



SECOND PARTY OPINION

BANGKOK EXPRESSWAY AND METRO PUBLIC COMPANY LIMITED SUSTAINABILITY BOND

Prepared by: DNV GL Business Assurance Australia Pty. Ltd.

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BANGKOK EXPRESSWAY AND METRO PUBLIC COMPANY LIMITED SUSTAINABILITY BOND

DNV GL ELIGIBILITY ASSESSMENT AND SECOND PARTY OPINION

Scope and objectives

Bangkok Expressway and Metro Public Company Limited ("BEM" or "Issuer"), is a public transportation company in Thailand. It operates two metro lines and expressways in Bangkok and its vicinity. BEM is committed to establishing and maintaining transport infrastructure and operations in its service area of Bangkok and its vicinity, Thailand.

BEM has developed a Sustainable Financing Framework and has conducted the issuance of bonds as defined within the Green Bond Principles 2018 ("GBP"), Social Bond Principles 2020 ("SBP"), Sustainability Bond Guidelines ("SBG"), ASEAN Green Bond Standards ("GBS"), ASEAN Social Bond Standards ("SBS") and the ASEAN Sustainability Bond Standards, 2018 (ASEAN SBS).

Sustainability Instruments have been issued with ThaiBMA symbols BEM244A, BEM264A, BEM284A and BEM314A with a value of THB 6 billion (henceforth referred to as the "BOND").

BEM is using the proceeds of the BOND to refinance projects within the categories of Clean Transportation, Energy Efficiency, Water Management, Affordable Basic Infrastructure and Employment Generation and Training.

DNV GL Business Assurance Australia Pty Ltd (henceforth referred to as "DNV GL") has been commissioned by BEM to provide a Sustainability Bond eligibility assessment of the BOND. Our methodology to achieve this is described under 'Work Undertaken' below. We were not commissioned to provide independent assurance or other audit activities.

No assurance is provided regarding the financial performance of the BOND, the value of any investments in the BONDS, or the long-term environmental benefits of the transaction. Our objective has been to provide an assessment that the BOND has met the criteria established on the basis set out below.

The scope of this DNV GL opinion is limited to the GBP, SBP, SBG, GBS, SBS and ASEAN SBS.

Responsibilities of the Management of BEM and DNV GL

The management of BEM has provided the information and data used by DNV GL during the delivery of this review. Our statement represents an independent opinion and is intended to inform BEM management and other interested stakeholders in the BOND as to whether the established criteria have been met, based on the information provided to us. In our work we have relied on the information and the facts presented to us by BEM. DNV GL is not responsible for any aspect of the nominated assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV GL shall not be held liable if any of the information or data provided by BEM's management and used as a basis for this assessment were not correct or complete.

Basis of DNV GL's opinion

We have adapted our Green Bond Principles, Social Bond Principles and ASEAN Sustainability Bond Standards assessment methodology, to create a BEM-specific Sustainability Bond Eligibility Assessment Protocol (henceforth referred to as "Protocol"). Our Protocol includes a set of suitable criteria that can be used to underpin DNV GL's opinion. The overarching principle behind the criteria is that a Sustainability Bond should "enable capital-raising and investment for new and existing projects with environmental benefits".

As per our Protocol, the criteria against which the BOND has been reviewed are grouped under the four Principles:

- **Principle One: Use of Proceeds.** The Use of Proceeds criteria are guided by the requirement that an issuer of a sustainability bond must use the funds raised to finance eligible activities. The eligible activities should produce clear environmental and social benefits.
- **Principle Two: Process for Project Evaluation and Selection.** The Project Evaluation and Selection criteria are guided by the requirements that an issuer of a sustainability bond should outline the process it follows when determining eligibility of an investment using bond proceeds, and outline any impact objectives it will consider.
- **Principle Three: Management of Proceeds.** The Management of Proceeds criteria are guided by the requirements that a sustainability bond should be tracked within the issuing organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled should be made.
- **Principle Four: Reporting.** The Reporting criteria are guided by the recommendation that at least Sustainability Reporting to the bond investors should be made of the use of bond proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

Work undertaken

Our work constituted a high-level review of the available information, based on the understanding that this information was provided to us by BEM in good faith. We have not performed an audit or other tests to check the veracity of the information provided to us. The work undertaken to form our opinion included:

- Creation of an BEM-specific Protocol, adapted to the purpose of the BOND, as described above and in Schedule 2 and 3 to this Assessment;
 - Assessment of documentary evidence provided by BEM on the BOND and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
 - Assessment of compliance with the ASEAN Sustainability Bond Standards;
 - Discussions with BEM management, and review of relevant documentation;
 - Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.
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Findings and DNV GL's opinion

DNV GL's findings are listed below:

