

5 July 2022

New Mining, Infrastructure Lease Applications lodged for Northern Silica Development

- Two Mining Lease Applications (MLA's) lodged for Diatreme's Northern Silica Development, located near Port of Cape Flattery in Far North Qld
- Four Infrastructure MLA's also lodged, delivering access to Cape Flattery port and road connections to community of Hope Vale
- Diatreme well positioned to advance further resource definition, technical studies and regulatory approvals on second high-grade silica project
- MLA's add to Diatreme's flagship Galalar Silica Sand Project (GSSP), amid surging demand for high-quality silica products from fast-growing solar PV industry.

Emerging silica sands developer and explorer, Diatreme Resources Limited (ASX: DRX) announced today the lodgement of two Mining Lease Applications (MLA's) and four Infrastructure MLA's for its Northern Silica Development, located near the Port of Cape Flattery in Far North Queensland. The proposed MLA's cover the entire Si2 and Casuarina dune systems.

Permitting on the Company's 1.35 million tonne per annum (Mtpa) flagship Galalar Silica Sand Project (GSSP) is well advanced and remains a priority for Diatreme. Mining Project Agreements are in the final stages of drafting, and environmental permitting approvals expected during 2022 will allow the project to advance in 2023. Once approved, the GSSP will deliver significant benefits to all stakeholders, including First Nations and other local communities and Queensland.

Diatreme's CEO, Mr Neil McIntyre commented: "Along with our flagship Galalar Silica Project, our Northern Silica Development is rapidly emerging as a highly valuable long-life proposition, providing in the medium term the potential for two, low capex projects producing a high-grade low iron silica product for fast-growing Asian solar PV markets.

"These Mining Lease and Infrastructure applications are a necessary first step in opening up this area to potential export development activity for the benefits of all stakeholders. This will provide new jobs, investment and other economic benefits for First Nations and other local communities, while fostering sustainable development in line with our ESG commitments."

The lodged Mining and Mining Infrastructure Lease applications comprise:

Lease Name	Number	Purpose
Northern Silica	MLA 100308	Mining, processing, with infrastructure supporting both Northern Silica and Casuarina Silica leases.
Casuarina Silica	MLA 100309	Separated lease with infrastructure areas noted.
Northern Silica Port Access	MLA (Infrastructure) 100310	Access to port across Mitsubishi granted ML.
FNQPCL Cape Flattery Access	MLA (Infrastructure) 100313	Lease over the Ports North Freehold Leases.
Starke-Northern Silica Access 1	MLA (Infrastructure) 100311	Shortest possible access form Starke Rd to Northern Silica and camp.
Starke-Northern Silica Access 2	MLA (Infrastructure) 100312	Backup access to Northern Silica and Casuarina Silica.

(Refer **Figure 1** for locations)

The parallel advancement of the GSSP and Northern Silica projects over the coming five years will allow for increased targeted production capacity and scale. Diatreme’s ESG principles govern its delivery of low impact projects, aligned to Australia’s 2022 Critical Minerals Strategy, which recognises the importance of silica in the rapid transition to lower global carbon emissions.

The combined GSSP and Northern Silica projects contain a total resource estimated at 199.5Mt (refer ASX release 17 March 2022). This provides a large resource base for two standalone projects, located in a stable and ESG compliant jurisdiction, amid increasing demand growth from Asia’s booming solar PV industry. In 2022, Diatreme defined the Si2 North resource at 124Mt (refer ASX release 10 January 2022), located within the Northern Silica MLA.

Diatreme will undertake further drilling in Q3 2022 to assess opportunities to expand the Si2 North resource and upgrade information on the Casuarina dune system.

Concurrently, Diatreme is applying for an Infrastructure Lease (Section 316 of the *Mineral Resources Act 1989*) for product transport purposes to link the Northern Silica MLA areas to the State-owned Cape Flattery Port, located within 15km of the project area. Expansion or addition to the current port facilities is being assessed, facilitating the port’s long-term operation and expansion.

