## EUR 20 million Fixed Rate N Senior Bonds (NSV) due 15 February 2038
### Final Terms & Conditions

<table>
<thead>
<tr>
<th>Issuer:</th>
<th>Royal Bank of Canada (London Branch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuer Rating:</td>
<td>A1 by Moody’s / A by Standard &amp; Poor’s</td>
</tr>
<tr>
<td>Bail-inable Notes:</td>
<td>The Notes are subject to conversion in whole or in part – by means of a transaction or series of transactions and in one or more steps – into common shares of the Issuer or any of its affiliates under subsection 39.2(2.3) of the Canada Deposit Insurance Corporation Act (the “CDIC Act”) and to variation or extinguishment in consequence, and subject to the application of the laws of the Province of Ontario and the federal laws of Canada applicable therein in respect of the operation of the CDIC Act with respect to the Notes. For a description of Canadian bank resolution powers and the consequent risk factors attaching to the Notes in particular reference is made to <a href="http://www.rbc.com/investorrelations/bail-in-debt.html">http://www.rbc.com/investorrelations/bail-in-debt.html</a> (Disclosure for Bail-inable Notes) which information is hereby incorporated by reference. The Notes do not constitute deposits that are insured under the CDIC Act.</td>
</tr>
<tr>
<td>Instrument:</td>
<td>N Senior Bonds (NSV)</td>
</tr>
<tr>
<td>Status:</td>
<td>Direct, unsecured and unsubordinated obligations of the Issuer</td>
</tr>
<tr>
<td>Trade Date:</td>
<td>07 February 2023</td>
</tr>
<tr>
<td>Issue Date:</td>
<td>15 February 2023 (Settlement Date)</td>
</tr>
<tr>
<td>Maturity Date:</td>
<td>15 February 2038</td>
</tr>
<tr>
<td>Rate of Interest:</td>
<td>From (and including) 15 February 2023 to (but excluding) 15 February 2038 interest shall be payable annually in arrear and accrue at a per annum rate of: 4.65 per cent</td>
</tr>
<tr>
<td>Interest Payment Dates:</td>
<td>The 15 of each February commencing 15 February 2024 with a final payment on the Maturity Date.</td>
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<tr>
<td>Interest Periods:</td>
<td>The period from and including each Interest Payment Date to but excluding the following Interest Payment Date with the first such period being the period from and including the Issue Date to but excluding the first Interest Payment Date.</td>
</tr>
<tr>
<td>Issuer Call Option</td>
<td>The Issuer has the right to call the Notes at par on 15 February 2028 in whole but not in part only upon giving 5 business days’ notice.</td>
</tr>
<tr>
<td>Business Day Convention:</td>
<td>Following</td>
</tr>
<tr>
<td>Day Count:</td>
<td>30/360, Unadjusted</td>
</tr>
<tr>
<td>Issue Price:</td>
<td>100.00 per cent</td>
</tr>
<tr>
<td>Redemption Price:</td>
<td>100.00 per cent</td>
</tr>
</tbody>
</table>
Net Proceeds: EUR 20 million
Business Days: London, TARGET
Denominations: EUR 100,000
Governing Law: German law other than with respect to the Bail-In regime when Province of Ontario and the federal laws of Canada are applicable. By acquiring the notes, each Noteholder (including each beneficial owner) is deemed to attorn to the jurisdiction of the courts in the Province of Ontario in Canada with respect to the CDIC Act and the laws of the Province of Ontario and the federal laws of Canada applicable therein.

Documentation: Standalone N Bond
Settlement: Bilaterally between the Issuer and the Lender(s)
Assignment: Minimum amounts EUR 100,000.
Unlimited.

Arranger: Royal Bank of Canada (London Branch)

Paying Agent, Registrar and Transfer Agent: BNY Mellon Corporate Trust

Royal Bank of Canada, London Branch (the "Issuer")

Duly authorized
In the execution of this registered bonds (Namensschuldverschreibungen) ("N Bonds") function RBC Europe Limited ("RBCEL") acts purely in an arranging and introductory function between Borrower and Lender. There is no advisory function (including, but not limited to, any investment advice) involved. RBCEL has neither a role in, nor responsibility for, the bilateral N Bond transaction between these parties; RBCEL will not, and cannot, be held responsible in any form for the respective performance of the parties under the resulting N Bond transaction.