- 1. Principle One: Use of Proceeds.** BEM is using the proceeds of the BOND to refinance projects and assets within the categories of Clean Transportation, Energy Efficiency, Water Management, Affordable Basic Infrastructure and Employment Generation and Training. DNV GL undertook an analysis of the associated project types including type and location and scale of the assets to determine eligibility of these projects as "Green" and "Socially Beneficial" in line with the GBP and SBP. DNV GL evaluates and concludes that BEM's nominated projects and assets are aligned with one of eligible Green and Social project categories specified in the GBP and SBP. Refer to Schedule 1 for further information.
- 2. Principle Two: Process for Project Evaluation and Selection.** The BOND's proceeds are being allocated to refinance the assets as defined in Schedule 1. DNV GL has reviewed evidence that demonstrates that BEM regularly assesses opportunities for improvement and devises action plans and initiatives to mitigate negative environmental and social impacts from its operations.
- 3. Principle Three: Management of Proceeds** DNV GL has confirmed allocation of proceeds and rereviewed evidence showing how BEM plans to trace the proceeds from the Bond, from the time of issuance to the time of disbursement. BEM will monitor the allocation of an amount equal to the proceeds via internal information systems. A record will be created to facilitate the monitoring and reporting of the issued Bonds and the deployment of an amount equal to the net proceeds. As stated above, DNV GL provides no assurance regarding the financial performance of the Bond, the value of any investments in the Bond, or the effects of the transaction. DNV GL has confirmed the proposed issuance value (THB 6b) is less than the BEM exposure to the eligible projects and assets.
- 4. Principle Four: Reporting.** BEM has confirmed that it will, where feasible, report on its website the following:
 - i) The amount of net proceeds allocated per Eligible Projects/Assets;
 - ii) The percentage of financing/refinancing of projects/assets ;
 - iii) The amount of unallocated proceeds, if any, at the date of reporting;
 - iv) Location and status of the projects/assets;
 - v) Impacts Reporting associated with the BOND;

On the basis of the information provided by BEM and the work undertaken, it is DNV GL's opinion that the BEM Sustainable Financing Framework and proposed BOND meet the criteria established in the Protocol and are aligned with the stated definition of green and social bonds within the Green Bond Principles 2018 and Social Bond Principles 2020. Based on the External Review procedures conducted, nothing has come to our attention that causes us to believe that the BEM Sustainable Financing Framework and BOND are not, in all material respects, in accordance with the ASEAN Sustainability Bond Standards 2018.

for DNV GL Business Assurance Australia Pty. Ltd.

Sydney, Australia / 20 May 2021



Mark Robinson
Team Leader



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Technical Reviewer

About DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

SCHEDULE 1: DESCRIPTION OF NOMINATED ASSET TO BE REFINANCED THROUGH BEM BONDS

Summary of BEM nominated projects with lookback to November 2018 as pro

Project	Type	Category	Use of Proceeds	Location	Exposure (THBm)
MRT Blue Line	Green	Clean Transportation	Rolling Stock, Signalling Systems, Stations, Depots	Bangkok, Thailand	6,000
		Energy Efficiency	LED Lighting Upgrades	Bangkok, Thailand	
		Water Management	Water Treatment and Water Recycling for Train Wash	Bangkok, Thailand	
	Social	Affordable Basic Infrastructure	Public Transportation and Amenities	Bangkok, Thailand	
		Employment Generation and Training	Knowledge Sharing and Scholarships to Underprivileged Children	Bangkok, Thailand	

