



WHEN TRUST MATTERS



# KOREA HOUSING FINANCE CORPORATION SUSTAINABLE FINANCING FRAMEWORK



KOREA HOUSING FINANCE CORPORATION

**Document title:** Second Party Opinion on KHFC's Sustainable Financing Framework

**Prepared by:** DNV Business Assurance Korea Ltd.

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This statement is valid until the Framework provided in September 2022 remains unchanged.

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### Disclaimer

Our assessment relies on the premise that the data and information provided by the client to us as part of our review procedures have been provided in good faith. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied as per scope of work. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Statement.

### Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV Code of Conduct<sup>1</sup> during the assessment and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of statements or data included in the Framework except for this Statement. DNV maintains complete impartiality toward stakeholders interviewed during the assessment process.

<sup>1</sup> DNV Code of Conduct is available from DNV website ([www.dnv.com](http://www.dnv.com))

## DNV'S INDEPENDENT ASSESSMENT

### Scope and Objectives

Korea Housing Finance Corporation (hereinafter "KHFC"<sup>2</sup>) was established in March 2004 as a government entity pursuant to the Korea Housing Finance Corporation Act No. 7030, 31 December 2003, as amended (the "KHFC Act") with a mandate to support the Korean government's housing welfare policy. KHFC provides long-term fixed rate amortized mortgage loans, housing finance credit guarantees and reverse mortgage guarantees to deliver on its mission to enhance the welfare of people and national economic development through long-term and stable supply of housing finance. Since 2004 up to the end of 2021, KHFC has assisted more than 3.3 million households to purchase their residential property by extending over KRW 366 trillion of mortgage loans through its diverse mortgage products.

In line with global society's efforts for sustainable development, KHFC intends to place ESG at the core of its operation. With its ESG objective of "Supply sustainable housing financing and earn clients' trust by establishing environmentally and socially responsible management, and transparent governance structure", it tries to 1) expand environment friendly infrastructure, 2) strengthen socially responsible management, and 3) establish transparent governance structure. Guided by this overarching objective, KHFC intends to participate in net zero by 2050, expand inclusive housing financing, enhancing compliance and ethics management, to name a few.

In particular, KHFC has been dedicated to the implementation of Korea's housing welfare policy through developing and purchasing mortgage loans, securitizing mortgage loans, and managing the Housing Finance Credit Guarantee Fund. In carrying out these socially beneficial projects, integrity and ethical management is a key part. KHFC achieved the highest ranking among 573 institutions in the integrity evaluation of public institutions by the Anti-Corruption & Civil Rights Commission in 2017, receiving the designation as a Grade 1 agency, marking 8 consecutive years since 2010.

DNV Business Assurance Korea Ltd. ("DNV")<sup>3</sup> has been commissioned by KHFC to review the KHFC's Sustainable Financing Framework and provide a Second Party Opinion on the Framework in relation to alignment with Green Bond Principles 2021 (GBP)<sup>4</sup>, Social Bond Principles 2021 ("SBP")<sup>5</sup>, and Sustainability Bond Guidelines 2021 ("SBG")<sup>6</sup> published by the International Capital Market Association ("ICMA").

No assurance is provided regarding the financial performance of instruments issued via the KHFC's Framework, the value of any investments, or the long-term environmental benefits of the transaction. Our objective has been to provide an assessment that the Framework has met the criteria established on the basis set out below.

### Responsibilities of KHFC and DNV

KHFC has provided the information and data used by DNV during the delivery of this review. Our statement represents an independent opinion and is intended to inform KHFC and other interested stakeholders in the Framework as to whether the Framework is aligned with the GBP, SBP, and SBG. In our work we have relied on the information and the facts presented to us by KHFC. DNV 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 shall not be held liable if any of the information or data provided by KHFC and used as a basis for this assessment were not correct or complete.

<sup>2</sup> <https://www.hf.go.kr/ehf/index.do>

<sup>3</sup> <https://www.dnv.co.kr/>

<sup>4</sup> <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

<sup>5</sup> <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/>

<sup>6</sup> <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-bond-guidelines-sbg/>

## Basis of DNV's opinion

We have adapted our assessment methodology to create the KHFC-specific Eligibility Assessment Protocol (henceforth referred to as "Protocol"). Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion.

