

BLACK SWAN GRAPHENE INC.
Management's Discussion and Analysis
For the period ended September 30, 2025
(In Canadian dollars, unless otherwise noted)

Date: November 27, 2025

This Management's Discussion and Analysis ("MD&A") provides a discussion and analysis of the financial condition and results of the operations of Black Swan Graphene Inc. ("Black Swan" or the "Company"), to enable a reader to assess material changes in the financial condition and results of operations as at September 30, 2025. The MD&A should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2024 and the condensed interim consolidated financial statements for the period ended September 30, 2025. All amounts included in the MD&A are expressed in Canadian dollars, unless otherwise specified.

The Company's condensed interim consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as published by the International Accounting Standards Board. Please refer to Note 3 of the audited consolidated financial statements as at and for the year ended December 31, 2024 for disclosure of the Company's significant accounting policies.

The Directors of the Company have reviewed this MD&A and the condensed interim consolidated financial statements for the period ended September 30, 2025, and the Company's Board of Directors approved these documents prior to their release.

Corporate Background

Black Swan is focused on the large-scale production and commercialization of patented high-performance and low-cost graphene products aimed at several industrial sectors, including concrete, polymers and others, which are expected to require large volumes of graphene.

The Company is listed on the TSXV as a Tier 2 Industrial Issuer under the name "Black Swan Graphene Inc." The Common Shares trade on the TSXV under the symbol "SWAN".

The Company acquired certain intangible assets related to a patented graphene processing technology from Thomas Swan & Co. Ltd. ("**Thomas Swan**"), and a license from Trinity College Dublin for the production of exfoliated defect-free, non-oxidised 2-D materials in large quantities (the "**TCD License**"), which license was previously held by Thomas Swan. In addition, Black Swan and Thomas Swan have entered into a License Agreement and a Sub-License Agreement, pursuant to which Black Swan has granted Thomas Swan a license to graphene processing technology for production of up to 1,000 tonnes per year and Black Swan has sub-licensed the TCD License to Thomas Swan, respectively.

The TCD License is subject to an incremental royalty rate ranging from 3.0% up to 9.0% of net sales when greater than €20,000,000 (\$27,345,000) and have lives of 15 or 20 years from the commencement of commercial sales related to such licenses.

To acquire the licenses, the Company paid Thomas Swan £3,000,000 (\$5,216,050) and issued 3,875,000 common shares of the Company valued at \$3,853,100, based on the value of the common shares in the previous private placement financing. Mason Graphite Inc., (Note 8) incurred transaction fees totaling \$390,128, which have been recorded within intangible assets and as a contribution from owner and presented within equity.

Corporate Highlights and Overview

- The execution of a binding collaboration agreement with a key equipment supplier, which includes commercial details and minimum commitments for the procurement of long lead items required for large scale production of graphene;
- The grant by the Chinese Authorities of a Certificate of Invention Patent to Black Swan for apparatus and method for bulk production of atomically thin 2-dimensional materials including graphene, increasing the portfolio of patents and patent applications to 20 in 9 countries;
- The execution of a Tier-2 Membership Agreement with the Graphene Engineering Innovation Center (“**GEIC**”) of the University of Manchester, a world-class centre which promotes, assists and carries out applied research, commercialisation, and manufacture of graphene;
- The launch of a new website, which includes a corporate video, which will be used for various industry events and furthering the brand awareness of Black Swan: www.blackswangraphene.com;
- The appointment of Mr. Michael Edwards as Black Swan's Chief Operating Officer (“**COO**”). Mr. Edwards joins Black Swan from Thomas Swan & Co. Ltd., where he was the head of the Advanced Materials Division, where the company's graphene processing technology was originally developed;
- Master Distributorship Agreement with Gerdau Graphene Gerdau Graphene will collaborate with Black Swan in order to introduce graphene products and accelerate the adoption of graphene in different industrial applications in the Americas market, including concrete and polymers where Gerdau Graphene will serve as a distributor, working with its customers in the integration of the graphene products, and support the development of existing and new applications;
- On April 6, 2023, the Company and Nationwide Engineering Research and Development Ltd (“**CONCRETENE**”) announced the closing of the Equity Swap and the entering into of the Supply Agreement announced on March 27, 2023, creating a strategic partnership being embedded in a fully integrated supply chain which will include Arup Group Limited (“**Arup**”), a multinational engineering consultancy headquartered in London, United Kingdom, with 18,000 experts working across 140 countries; and
- On September 14, 2023, the Company announced the results of the Scoping Study. The Scoping Study provides an initial evaluation, including processing plant specifications as well as conceptual mechanical, civil, structural, and electrical designs, for its proposed 40,000 square-foot first large-scale production facility, based on the same processing technology currently being used in the facility located in the United Kingdom. The annual production and self-sustaining ramp up of its industry-ready products have been established by taking into consideration customers and distributors' expected demand, as well as strategic partnerships, including the partnerships with Nationwide Engineering Research & Development (“**Cobmore**” formerly “**NERD**”) and Arup. The Scoping Study also established capital and operating cost estimates, as well as financial analysis based on its strategy to build such facility in Québec, Canada, where the Company aims to leverage the emergence of a world class graphite industry as a raw material source and the province's low-cost renewable hydroelectricity. While the initial capacity target stands at 9,868 tonnes per annum in accordance with the Company's initial strategy, expansion beyond this figure will be driven by market dynamics and raw material access.