SCHEDULE 2: SUSTAINABILITY BOND ELIGIBILITY ASSESSMENT PROTOCOL

1. Use of proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
1a	Type of bond	<p>The bond must fall in one of the following categories, as defined by the Green/Social Bond Principles:</p> <ul style="list-style-type: none"> • Green/Social Use of Proceeds Bond • Green/Social Use of Proceeds Revenue Bond • Green/Social Project Bond • Green/Social Securitized Bond 	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Issuance Information - BEM Sustainable Financing Framework <p>Correspondence with BEM management</p>	<p>The reviewed evidence confirms that the BOND falls in the category: Sustainable Use of Proceeds Bond.</p>
1b	Sustainability Project Categories	<p>The cornerstone of a Sustainability Bond is the utilization of the proceeds of the bond which should be appropriately described in the legal documentation for the security.</p>	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Issuance Information - BEM Sustainable Financing Framework <p>Correspondence with BEM management</p>	<p>As identified by the BOND Issuance Information the purpose of the BOND is to use the proceeds for the financing or refinancing of Clean Transportation, Energy Efficiency, Water Management, Affordable Basic Infrastructure and Employment Generation and Training projects. The BEM Sustainable Finance Framework considers Use of Proceeds from Green and Social perspectives.</p> <p>Specifically, the use of proceeds for the proposed BEM Sustainability Bond are summarised in Schedule 1 above. DNV GL's assessment concluded that these assets would present tangible and genuine environmental and social benefits in the target areas and for the target populations.</p> <p>Environmental Use of Proceeds impacts have been linked to SDGs 6; Clean Water and Sanitation, 7; Affordable and Clean</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
				<p>Energy, 11; Sustainable Cities and Communities, 12; Responsible Consumption and Production, 13; Climate Action.</p> <p>Social Use of Proceeds impacts have been linked to SDGs 3; Good Health and Wellbeing, 4; Quality Education, 8; Decent Work and Economic Growth, 9; Industry, Innovation and Infrastructure, 11; Sustainable Cities and Communities.</p> <p>DNV GL considers the SDG linkages made to reasonably reflect the impacts resulting from the nominated projects and the Use of Proceeds set out in the Framework. DNV GL confirms that the Use of Proceeds set out in the framework have clear Green and Social benefits.</p>
1c	Environmental and Social benefits	All designated Green Project categories should provide clear environmentally sustainable benefits, which, where feasible, will be quantified or assessed by the Issuer.	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Issuance Information - BEM Sustainable Financing Framework - BEM Asset Specifications <p>Correspondence with BEM management</p>	<p>Clean Transportation</p> <p>DNV GL confirms that Clean transportation investments in Electrified Rail and supporting infrastructure as listed in Schedule 1 are considered to be green for the purposes of the Green Bond Principles. Electrified rail presents a low emissions alternative to road based transport. DNV GL considers these projects to be well aligned with the GBP.</p> <p>Energy Efficiency</p> <p>The LED Lighting upgrade investments have a direct impact on the energy consumption throughout the MRT Blue Line infrastructure and have been quantified to reduce electricity consumption. DNV GL can confirm that this investment is well aligned with the GBP.</p> <p>Water Management</p> <p>The water treatment and water recycling system installed on the MRT Blue Line facilities for the purposes of recovering train</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
				<p>washing water are a quantified water efficiency asset and are likely contribute a water saving for BEM. DNV GL can confirm that this investment is well aligned with the GBP.</p> <p>Affordable Basic Infrastructure The delivery of basic infrastructure associate with public transportation services in dense urban environments have been provided by the issuer. DNV GL can confirm that the benefits and target populations associated with the delivery of Affordable Basic Infrastructure have been well defined and are well aligned with the Use of Proceeds requirements of the SBP.</p> <p>Employment Generation and Training The delivery of staff and contractor training for the personal and professional development of human resources, especially related to safety, sanitation and efficient operation of the railway in addition to the provision of scholarships to underprivileged children is considered to be well aligned with the Social Bond Principles.</p> <p>DNV GL can confirm that the Use of Proceeds associated with the BEM Sustainability Bond are considered to qualify under and be well aligned with the Use of Proceeds and associated Categories Green Bond Principles and Social Bond Principles.</p>
1d	Refinancing share	In the event that a proportion of the proceeds may be used for refinancing, it is recommended that issuers provide an estimate of the share of financing vs. re-financing, and where	Review of: - BOND Issuance Information - Bond disclosure documentation - Sustainable Financing Framework	The proceeds of the BOND will be used to refinance the assets listed in Schedule 1, above based on the historical investment since November 2018.

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
		appropriate, also clarify which investments or project portfolios may be refinanced.	Correspondence with BEM management	

2. Process for Project Selection and Evaluation

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
2a	Investment-decision process	<p>The Issuer of a Sustainability Bond should outline the decision-making process it follows to determine the eligibility of projects using Sustainability Bond proceeds. This includes, without limitation:</p> <ul style="list-style-type: none"> • A process to determine how the projects fit within the eligible Green and Social Projects categories identified in the Green/Social Bond Principles; • The criteria making the projects eligible for using the Sustainability Bond proceeds; and • The environmental sustainability objectives 	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Issuance Information - BEM Sustainable Financing Framework 	<p>As per the BEM Sustainable Financing Framework, the Issuer has set out the following for project selection:</p> <p><i>The selection and evaluation of eligible projects/assets for Sustainable Financing instruments will be performed in concert among BEM's Financial Planning Department, Quality Management Division, Corporate Image and Marketing Communication Department and Investor Relations Department ("Sustainable Finance Working Group").</i></p> <p><i>In addition, Sustainable Finance Working Group will monitor the allocation process as per the Eligible Projects/Assets Description defined in the Use of Proceeds.</i></p> <p>BEM has in place policies, systems, and procedures including for Environmental and Social aspects that equip it to "do no significant harm" to the environment or social aspects. DNV GL can confirm that the Use of Proceeds set out in the BEM policies, systems and procedures and the BEM Framework provide mitigating measures for reducing the risk of significant harm.</p> <p>DNV GL has reviewed the structure and function of the Project Selection criteria and confirmed it is in line with the criteria set out in the GBP and SBP.</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
2b	Issuer's environmental and social and governance framework	In addition to information disclosed by an issuer on its Sustainability Bond process, criteria and assurances, Sustainability Bond investors may also take into consideration the quality of the issuer's overall framework and performance regarding environmental sustainability.	<p>Review of:</p> <ul style="list-style-type: none"> - BEM Environmental and Social Policies and Procedures - BEM Sustainable Financing Framework <p>Correspondence with BEM management</p>	<p>BEM has published a Corporate Sustainability Framework including focus on:</p> <ul style="list-style-type: none"> - Communication - Sustainability Culture; - Promoting training, learning, and counseling; - Organisational Support for Sustainability. <p>BEM also has a stated set of ESG commitments related to its operations, goals and targets. DNV GL has confirmed this is well aligned to the purpose and function of the proposed Sustainability Bond.</p> <p>We have also carried out a high-level media review of BEM. No outstanding ESG incidents or controversies were identified. Based on the evidence reviewed and the discussion we had with senior managers, we found that BEM's current environmental, social and governance framework is in line with good practice of the industry for the nominated projects and assets within the proposed BOND.</p>