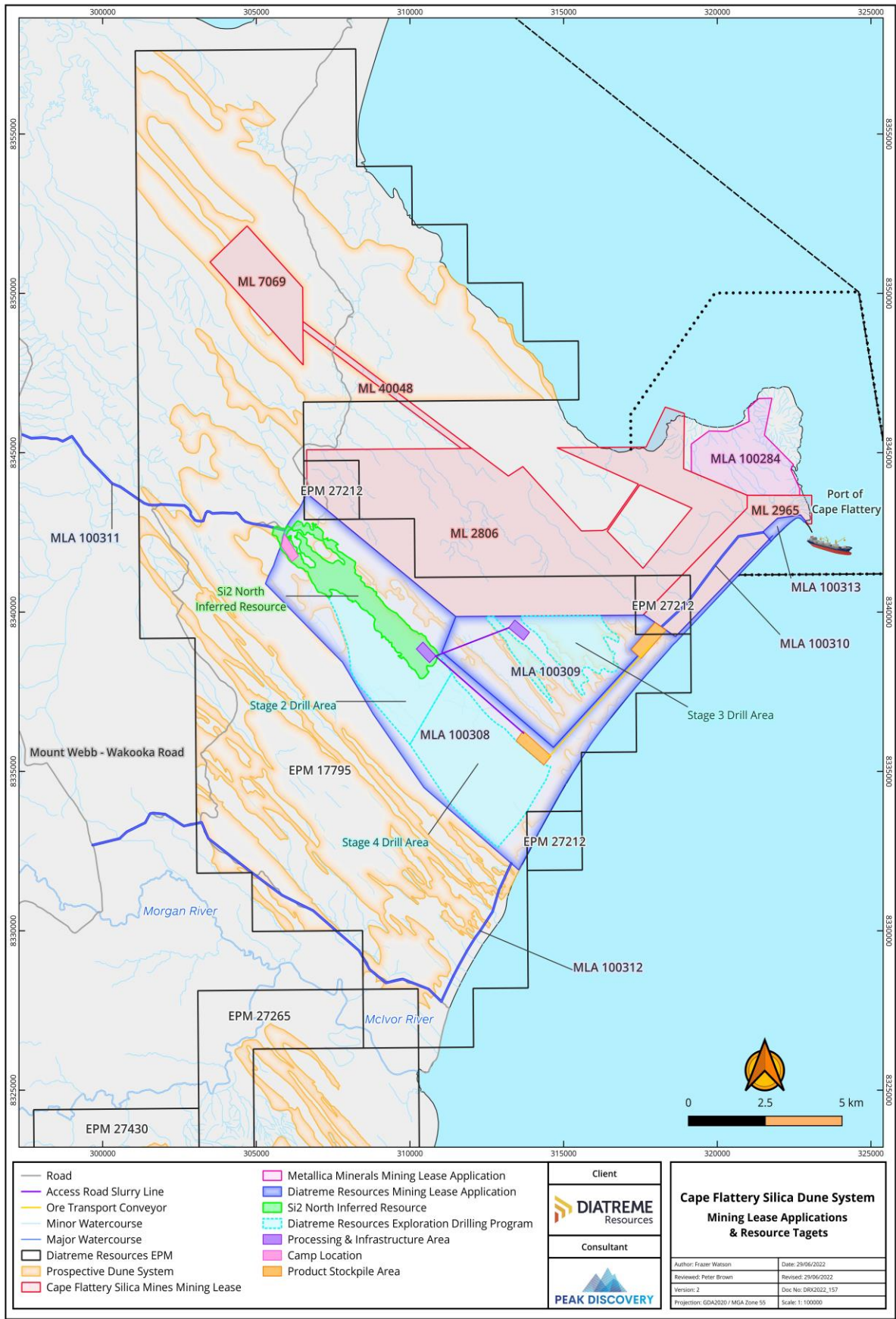


Figure 1: Mining Lease Applications and Resource Targets

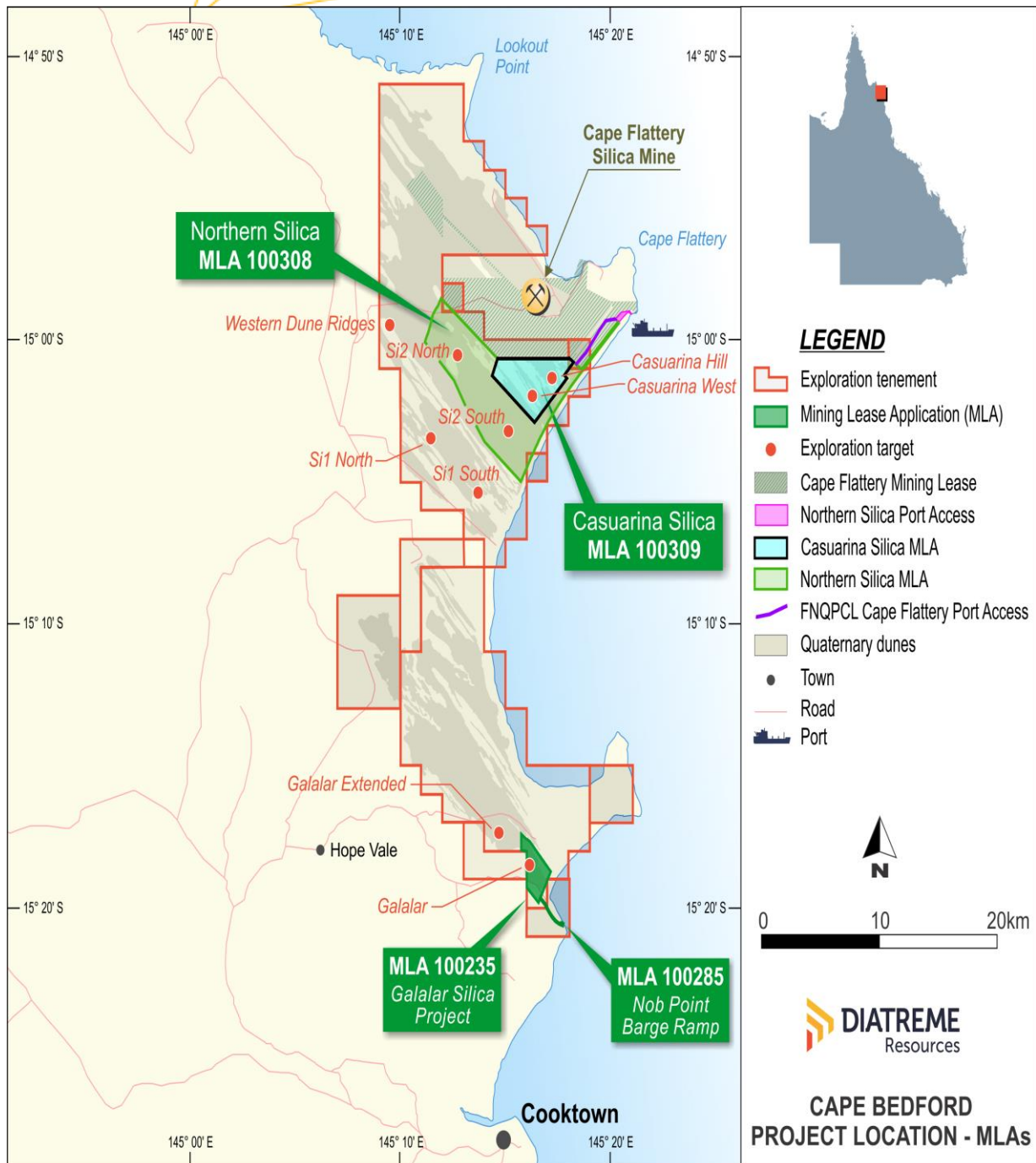



Figure 2: Cape Bedford project locations showing principal Diatreme MLA's regionally

Planning and implementation of any required changes to the port are being completed in consultation with Far North Queensland Ports Corporation Limited (Ports North), the State's responsible entity. The near-term requirements of transshipment from GSSP and the longer term requirement for product shipping from the Northern Silica Development are being evaluated.

Oceangoing vessels are expected to deliver the product to Asian markets. Options also exist for possible barging of the product to Townsville, with downstream domestic manufacturing of high quality silica products, subject to further analysis.



The latest advances by Diatreme concerning its northern silica projects follow the announcement of a strategic partnership with global material solutions company, Sibelco (refer ASX release 27 June 2022). The two partners have agreed on a joint venture to develop the GSSP and Northern Resource Project, supported by a significant initial investment from Sibelco of \$35 million, subject to regulatory approvals.

Summary

Northern Silica Pty Ltd, a wholly owned subsidiary of Cape Silica Holding Pty Ltd, both currently wholly owned by Diatreme Resources has lodged an MLA for its Northern Silica Development near Cape Flattery. The MLA has been made under section 234(1) the *Mineral Resources Act 1989*, with the purpose being to extract, process and export silica sand and heavy mineral sands.

The MLA allows road transport, mining, stockpiling, processing, pipeline and covered conveying of silica product from the proposed Northern Silica mines to the Cape Flattery Port facility. The MLA is proposed to be used in conjunction with a second adjacent MLA and associated infrastructure lease applications.

Diatreme is targeting high purity silica and heavy minerals that are intended to be shipped for sale either in the domestic or export market. The primary use for high purity silica is in the production and manufacture of new and high technology glass products such as solar panels, transparent photovoltaic windows, mobile phones, computer screens and other appliances requiring high transparency glass. Phases of the silica sand dunes also contain accessory, though separated grains of zircon and titanium minerals such as ilmenite and rutile. Subject to evaluation this may deliver a by-product at Northern Silica.