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- On January 12, 2024, the Company announced a commercial agreement with Hubron International Ltd. ("**Hubron**"), specializing in customised solutions in plastic masterbatch and conductive compound manufacturing. This strategic partnership is set to hasten the commercialization of Black Swan's graphene products, leveraging Hubron's 80 years of compounding expertise and market access.
- On January 17, 2024, the Company announced a range of Graphene Enhanced Masterbatch ("**GEM**") products. These GEMs offer different performance and attributes of products aimed at multiple applications in the polymer industry. This announcement follows a recent commercial agreement ratified with Hubron, a global leader in black masterbatch manufacturing. See *press release dated January 16, 2024*.
- On January 24, 2024 the Company announced the establishment of a Distribution and Sales Agreement (the "**Agreement**") with Thomas Swan, effective as of January 23, 2024. This Agreement leverages the existing strategic partnership and positions Thomas Swan as a value-added non-exclusive distributor and reseller of Black Swan's innovative Graphene Enhanced Masterbatch ("**GEM**") products in the polymer additive market.
- On April 30, 2024 the Company announced the commercialization and release of GraphCore™ 01 family of graphene nanoplatelets products. These products, now in full production volume, are tailored to meet a diverse range of needs within the polymer industry, offering various forms including powders and polymer-ready masterbatches.
- On June 18, 2024 the Company announced having initiated a commercial partnership for the supply of Black Swan's graphene used in the fabrication of GC Shield®, a patented ballistic protection technology. Furthermore, Black Swan is excited to report having received strong interest for its graphene enhanced masterbatch products (*see press release dated April 30, 2024*). Several promising initiatives involving high-profile customers are currently underway, and the Company expects to provide more details in the near future.
- On July 16, 2024 the Company unveiled its new GEM, GEM S27M, the latest innovation in the Company's GraphCore™-01 product line ("GraphCore"). This new offering is a 10% graphene nanoplatelet ("GNP") masterbatch in high-density polyethylene ("HDPE"), designed to deliver transformative benefits.
- On June 18, 2024 the Company announced a Commercial Agreement (the "Agreement") with Broadway Colours Ltd. ("Broadway"), a leading United Kingdom based manufacturer of colour and additive masterbatches, plastic compounds, and rotational moulding powders. Broadway supplies moulders across the United Kingdom, Europe and internationally. Notably, their high-quality materials are specified by a number of multinational consumer goods companies for use in their branded packaging. This strategic partnership aims to accelerate the commercialization of Black Swan's graphene products by leveraging Broadway's technical expertise, manufacturing capabilities, distribution and market reach.
- On February 10, 2025 the Company announced it will consolidate its common shares on the basis of one (1) new Share for every eight (8) currently outstanding shares. The Consolidation will reduce the number of outstanding Shares from 301,730,083 shares to approximately 37,716,260 post-consolidated Shares and the number of outstanding Shares held in escrow will be reduced from

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103,875,793 Shares to 12,984,474 post-consolidated Shares, subject to adjustment for rounding, prior to the Offering.