3. Management of proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
3a	Tracking procedure	The net proceeds of Sustainability Bonds should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the Issuer in an appropriate manner and attested to by a formal internal process that will be linked to the	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Issuance Information - BOND Proceeds and Reporting Framework 	<p>The evidence reviewed shows how BEM plans to trace the BOND's proceeds, from the time of issuance to the time of disbursement.</p> <p>BEM plans to monitor the allocation of an amount equal to the proceeds via internal information systems. A record will be created to facilitate the monitoring and reporting of the issued</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
		Issuer’s lending and investment operations for Green/Social Projects.	Correspondence with BEM management	<p>Bonds and the deployment of an amount equal to the net proceeds.</p> <p>DNV GL concludes that the process set out in the Issuer’s Framework is aligned with the Management of Proceeds as set out in the Green and Social Bond Principles.</p>
3b	Tracking procedure	So long as the Sustainability Bonds are outstanding, the balance of the tracked proceeds should be periodically reduced by amounts matching eligible green investments or loan disbursements made during that period.	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Issuance Information - BEM Sustainable Financing Framework <p>Correspondence with BEM management</p>	The evidence reviewed shows that BEM plans to trace the proceeds from the BOND, from the time of issuance to the time of disbursement. On an annual basis, the outstanding balance of the Bond will be reviewed.
3c	Temporary holdings	Pending such investments or disbursements to eligible Green and Social Projects, the Issuer should make known to investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	<p>Review of:</p> <ul style="list-style-type: none"> - BOND Proceeds and Reporting Framework <p>Correspondence with BEM management</p>	<p>The net proceeds of the Bond will be held in cash or cash equivalent on account until disbursement to the nominated assets as per the BEM Sustainable Financing Framework. BEM will aim to be fully allocated to Green and Social Projects within 30 months of Issue date.</p> <p>BEM have nominated the use of proceeds as per Schedule 1 within their Sustainable Financing Framework.</p>

4. Reporting

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings		
4a	Periodical reporting	In addition to reporting on the use of proceeds and the temporary investment of unallocated proceeds, Issuers should provide at least annually a list of projects to which Sustainability Bond proceeds have been allocated including - when possible with regards to confidentiality and/or competitive considerations - a brief description of the projects and the amounts disbursed, as well as the expected environmentally sustainable impact.	Review of: - BOND Proceeds and Reporting Framework Correspondence with BEM management	<p>BEM has confirmed that it will report on its corporate website and integrated annual reporting the following:</p> <p><i>Allocation Reporting (until full allocation):</i></p> <ul style="list-style-type: none"> <i>The amount of net proceeds allocated per Eligible Projects/Assets</i> <i>The percentage of financing/refinancing of projects/assets</i> <i>The amount of unallocated proceeds, if any, at the date of reporting</i> <i>Location and status of the projects/assets</i> <p>Impact Reporting:</p> <p>Where feasible, BEM intends to report on the impact of the portfolio by category from environmental perspective on an annual basis, subject to the availability of information and baseline data and based on methodologies that will be publicly available. BEM has set out a broad range of potential metrics in their Sustainable Financing Framework including:</p> <table border="1" data-bbox="1099 1031 2123 1382"> <tr> <td data-bbox="1099 1031 1456 1382">Clean Transportation</td> <td data-bbox="1456 1031 2123 1382"> <ul style="list-style-type: none"> - Reduced and/or avoided GHG emissions (in t. CO2e/year) - # of passengers carried/passenger trips - Estimated reduction in car use in number or kilometres driven - Estimated reduction in fuel consumption - Total in kilometres of new or improved train lines - # of rolling stock, carriages, locomotives bought, repaired and modernized </td> </tr> </table>	Clean Transportation	<ul style="list-style-type: none"> - Reduced and/or avoided GHG emissions (in t. CO2e/year) - # of passengers carried/passenger trips - Estimated reduction in car use in number or kilometres driven - Estimated reduction in fuel consumption - Total in kilometres of new or improved train lines - # of rolling stock, carriages, locomotives bought, repaired and modernized
Clean Transportation	<ul style="list-style-type: none"> - Reduced and/or avoided GHG emissions (in t. CO2e/year) - # of passengers carried/passenger trips - Estimated reduction in car use in number or kilometres driven - Estimated reduction in fuel consumption - Total in kilometres of new or improved train lines - # of rolling stock, carriages, locomotives bought, repaired and modernized 					