In Queensland, silica is a “prescribed mineral” under the Mineral Resources Act (1989). An annual production threshold of 100,000 tonnes per annum is proscribed by the Mineral Resources Regulation 2013 and as Northern Silica is expected to exceed this threshold, a development plan has been completed. These minerals are recognised as critical minerals by the Queensland and Commonwealth governments.

Primary access to the project can be gained via Starcke from Wakooka Road along an unnamed road alignment. A secondary access will run southwest from the ML boundary along the coastline before connecting to the gazetted road to Hopevale. Figure 1 details the Mining Lease and Infrastructure Lease application areas.



Background/History

Diatreme holds a dominant exploration position in a known silica province from Cape Bedford to Cape Flattery, over a 500 sq km area. The underlying exploration tenements to Northern Silica comprise EPM 17795, EPM 27212, EPM 27430, and EPM 27265. The tenement package is shown in Figure 2, along with the current location of MLA's at GSSP. MLA 100235 includes the proposed mine, whilst MLA100825 includes haulage and export infrastructure located at Nob Point. The Northern Resource Project comprises all exploration areas north of the Mclvor River.

In early 2022, Diatreme drilled a second high-grade silica sand resource within the northern area of the Cape Bedford (EPM17795) exploration tenement (Si2 North Project). The Si 2 North resource is located approximately 53km north of Cooktown, abutting the CFSM mining leases, with potential for access to existing export infrastructure. Casuarina also forms part of the deposits located in the NRP exploration area and has been exploited by CFSM to the boundary of EPM 17795. Processing facilities are located nearby.


Diatreme has collected sufficient data on Casuarina from pre-existing drill holes and notes the dune has been subject to drilling from 1983. The metallurgical results are consistent with the high qualities produced from CFSM with western holes having marginally higher Fe_2O_3 relating to locally elevated heavy mineral sand (HMS) assemblages.

Diatreme has completed field sampling with auger holes spread around the periphery of the main dune and is commencing further assessment in 2022, which will include upgrading metallurgical testing. Some of the area is located within a coastal management zone. Permitting is required to access the dune for ongoing drilling in 2022-23.

The combined GSSP and Si2 North projects contain a total resource estimated at **199.5 Mt** (refer ASX release 17th March 2022). This provides a large resource base for two standalone operations, located in a stable and ESG compliant jurisdiction.

Traditional Owner Negotiations

Diatreme will seek to negotiate a Mining Project Agreement with the Native Title Clan members, utilising the extensive negotiations and documentation produced from the GSSP agreements. This is designed to introduce commonality to agreements with the Native Title clan groups and will define a joint commitment to apply the principles of Free, Prior and Informed Consent to all aspects of decision making by Hope Vale Congress and the Native Title Holders.



A liaison committee will be established to interact with Diatreme site personnel and the Native Title clan representatives and Hope Vale Congress. Diatreme is also working with other stakeholders, including the Hope Vale Shire Aboriginal Council and relevant State and Commonwealth government agencies. Ongoing community consultation and information meetings are planned for 2022-2023.

This announcement was authorised for release by:

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About Diatreme Resources

Diatreme Resources (ASX:DRX) is an emerging Australian producer of mineral and silica sands based in Brisbane. Our key projects comprise the Galalar Silica Project and Northern Resource Project in Far North Queensland, located next to the world's biggest silica sand mine at Cape Flattery.

In Western Australia's Eucla Basin, Diatreme's 'shovel-ready' Cyclone Zircon Project is considered one of a handful of major zircon-rich discoveries of the past decade.

Diatreme has an experienced Board and management, with expertise across all stages of project exploration, mine development and project financing together with strong community engagement skills.

Diatreme's silica sand resources will contribute to global decarbonisation by providing the necessary high-grade silica for use in the solar PV industry.

The Company has a strong focus on ESG, working closely with Traditional Owners and all other key stakeholders to ensure the long-term sustainability of our operations, including health, safety and environmental stewardship.

For more information, please visit www.diatreme.com.au.



References to previous ASX releases

This announcement contains references to the following ASX releases:

- Transformational strategic partnership and placement with global material solutions leader Sibelco – 27 June 2022
- Quarterly Activities Report – 29 April 2022
- Resource grows to 200Mt across high-grade silica projects – 17 March 2022
- Diatreme expands Northern Resource Project exploration – 23 February 2022
- Diatreme discovers 2nd major high-grade silica deposit – 10 January 2022

Forward-looking statements

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