- On February 14, 2025 following the Company's 8:1 share consolidation effective February 10, 2025, the Company announced it has closed its non-brokered private placement of units of the Company at a price of \$0.50 per Unit for gross aggregate proceeds of \$6,000,000.
- On April 30, 2025, the Company announced the appointment of Jobin George as Technical Sales Manager for the Europe, Middle East and Africa (EMEA) region.
- On May 8, 2025, the Company began trading on the OTCQX under the symbol "BSWGF".
- ON May 14, 2025, the Company announced the execution of a preferred compounder agreement with Modern Dispersions Inc. ("**MDI**"), a leading manufacturer of thermoplastic compounds and concentrates. This strategic partnership aims to promote MDI as a manufacturer of GEM for graphene applications, with Black Swan serving as a preferred supplier of Graphene Nanoplatelets ("**GNP**"). This agreement underscores Black Swan's commitment to fostering strategic partnerships that drive innovation and expand the applications of graphene across diverse industries.
- On June 3, 2025, announced that it has ordered its next-generation production unit, a significant milestone in the Company's industrial scale-up strategy and a key element of its broader effort to position itself as a global leader in graphene-enhanced materials. The Company currently has the capacity to produce up to 40 tonnes of high-quality graphene annually. As part of its growth initiative, the Company is undertaking a significant expansion that will increase its production capacity to 140 tonnes per annum, more than tripling its current capacity.
- On June 27, 2025, the Company announced that it has entered into a non-exclusive distribution and sales agreement with METCO Resources ("**METCO**"), a leading Indian supplier of specialty materials and polymers, to supply Black Swan's GEM for a wide range of polymer applications.
- On July 9, 2025, the Company secured a U.S. patent for breakthrough continuous graphene production process. The patent titled: "Process for the Continuous Production of Sub-Micron Two-Dimensional Materials Such as Graphene" was granted and assigned to the Company and remains in force until January 5, 2039.
- On August 12, 2025, the Company announced it has entered into a non-exclusive distribution and sales agreement with Ferro South Africa ("**Ferro**"). Under the terms of the Agreement, Ferro will distribute and resell Black Swan's GEM products and graphene nanoplatelet ("**GNP**") solutions across South Africa.
- On August 19, 2025, the Company announced it entered into a non-exclusive distribution, reseller and warehouse agreement ("**TS Agreement**") with Thomas Swan. This TS Agreement leverages the existing strategic partnership and positions Thomas Swan as a value-added non-exclusive distributor and reseller of Black Swan's GNP and GEM products for the polymer additive market.

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- On September 9, 2025, the Company reported compelling performance results from production-scales trials conducted by one of its partners, a global masterbatch manufacturer, including testing at end-customer facilities.
- On September 23, 2025, the Company announced the issuance of a Canadian patent titled, “Apparatus and Method for Bulk Production of Atomically Thin 2-Dimensional Materials Including Graphene” (the “Patent”). The Patent solidifies Black Swan’s intellectual property leadership in the field of advanced nanomaterials and scalable graphene production technologies. The patent has an anticipated expiration in October 2037.

Liquidity and Capital Resources

As at September 30, 2025, the Company had working capital of \$7,249,613 (December 31, 2024 - \$2,731,269) which included a cash balance of \$7,218,018 (December 31, 2024 - \$3,003,901), including amounts receivable of \$356,917 and prepaid expenses of \$11,441 offset by accounts payable and accrued liabilities of \$336,763.

Results of Operations

Quarterly information:

	2025 Third	2025 Second	2025 First	2024 Fourth
Revenues	Nil	Nil	Nil	Nil
Net comprehensive income (loss)	\$(1,987,971)	\$(1,089,683)	\$(2,349,914)	\$(3,393,895)
	2024 Third	2024 Second	2024 First	2023 Fourth
Revenues	Nil	Nil	Nil	Nil
Net comprehensive income (loss)	\$(2,332,274)	\$(1,654,120)	\$(643,384)	\$(877,317)

For the period ended September 30, 2025:

During the period ended September 30, 2025, the Company recorded a loss of \$1,987,971 or \$0.04 per share. Expenses incurred during the period ended September 30, 2025 included \$618,784 (September 30, 2024 - \$152,432) in project development expenses, as the Company continued on its strategy of distributing low-cost graphene products aimed at several industrial sectors, including concrete, polymers, Li-ion batteries, and others, which are expected to require large volumes of graphene. The Company incurred \$130,320 in professional fees (September 30, 2024 – \$36,117) comprised of legal fees for services in connection with the transactions discussed, as well as audit fees and listing and filing fees.

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Cash flows

During the period ended September 30, 2025, the Company had a decrease of \$3,593,301 (September 30, 2024 - \$1,572,911 in cash flows from operating activities.

During the period ended September 30, 2025, the Company generated \$nil (September 30, 2024 - \$nil) in cash flow from investing activities.

During the period ended September 30, 2025, the Company generated \$7,807,418 (September 30, 2024 - \$nil) in cash flow from financing activities.

The Company manages and adjusts its capital structure based on available funds in order to support the acquisition, exploration and development of mineral properties. The Board does not establish quantitative return on capital criteria for management, but rather relies on the expertise of the Company's management to sustain future development of the business. The Company considers its capital to consist of common shares.

Management reviews its capital management approach on an ongoing basis and believes that this approach, given the relative size of the Company, is reasonable. There were no significant changes in the Company's approach to capital management during the periods ended September 30, 2025 and 2024.

The Company is not subject to any capital requirements imposed by a lending institution or regulatory body, other than of the TSX Venture Exchange ("TSXV") which requires adequate working capital or financial resources of the greater of (i) \$50,000 and (ii) an amount required in order to maintain operations and cover general and administrative expenses for a period of 6 months.