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings										
				<table border="1"> <tr> <td data-bbox="1099 411 1456 531">Energy Efficiency</td> <td data-bbox="1456 411 2123 531"> <ul style="list-style-type: none"> - Annual reduction of energy consumption - Annual GHG emissions avoided (in t. CO2e/year) </td> </tr> <tr> <td data-bbox="1099 531 1456 711">Water Management</td> <td data-bbox="1456 531 2123 711"> <ul style="list-style-type: none"> - Annual reduction in water consumption - Annual volume of water reused (in cubic metres) - Annual volume of wastewater treated (in cubic metres) </td> </tr> <tr> <td data-bbox="1099 711 1456 1007">Affordable Basic Infrastructure</td> <td data-bbox="1456 711 2123 1007"> <ul style="list-style-type: none"> - # of passengers carried/passenger trips - # of passengers/target population benefited - # of sanitation and healthcare equipment provided - # of Additional Cleaning Personnel Hired - # of recreation area/accessible infrastructure/facilities built - # of Road accident reduction - Estimate travel time reduction </td> </tr> <tr> <td data-bbox="1099 1007 1456 1158">Employment Generation and Training</td> <td data-bbox="1456 1007 2123 1158"> <ul style="list-style-type: none"> - Estimated jobs created or retained - Customer satisfaction scoring - # of target group benefited </td> </tr> <tr> <td data-bbox="1099 1158 1456 1230">Quality Education</td> <td data-bbox="1456 1158 2123 1230"> <ul style="list-style-type: none"> - # of given scholarships/students </td> </tr> </table> <p data-bbox="1048 1289 2123 1345">DNV GL considers the proposed financial and impact reporting proposed and the means of communication to be aligned with the criteria set out in the GBP and SBP.</p>	Energy Efficiency	<ul style="list-style-type: none"> - Annual reduction of energy consumption - Annual GHG emissions avoided (in t. CO2e/year) 	Water Management	<ul style="list-style-type: none"> - Annual reduction in water consumption - Annual volume of water reused (in cubic metres) - Annual volume of wastewater treated (in cubic metres) 	Affordable Basic Infrastructure	<ul style="list-style-type: none"> - # of passengers carried/passenger trips - # of passengers/target population benefited - # of sanitation and healthcare equipment provided - # of Additional Cleaning Personnel Hired - # of recreation area/accessible infrastructure/facilities built - # of Road accident reduction - Estimate travel time reduction 	Employment Generation and Training	<ul style="list-style-type: none"> - Estimated jobs created or retained - Customer satisfaction scoring - # of target group benefited 	Quality Education	<ul style="list-style-type: none"> - # of given scholarships/students
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SCHEDULE 3: ASEAN SUSTAINABILITY BOND STANDARDS VERIFICATION

Summary criteria for assertions of compliance with the ASEAN Sustainability Bond Standards 2018 and compliance conclusion.

The criteria against which BEM and its nominated projects and assets have been reviewed prior to inclusion in the Bond are grouped under the requirements as detailed within the ASEAN Sustainability Bond Standards 2018.

3.0: Criteria for ASEAN Sustainability Bonds

Criteria	Requirement	Demonstrated Compliance
3.1	(i) Must be an ASEAN Issuer, or; (ii) In the case of a Non-ASEAN Issuer, the eligible Sustainability Projects must be located in any of the ASEAN countries.	The Bond Issuer and nominated project is located in Thailand, an ASEAN member country.
3.2	ASEAN Sustainability Bonds issuances must be originated from any of the ASEAN member countries.	The bond is to be originated from Thailand and issued in THB.

4.0: Guidance for the Four Components of the GBP

4.1 Use of Proceeds

Criteria	Requirement	Demonstrated Compliance
4.1.1	The utilisation of proceeds from the ASEAN Sustainability Bonds must be described in the documentation for issuance of the ASEAN Sustainability Bonds.	The Issuer has set out the Use of Proceeds in both the Sustainable Financing Framework and the listing of Nominated Projects and Assets as summarised in Schedule 1.
4.1.2	In relation to 4.1.1, the Issuer must disclose the following information: (i) The categories of eligible Green/Social Projects to which the ASEAN Sustainability Bonds proceeds will be allocated; and/or (ii) The information on specific Green/Social Projects in the case where the Issuer has identified the specific Green/Social Projects to which the ASEAN Sustainability Bonds proceeds will be allocated.	<ul style="list-style-type: none"> i. The Issuer has set out the categories for Nominated Projects and Assets in the Use of Proceeds section of the Sustainable Financing Framework. ii. The Issuer has detailed the specific Green and Social Projects as per Schedule 1 of this report.

4.1.3	All designated Green and Social Projects must provide clear environmental/Social benefits, which will be assessed and, where feasible, quantified by the Issuer.	As per 1c in Schedule 2 above, the Nominated Projects have clear and demonstrated environmental and social benefits. This includes Social Benefits and defined target populations
4.1.4	In the event that all or a proportion of the proceeds are or may be used for refinancing, it is recommended that Issuers provide an estimate of the share of financing and refinancing, and where appropriate, also clarify which investments or project portfolios may be refinanced and, to the extent relevant, the expected look-back period for refinanced Green/Social Projects.	The Issuer has detailed the refinancing share as shown in Schedule 2.
4.1.5	Sustainability Bond Categories	Sustainability Bond categories have been disclosed by the Issuer in both the Sustainable Financing Framework and as per Schedule 1.
4.1.6	For clarification purposes, fossil fuel power generation projects are excluded from the ASEAN SBS.	DNV GL has confirmed that the Use of Proceeds is not proposed to include fossil fuel power generation project related activities.