Additionally, RBCEL undertakes no underwriting responsibility in respect of this issuance and gives no undertaking to buy or sell the underlying N Bond.

This termsheet is for informational purposes only and is strictly confidential.

The N Bonds have not been notified to, registered with or approved by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht - BaFin) for public offer or public distribution under German law.

Accordingly, the registered bonds may not be distributed/offer ed to or within Germany by way of a public distribution/offer within the meaning of applicable German laws, by way of public advertisement or in any similar manner. This termsheet and any other document relating to the offer of the N Bonds, as well as any information contained therein, may not be supplied to the public in Germany or used in connection with any offer for subscription of the registered bonds to the public in Germany or any other means of public marketing.

This termsheet and any other document relating to the offer of the N Bonds are strictly confidential and may not be distributed to any person or entity other than the recipient hereof to whom this termsheet is personally addressed.

The receipt of this termsheet by any person, as well as any information contained herein or supplied herewith or subsequently communicated to any person in connection with any offer for subscription is not to be taken as constituting the giving of investment advice to such person. Each such person should make its own independent assessment of the merits or otherwise of acquiring N Bonds and should take its own professional advice.

**OFFERING INFORMATION**

<table>
<thead>
<tr>
<th>EEA Retail Investor Offering Information</th>
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| The Base Prospectus (as contemplated by the Final Terms of the Notes) has been prepared on the basis that any offer of Notes in any Member State of the European Economic Area ("EEA") which has implemented Regulation (EU) 2017/1129 (the "Prospectus Regulation") will be made pursuant to an exemption under the Prospectus Regulation, as implemented in the Relevant State, from the requirement to publish a prospectus for offers of Notes. Accordingly, the Notes should not be sold or offered, directly or indirectly, to persons in any Relevant State except in circumstances which would not require the publication of a prospectus and any person making or intending to make an offer in that Relevant State of Notes should only do so in circumstances in which no obligation arises for the Issuer or RBC Europe Limited to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation in relation to such offer. No recipient of this termsheet is authorized by any person to act in a way which would result in an offer to it being considered to be a placement through an intermediary for the purposes of the Prospectus Regulation.

The Securities are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the EEA without an up-to-date PRIIPS KID being in place with the prior written consent of RBC Europe Limited and provided in accordance with the PRIIPS Regulation. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (ii) a customer within the meaning of Directive (EU) 2016/97, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii)
not a qualified investor as defined in Regulation (EU) 2017/1129. If the aforementioned consent of RBC Europe Limited has not been received then no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

UK Retail Investor Offering Information

The Securities are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom ("UK"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 ("EUWA"); or (ii) a customer within the meaning of provisions of the FSMA and any rules or regulations made under the Financial Services and Markets Act 2000 (the "FSMA") to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA.

Consequently no key information document ("KID") required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the "UK PRIIPs Regulation") for offering or selling the Securities or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Securities or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

Additional UK Offering Information

Each Dealer has represented, warranted and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any Securities in circumstances in which Section 21(1) of the FSMA would not, if the Issuer was not an authorized person, apply to the Issuer; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Securities in, from or otherwise involving the United Kingdom.

US Offering Information

This termsheet is not an offer of securities for sale in the United States. The Notes have not been and will not be registered under the US Securities Act of 1933, as amended (the "Securities Act") or any state securities laws, and may not at any time be offered, pledged, sold or otherwise transferred, directly or indirectly, in the United States or to, or for the account or benefit of, US Persons (as such term is defined in Regulation S under the Securities Act) unless registered under the Securities Act or pursuant to an exemption from such registration.

