block in the block model. • There has been no mining to date and thus there are no production records.