4.2: Process for Project Evaluation and Selection

Criteria	Requirement	Demonstrated Compliance
4.2.1	The Issuer of ASEAN Sustainability Bonds must clearly communicate to investors– (i) the environmental/social sustainability objectives; (ii) the process by which the Issuer determines how the projects fit within the eligible Green/Social Projects categories identified above; and (iii) the related eligibility criteria, including, if applicable, exclusion criteria or any other process applied to identify and manage potentially material environmental and social risks associated with the Green/Social Projects.	The Issuer has communicated: i. The sustainability objectives of their Sustainability Finance Program and of the Nominated Projects and Assets has been communicated in the Sustainable Financing Framework. ii. The Issuer has described the process for Project Evaluation and Selection in the Sustainable Financing Framework. iii. Selection criteria has been set out in section 1 Use of Proceeds and section 2 Process for Project Selection and Evaluation.
4.2.2	The Issuer must establish the process for project evaluation and selection prior to the issuance of the ASEAN Green/Social Bonds and disclose the same to investors in the documentation for the issuance of the ASEAN Sustainability Bonds.	The Process for Project Selection and Evaluation has been defined and presented in the Sustainable Financing Framework prior to issuance.

4.2.3	Issuers are encouraged to position this information within the context of the Issuers’ overarching objectives, strategy, policy and/or processes relating to environmental sustainability. Issuers are also encouraged to disclose any green standards or certifications referenced in project selection.	The Issuer has presented the Sustainable Financing Framework in the context of BEM’s Sustainability Program, policies and procedures.
4.2.4	It is recommended that the Issuer’s process for project evaluation and selection be supported by an external review.	This external verification has been conducted to provide external review of the Issuers claims.
4.2.5	<p>The Issuer must make the following publicly available on a website designated by the Issuer at the time of the issuance and throughout the tenure of ASEAN Sustainability Bonds:</p> <p>(i) The process for project evaluation;</p> <p>(ii) The use of proceeds; and</p> <p>(iii) External review report on the process (if any).</p>	<p>The Issuer proposes to make publicly available on its corporate website the:</p> <ul style="list-style-type: none"> i. Sustainable Financing Framework including Process for Project Evaluation; ii. Use of Proceeds, and; iii. This external review report.

4.3: Management of Proceeds

Criteria	Requirement	Demonstrated Compliance
4.3.1	Prior to the issuance of the ASEAN Sustainability Bonds, the Issuer must disclose to investors in the documentation for the issuance of the ASEAN Sustainability Bonds the process for managing the net proceeds from the ASEAN Sustainability Bonds.	The issuer has disclosed to bond placement investors that it will hold Sustainability Bond proceeds raised in internal treasury cash accounts for allocation to existing and new investments associated with nominated projects and assets.
4.3.2	The net proceeds from the ASEAN Sustainability Bonds, or an amount equal to these net proceeds, must be credited into a sub-account, moved to a sub-portfolio or otherwise tracked by the Issuer in an appropriate manner and attested to by a formal internal process linked to the Issuer’s lending and investment operations for Green and Social Projects. The total amount deployed from the net proceeds for the eligible Green and Social Projects need not occur simultaneously.	The Issuer has prepared and presented the process for the tracking and monitoring of proceeds and allocation reporting in the Sustainable Financing Framework.
4.3.3	As long as the ASEAN Sustainability Bonds are outstanding, the balance of tracked proceeds must be periodically adjusted to match	The Issuer has defined how proceeds are to be tracked and reported to match the allocation to eligible Green and Social Projects.

	allocations to eligible Green and Social Projects made during that period.	
4.3.4	The Issuer must also disclose to investors in the documentation for the issuance of the ASEAN Sustainability Bonds the intended types of temporary placement for the balance of unallocated proceeds.	The Issuer has disclosed that all temporary investments will be held in cash or cash equivalent.
4.3.5	It is recommended that the Issuer’s management of proceeds be supplemented by the use of an auditor, or other third party to verify the internal tracking method and the allocation of funds from the ASEAN Sustainability Bonds proceeds.	The Issuer has confirmed in order to provide transparent information about the reporting of the funds from bonds issued under this framework, BEM intends to engage a Second Party Opinion Provider/ Verifier/ External Auditor to provide the assessment on the alignment of the allocation of funds with Framework’s criteria until the full allocation of the proceeds.
4.3.6	Where the Issuer appoints an auditor or other third party to verify the Issuer’s management of proceeds, the Issuer must make the report produced by the auditor or other third party publicly available on a website designated by the Issuer at the time of the issuance of the ASEAN Sustainability Bonds.	The verification report will be made available for investors on its corporate website.