Swiss Offering Information

Each offeror acknowledges and agrees that, subject to the applicable transitional provisions under the FinSA and the implementing FinSO, the Notes have not been offered and will not be offered, directly or indirectly, to the public in Switzerland, and have not distributed or caused to be distributed and will not distribute or cause to be distributed to the public in Switzerland, the Base Prospectus, this termsheet or any other offering material relating to the Notes, other than pursuant to an exemption under Article 36(1) FinSA or where such offer or distribution does not qualify as a public offer in Switzerland. For these purposes, “public offer” refers to the respective definitions in Article 3(g) and (h) FinSA and as further detailed in FinSO.

Canadian Offering Information

The Notes have not been and will not be qualified for sale under the securities laws of any province or territory of Canada. Each Dealer has represented and agreed that it has
not offered, sold or distributed and will not offer, sell or distribute any securities, directly or indirectly, in Canada or to or for the benefit of any resident of Canada, other than in compliance with applicable securities laws. Each Dealer has also represented and agreed that it has not distributed or delivered and will not distribute or deliver this termsheet, or any other offering material in connection with any offering of the securities, in Canada other than in compliance with applicable securities laws.

**WARNING**

The contents of this termsheet have not been reviewed by any regulatory authority in Hong Kong or any other jurisdiction. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this termsheet, you should obtain independent professional advice.

This is a structured product which involves derivatives. Do not invest in it unless you fully understand and are willing to assume the risks associated with it. If you are in any doubt about the risks involved in the product, you may clarify with the intermediary or seek independent professional advice.

This termsheet has not been approved by the Securities and Futures Commission in Hong Kong and, accordingly, (i) the Notes (except for Notes which are “structured products” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the “SFO”)) may not be offered or sold in Hong Kong by means of this termsheet or any other document other than to “professional investors” as defined in the SFO and any rules made thereunder, or in other circumstances which do not result in the termsheet being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the “C(WUMP)O”) or which do not constitute an offer to the public within the meaning of C(WUMP)O, and (ii) no person shall issue or possess for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or termsheet relating to the Notes which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made thereunder. For distribution through Hong Kong, Royal Bank of Canada Hong Kong Branch and/or its associates will receive monetary benefits in distributing this product.

Each Dealer acknowledges that the Base Prospectus has not been, and will not be, registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each Dealer represents, warrants, and agrees that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, the Base Prospectus, this termsheet or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of any Notes, whether directly or indirectly, to any person in Singapore other than (a) to an institutional investor (as defined in Section 4A of the SFA) pursuant to Section 274 of the SFA, (b) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or to any person pursuant to Section 275(1A) of the SFA and in accordance with the conditions specified in Section 275 of the SFA or (c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an individual who is an accredited investor;
investor, securities or securities-based derivative contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred within 6 months after that corporation or that trust has acquired the Notes pursuant to an offer made under Section 275 of the SFA except:

(i) to an institutional investor or to a relevant person or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
(ii) where no consideration is or will be given for the transfer;
(iii) where the transfer is by operation of law;
(iv) as specified in Section 276(7) of the SFA; or
(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities–based Derivatives Contracts) Regulations 2018 of Singapore.

UAE (excluding Dubai International Financial Centre) Offering Information

Each Dealer has represented and agreed that Notes have not been, and will not be, offered, sold or publicly promoted or advertised by it in the United Arab Emirates other than in compliance with any laws applicable in the United Arab Emirates governing the issue, offering and sale of Notes.

Bahrain Offering Information

This termsheet has been prepared for information purposes of intended investors only who will be high net worth individuals and institutions. The issuer represents and warrants that it has not made and will not make any invitation in or from the kingdom of Bahrain and will not market or offer the securities to any potential investor in Bahrain. All marketing and offering is made and will be made outside the kingdom of Bahrain. The central bank of Bahrain has not reviewed, nor has it approved, this termsheet or the marketing of the securities and takes no responsibility for the accuracy of the statements and information contained in this termsheet, nor shall it have any liability to any person for any loss or damage resulting from reliance on any statements or information contained herein.

Israel Offering Information

Israeli Securities law. Neither such offering nor the Notes have been qualified or approved by the Israeli Securities Authority or any other government or regulatory body. RBC is not licensed under The Regularization of Engagement in Investment Counselling Investment Marketing and Portfolio Management Law, 1995 (the “Counselling Law”) and therefore, RBC does not carry insurance as would be required if RBC were licensed.