As of September 30, 2025, the Company believes it is compliant with the policies of the TSXV.

FINANCIAL INSTRUMENTS

Financial instruments recorded at fair value on the statement of financial position are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy has the following levels:

- a) Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities;
- b) Level 2 - Inputs other than quoted prices that are observable for assets or liabilities, either directly or indirectly; and
- c) Level 3 - Inputs for assets and liabilities that are not based on observable market data.

The fair value hierarchy requires the use of observable market inputs whenever such inputs exist. A financial instrument is classified to the lowest level of the hierarchy for which a significant input has been considered in measuring fair value.

The Company's financial instruments include cash, amounts receivable, investment, and accounts payable and accrued liabilities. The carrying values of these financial instruments reported in the statements of financial position approximate their respective fair values (with the exception of the investment) due to the relatively short-term nature of these instruments. As at September 30, 2025 and 2024, the Company classifies their investment as a Level 3 financial instrument.

The following tables illustrates the classification and hierarchy of the Company's financial instruments, measured at fair value in the statements of financial position as at September 30, 2025.

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	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
	Quoted	Valuation	Valuation
	Market price	technique-	technique-non
		observable	observable
Investments, fair value	Market price	market	market
		inputs	inputs
Private investment	-	-	795,249
September 30, 2025			795,249

Within Level 3, the Company includes private company investments that are not quoted on an exchange. The key assumptions used in the valuation of these instruments include (but are not limited to) the value at which a recent financing was done by the investee, company-specific information, trends in general market conditions and the share performance of comparable publicly-traded companies. The following table presents the fair value, categorized by key valuation techniques and the unobservable inputs used within Level 3 as at September 30, 2025.

Description	Fair Value	Valuation Technique	Significant Unobservable input(s)	Range of significant Unobservable input(s)
September 30, 2025		Recent financing	Marketability of shares	0% discount

The Company's risk exposures and the impact on the Company's financial instruments are summarized below:

(a) *Credit risk*

Counterparty credit risk is the risk that the financial benefits of contracts with a specific counterparty will be lost if a counterparty defaults on its obligations under the contract. This includes any cash amounts owed to the Company by those counterparties, less any amounts owed to the counterparty by the Company where a legal right of set-off exists and also includes the fair values of contracts with individual counterparties which are recorded in the financial statements.

a. *Trade credit risk*

The Company is not exposed to significant trade credit risk.

b. *Cash*

In order to manage credit and liquidity risk the Company's policy is to invest only in highly rated investment grade instruments that have maturities of three months or less. Limits are also established based on the type of investment, the counterparty and the credit rating.

(b) *Currency risk*

Currency risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will fluctuate because of changes in foreign exchange rates. The Company's foreign currency risk arises primarily with respect to UK sterling and US dollars from operations. Fluctuations in the exchange rates between these currencies and the Canadian dollar could have a material effect on the Company's business, financial condition and results of operations.

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The Company does not engage in any hedging activity to mitigate this risk. The Company did not have any UK sterling denominated assets and liabilities as at September 30, 2025 or December 31, 2024.

As at September 30, 2025, the Company had accounts payable of \$143,586 denominated in UK sterling (December 31, 2024 - \$nil) (expressed in Canadian dollars):

A 10% strengthening (weakening) of the Canadian dollar against the UK Sterling would increase (decrease) net loss by approximately \$14,600 (December 31, 2024 - \$nil).

As at September 30, 2025, the Company had cash of US dollars of \$13,533 and accounts payable of \$7,587 denominated in US dollars (expressed in Canadian dollars):

A 10% strengthening (weakening) of the Canadian dollar against the United States dollar would decrease (increase) net loss by approximately \$600 (December 31, 2024: \$542).

(c) Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Company's approach to managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due. At September 30, 2025, the Company had a cash balance of \$7,218,018 (December 31, 2024 - \$3,003,901) to settle current liabilities of \$336,763 (December 31, 2024 - \$272,632). The Company's trade payables have contractual maturities of less than 30 days and are subject to normal trade terms.

RELATED PARTY TRANSACTIONS

Compensation of key management personnel of the Company

In accordance with IAS 24, key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Company directly or indirectly, including any directors (executive and non-executive) of the Company. During the three and nine months ended September 30, 2025, the remuneration of directors and other key management personnel was \$242,500 and \$674,326 respectively ((three and nine months ended September 30, 2024 - \$215,000 and \$645,000, respectively). For the three and nine months ended September 30, 2025, a total of \$nil and \$440,048, respectively was recorded in share-based payments expense for stock options and RSU's issued to directors and officers (three and nine months ended September 30, 2024 - \$nil).