4.4: Reporting

Criteria	Requirement	Demonstrated Compliance
4.4.1	Issuers must report to investors at least on an annual basis and encouraged to make more frequent reporting on the use of proceeds until full allocation, and as necessary thereafter in the event of material developments. This should include a list of the projects to which the ASEAN Sustainability Bonds proceeds have been allocated, as well as a brief description of the projects and the amounts allocated and their expected impact.	The Issuer has confirmed annual reporting on the sustainability bond allocations until full allocation. DNV GL notes that BEM expects to fully and immediately allocate the proceeds raised after issuance. After confirmation of the full and complete allocation of proceeds, further allocation would not be expected and any ongoing allocation reporting would be expected to reflect that complete allocation had occurred.
4.4.2	Where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available, the Issuer may present the information in generic terms or on an aggregated portfolio basis.	The Issuer reserves the right to manage confidentiality obligations with regards to Sustainability Bond reporting.
4.4.3	It is recommended that Issuers use qualitative performance indicators, and where feasible, quantitative performance measures	The Issuer intends to provide qualitative and where possible quantitative impact reporting.

	and disclosure of the key underlying methodology and/or assumptions used in the quantitative determination.	
4.4.4	It is recommended that the Issuer’s annual reporting on the use of proceeds be supplemented by a confirmation of such use of proceeds by an external reviewer along with any relevant updates of the external review.	The Issuer has confirmed the initial SPO is to be the subject of this SPO. BEM will consider the review of annual reporting by an external party until the full allocation of the proceeds.
4.4.5	The Issuer must provide to investors the annual reporting and the external review on the annual reporting, if any, through a website designated by the Issuer and/ or annual reports throughout the tenure of the ASEAN Sustainability Bonds.	The verification report will be made available for investors on its corporate website.

5.0: External Review

Criteria	Requirement	Demonstrated Compliance
5.1	Issuers are recommended to appoint external review providers for their ASEAN Sustainability Bonds issuances.	DNV GL has been appointed as External Reviewer of the Sustainability Bond Issuance.
5.2	The external review may be partial, covering only certain aspects of the Issuer’s ASEAN Sustainability Bonds framework or full, assessing alignment with all four core components as stated in the ASEAN SBS.	The scope of this verification is full compliance with the four core components as stated in the ASEAN SBS.
5.3	The external review provider must have the relevant expertise and experience in the components of the ASEAN Sustainability Bonds which they are reviewing.	DNV GL is an Accredited Verifier under the Climate Bonds Standard with global experience providing Green Bond Verification and Services since 2011.
5.4	The external review provider must also disclose their relevant credentials and expertise, and the scope of the review conducted in the review report.	DNV GL’s credentials and expertise have been disclosed in this Opinion. The scope of this Verification has been detailed in the “Scope and Objective” section.
5.5	There are a variety of ways for Issuers to obtain outside input into the formulation of their ASEAN Sustainability Bonds process and there are several levels and types of review that can be conducted.	This Verification has been conducted as an independent external review and verification against the criteria set out in the ASEAN SBS.
5.6	Independent external reviews may vary in scope and may address an ASEAN Sustainability Bonds framework/programme, an individual ASEAN Sustainability Bonds issuance, the underlying assets and/or procedures.	This Verification has been conducted as an independent external review and verification against the criteria set out in the ASEAN SBS.

Sustainability Bond / Sustainability Bond Programme External Review Form

Section 1. Basic Information

Issuer name: Bangkok Expressway and Metro Public Company Limited

Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: Bangkok Expressway and Metro Public Company Limited, Sustainable Financing Framework 2021

Independent External Review provider's name: DNV GL Business Assurance Australia Pty Ltd

Completion date of this form: 12 March 2021

Publication date of review publication: March 2021

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs and the SBPs:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- | | |
|---|---|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input checked="" type="checkbox"/> Verification | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (*if applicable*)

On the basis of the information provided by BEM and the work undertaken, it is DNV GL's opinion that the BEM Sustainable Financing Framework and proposed BOND meet the criteria established in the Protocol and are aligned with the stated definition of green and social bonds within the Green Bond Principles 2018 and Social Bond Principles 2020.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (*if applicable*):

BEM intends to use the proceeds of the BOND to refinance projects and assets within the categories of Clean Transportation, Energy Efficiency, Water Management, Affordable Basic Infrastructure and Employment Generation and Training. DNV GL undertook an analysis of the associated project types including type and location and scale of the assets to determine eligibility of these projects as “Green” and “Socially Beneficial” in line with the GBP and SBP. DNV GL evaluates and concludes that BEM’s nominated projects and assets are aligned with one of eligible Green and Social project categories specified in the GBP and SBP. Refer to Schedule 1 for further information.