The purchaser represents, warrants and covenants that: (i) the purchaser is acquiring the Notes as a principal only and not as an agent of Royal Bank of Canada, (ii) all risks associated with the holding or owning of the Notes are irrevocably transferred to the purchaser upon the purchase of such Notes by the purchaser, (iii) the purchaser will not share with RBC any gains or losses it realizes in connection with the Notes; (iv) neither RBC nor RBC EL has provided the purchaser with any investment advice in connection with the purchaser’s purchase of the Notes and the purchaser has consulted with its own investment advisors in connection therewith; (v) to the extent relevant to the purchaser. The purchaser will comply with the applicable provisions of Israel’s Currency Control Law, 1978 and the amended Currency Control Permit, 1998 promulgated thereunder in connection with the Notes; and (vi) the purchaser shall at all times comply with Israeli and other applicable laws and regulations, including securities laws and regulation, in connection with Notes and the purchaser shall take no action which would or not fail to take any action if the failure would cause RBC or RBC EL to be in violation of any such laws or regulations.

Monaco Offering Information

The securities may not be offered or sold, directly or indirectly, to the public in Monaco other than by a Monaco Bank or a duly authorized Monegasque intermediary. Consequently, this document may only be communicated to Monaco banks duly licensed by the “Autorité de Contrôle Prudentiel” and fully licensed Monaco portfolio management companies by virtue of Law n° 1.144 of July 26, 1991 and Law 1.338, of September 7, 2007 duly licensed by the “Commission de Contrôle des Activités Financières”(“CCAF”).
Dubai International Financial Centre
Offering Information

Each Dealer has represented and agreed that it has not offered and will not offer Notes to any person in the Dubai International Financial Centre unless such offer is:

(a) An “Exempt Offer” in accordance with the Market Rules (MKT) Module of the Dubai Financial Services Authority (the “DFSA”) rulebook; and

(b) Made only to persons who meet the Professional Client criteria set out in Rule 2.3.3 of the Conduct of Business Module of the DFSA rulebook.

Japan Offering Information

No registration pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the “FIEA”) has been made or will be made with respect to the Notes. The Dealer has represented and agreed, and each further Dealer appointed under the Base Prospectus will be required to represent and agree, that it will not offer or sell any Notes, directly or indirectly, in Japan or to, or for the benefit of, any Resident of Japan (as defined under Article 6, Paragraph 1, Item 5 of the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949, as amended)), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of a resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEA and any other applicable laws, regulations and ministerial guidelines of Japan.

SALES RESTRICTIONS AND DISCLAIMERS

On-sales of Notes: In addition to the specific restrictions in relation to offers in the EEA, Switzerland and Canada stated above, any on-sales, subsequent offer or buy back of the Notes should only be made in accordance with any applicable law and regulation. In particular any applicable securities laws or regulations relating to the requirement for a prospectus or other prescribed disclosure or any requirement to conduct suitability or appropriateness assessments and any requirement regarding the disclosure of commissions and/or fees and/or non monetary benefits paid or received should be complied with.

Conflict of Interest Disclosure: RBC Europe Limited (“RBCEL”) forms part of a major banking group. It is therefore possible that RBCEL or one of its subsidiaries or affiliates or one of their officers, employees, representatives or agents (together “the Bank Group”) or another client of the Bank Group may have interests, relationships and/or arrangements that give rise to conflicts of interest in relation to business that is transacted with you. Members of the Bank Group may perform a variety of roles in connection with the issuance. The Issuer, Dealer or their affiliates may act as the Calculation Agent and may undertake hedging activity which may have an adverse impact on the value of the Notes. The Issuer, Dealer or their affiliates may also from time-to-time provide market prices that are utilised in calculating the Reference Index, as such, these determinations may affect the value of the notes being issued. Any conflicts of interest will be managed in accordance with The Bank Group's established policies and procedures.