Use of proceeds categories as per GBP:

- | | |
|--|--|
| <input type="checkbox"/> Renewable energy | <input checked="" type="checkbox"/> Energy efficiency |
| <input type="checkbox"/> Pollution prevention and control | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input checked="" type="checkbox"/> Clean transportation |
| <input checked="" type="checkbox"/> Sustainable water and wastewater management | <input type="checkbox"/> Climate change adaptation |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input type="checkbox"/> Green buildings |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other <i>(please specify)</i> : |

If applicable please specify the environmental taxonomy, if other than GBPs:

Use of proceeds categories as per SBP:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Affordable basic infrastructure | <input type="checkbox"/> Access to essential services |
| <input type="checkbox"/> Affordable housing | <input type="checkbox"/> Employment generation / programs designed to prevent and/or alleviate unemployment stemming from socioeconomic crises |
| <input type="checkbox"/> Food security and sustainable food systems | <input type="checkbox"/> Socioeconomic advancement and empowerment |

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- | | |
|--|---|
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs | <input checked="" type="checkbox"/> Other (<i>please specify</i>): Employment Generation and Training |
|--|---|

If applicable please specify the social taxonomy, if other than SBPs:

Target populations:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Living below the poverty line | <input type="checkbox"/> Excluded and/or marginalised populations and /or communities |
| <input checked="" type="checkbox"/> People with disabilities | <input type="checkbox"/> Migrants and /or displaced persons |
| <input checked="" type="checkbox"/> Undereducated | <input type="checkbox"/> Underserved, owing to a lack of quality access to essential goods and services |
| <input checked="" type="checkbox"/> Unemployed | <input type="checkbox"/> Women and/or sexual and gender minorities |
| <input checked="" type="checkbox"/> Aging populations and vulnerable youth | <input type="checkbox"/> Other vulnerable groups, including as a result of natural disasters |
| <input checked="" type="checkbox"/> Other (<i>please specify</i>): Urban residents | |

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (*if applicable*):

The BOND's proceeds will be allocated to refinance the assets as defined in Schedule 1. DNV GL has reviewed evidence that demonstrates that BEM regularly assesses opportunities for improvement and devises action plans and initiatives to mitigate negative environmental and social impacts from its operations.

Evaluation and selection

- | | |
|---|--|
| <input checked="" type="checkbox"/> Credentials on the issuer's social and green objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Sustainability Bond proceeds | <input type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input checked="" type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other (<i>please specify</i>): |

Information on Responsibilities and Accountability

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- | | |
|--|---|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (please specify): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section (if applicable):

DNV GL has reviewed evidence showing how BEM plans to trace the proceeds from the Bond, from the time of issuance to the time of disbursement. BEM will monitor the allocation of an amount equal to the proceeds via internal information systems. A record will be created to facilitate the monitoring and reporting of the issued Bonds and the deployment of an amount equal to the net proceeds. As stated above, DNV GL provides no assurance regarding the financial performance of the Bond, the value of any investments in the Bond, or the effects of the transaction. DNV GL has confirmed the proposed issuance value (THB 6b) is less than the BEM exposure to the eligible projects and assets.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Sustainability Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other (please specify): |

Additional disclosure:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Allocations to future investments only | <input type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input checked="" type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other (please specify): |

4. REPORTING

Overall comment on section (if applicable):

BEM has confirmed that it will, where feasible, report on its website the following:

- i) The amount of net proceeds allocated per Eligible Projects/Assets;
- ii) The percentage of financing/refinancing of projects/assets ;
- iii) The amount of unallocated proceeds, if any, at the date of reporting;
- iv) Location and status of the projects/assets;
- v) Impacts Reporting associated with the BOND.

Use of proceeds reporting:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Project-by-project | <input type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (please specify): |

Information reported:

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Allocated amounts

Sustainability Bond financed share of total investment

Other (please specify):

Frequency:

Annual

Semi-annual

Other (please specify):

Impact reporting:

Project-by-project

On a project portfolio basis

Linkage to individual bond(s)

Other (please specify):

Frequency:

Annual

Semi-annual

Other (please specify):

Information reported (expected or ex-post):

GHG Emissions / Savings

Energy Savings

Decrease in water use

Number of beneficiaries

Target populations

Other ESG indicators (please specify): Multiple as set out in attached SPO

Means of Disclosure

Information published in financial report

Information published in sustainability report

Information published in ad hoc documents

Other (please specify): Website Publication

Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

Second Party Opinion

Certification

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Verification

Other (*please specify*):

Scoring/Rating

Review provider(s):

Mark Robinson
Sustainability Services,
DNV GL Business Assurance Australia Pty Ltd

Date of publication:

19 March 2021

ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP

1. Second Party Opinion: An institution with sustainability expertise that is independent from the issuer may provide a Second Party Opinion. The institution should be independent from the issuer's adviser for its Sustainability Bond framework, or appropriate procedures such as information barriers will have been implemented within the institution to ensure the independence of the Second Party Opinion.

It normally entails an assessment of the alignment with the Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy, and/or processes relating to sustainability and an evaluation of the environmental and social features of the type of Projects intended for the Use of Proceeds.

2. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or sustainability criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally or socially sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Sustainability Bond proceeds, statement of environmental or social impact or alignment of reporting with the Principles may also be termed verification.

3. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against a recognised external sustainability standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.

4. Green, Social and Sustainability Bond Scoring/Rating: An issuer can have its Sustainability Bond, associated Sustainability Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental and/or social performance data, process relative to the Principles, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material sustainability risks.