Fee Disclosure: The Issue Price may include a fee or commission payable to a distributor or third party, such a fee or commission will be determined by a number of factors including but not limited to maturity of the note, hedging costs and legal fees. Further details in respect of the fee or commission are available upon request.

RISK INFORMATION

Issuer Risk: Investors bear the issuer risk. The investment instrument’s value is dependent not only on the development of the underlying, but also on the creditworthiness of the issuer, which may vary over the term of the structured product. The ratings of the Issuer noted above reflect the independent opinion of the rating agencies as to the safety of payments of principal and interest. These ratings are not a guarantee of credit quality. The ratings do not take into consideration any risk associated with fluctuations in the market value of this instrument, or where factors other than the Issuer’s credit quality determine the level of principal and interest payments.
Liquidity Risk:

The investor should be prepared to hold this note until maturity should it not be called or terminated early, if such option exists, by the Issuer. The Dealer will, however, use its reasonable endeavours to provide liquidity to the Note (either directly or through an affiliate) but is not obliged to do so and may stop providing liquidity at any time without notice. The price at which you purchase the Note includes selling commissions paid by the Dealer and hedging costs and profits that the Dealer or its affiliates expect to incur or realize. These selling commissions, costs and profits will reduce the secondary market price, if any secondary market develops, for the Note. As a result, you may experience an immediate and substantial decline in the value of your notes on the issue date.

Suitability:

This document is being provided to you based on our reasonable belief that you are a sophisticated institutional investor that is capable of assessing the merits and risks of the matters discussed herein. Institutions referencing this document or extracting information from this document with which to assist their clients will need to ensure that the information satisfies their local jurisdictional requirements and applicable securities laws for conducting business with private and/or retail clients.

This document has been prepared by RBC Capital Markets ("RBCCM") for discussion and/or information purposes only. This document is an indicative summary of the terms and conditions of the transaction described herein. It may be amended, superseded or replaced by subsequent summaries and should not be relied on. Should a transaction ultimately be entered into between us, the final terms and conditions of the transaction will be set out in full in a binding transaction document and reference should be made only to such document and not this indicative termsheet for definitive information. This document shall not constitute an underwriting commitment, an offer to sell, or the solicitation of an offer to buy any securities, commodities or other instruments, or a recommendation to enter into any transaction by any RBC entity. Nor is it an official or unofficial confirmation of terms. Although the indicative information set forth herein is reflective of terms, as of the date of this communication, under which we believe an issuance of securities or other transactions might be structured, no assurance can be given that such an issuance or transaction could in fact be executed, nor is any entity obligated to issue such securities or obligations or enter into any transaction. To the extent that you subsequently enter into a transaction with RBC and/or any of its affiliates this would be on the basis that you were transacting with us as principal (and not as agent or in any other capacity, fiduciary or otherwise) and no other person would have an interest herein.

All information, terms and pricing set forth herein is indicative and subject to change without notice. Any opinions expressed herein reflect our judgment at the date and time hereof and are subject to change without notice. The information contained in this document has been internally developed or taken from trade and statistical services and other sources which we deem reliable, but no warranty is made that such information is accurate or complete and it should not be relied upon as such.

Transactions of the type described herein may involve a high degree of risk, and the value of such instruments may be highly volatile. Such risks may include without limitation risk of adverse or unanticipated market developments, risk of issuer default and risk of illiquidity. In certain transactions counterparties may lose their entire investment or incur an unlimited loss. This brief statement does not disclose all the risks and other significant aspects in connection with transactions of the type described herein, and counterparties should ensure that they fully understand the terms of the transaction, including the relevant risk factors and any legal, tax, regulatory and accounting considerations applicable to them, prior to transacting. No representation is made concerning the legal, tax, regulatory or accounting implications in any applicable jurisdiction and we are not advising you in respect of such matters. Accordingly you must independently determine, with your own advisors, the appropriateness for you of the transaction before transacting. To the fullest extent permissible by law, RBCCM accepts no liability for any loss (including consequential losses) arising from the use of this document or reliance on the information contained herein. RBCCM is acting solely in the capacity of an arm’s length contractual counterparty and not in the capacity of your financial adviser or fiduciary.

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