As per our Protocol, the criteria against which the Framework has been reviewed are grouped under the four core components:

### 1. Use of Proceeds

The Use of Proceeds criteria are guided by the requirement that an issuer of a bond must use the funds raised to finance eligible activities. The eligible activities should produce clear social and environmental benefits.

### 2. Process for Project Evaluation and Selection

The Project Evaluation and Selection criteria are guided by the requirements that an issuer of a bond should outline the process it follows when determining eligibility of an investment using Green, Social and Sustainability Bond proceeds, and outline any impact objectives it will consider.

### 3. Management of Proceeds

The Management of Proceeds criteria are guided by the requirements that a bond should be tracked within the organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled.

### 4. Reporting

The Reporting criteria are guided by the recommendation that at least annual reporting should be made of the use of 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 KHFC 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 a Protocol, adapted to the purpose of the Framework, as described above and in Schedule 3 to this Assessment;
- Assessment of documentary evidence provided by KHFC on the Framework and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
- Review of published materials by KHFC and KHFC's website;
- Discussions with KHFC and review of relevant documentation and evidence related to the criteria of the Protocol; and
- Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.

## Findings and DNV's Opinion

DNV's findings are listed below:

### 1. Use of Proceeds

KHFC intends to use the proceeds from all debt instruments issued under the Framework to finance or refinance new or existing Eligible Green Project Categories and/or Eligible Social Project Categories. The Framework defines the following eligible project categories.

*Eligible Green Project Categories*

- Green Buildings

*Eligible Social Project Categories*

- Affordable Housing

DNV undertook an analysis of the associated project type to determine the eligibility as “Green” and “Socially Beneficial” in line with the GBP, SBP and SBG 2021. KHFC has provided tables mapping its Eligible Green and Social Categories with the United Nations Sustainable Development Goals (“UN SDGs”). The outlined types of project within each category and associated selection criteria are provided in the Framework in order to determine eligibility. KHFC has also stated exclusion criteria in the Framework.

DNV concludes that the eligible categories outlined in the Framework are consistent with the categories outlined in the GBP, SBP and SBG 2021.

**2. Process for Project Evaluation and Selection**

KHFC describes the process for project evaluation and selection in the section of 1) launching of mortgage products, 2) loan disbursement, 3) covered bonds and mortgage-backed securities issuance, and 4) the KHFC Green, Social, Sustainability (GSS) Bonds Work Group. DNV can confirm that process for project selection and evaluations is in place. KHFC also set 24 months of look-back period for refinancing.

DNV concludes that KHFC's Framework appropriately describes the process of project evaluation and selection.

**3. Management of Proceeds**

The Framework states that the net proceeds of the GSS Bonds will be fully used to purchase pre-determined pools of KHFC mortgage loans from its partner banks and when issuing the GSS Bonds in the form of Covered Bonds or MBS, KHFC is required to a) physically separate the mortgage loans from KHFC's other assets and b) separately manage the mortgage loans according to the KHFC Act. The Framework also mentions how KHFC plans to track the allocation of the proceeds in an appropriate manner by describing that KHFC's Securitization Work Group will maintain a register to keep track of the use of proceeds for each bond.

DNV views that the proceeds arising from the future issuances will be appropriately managed.

**4. Reporting**

KHFC will report on the allocation of net proceeds and associated impact metrics of its bonds annually until maturity, which will be available in the public domain, and as necessary in the event of material development. KHFC may consolidate information of all bonds into one single report. Where possible, KHFC will make best efforts to report on the environmental and social impacts associated with the Eligible Projects funded with the net proceeds of the GSS Bonds. DNV concludes that KHFC's reporting is aligned with the relevant principles.

On the basis of the information provided by KHFC and the work undertaken, it is DNV's opinion that the KHFC's Sustainability Financing Framework meets the criteria established in the Protocol and are aligned with the GBP, SBP and SBG. Please refer to Schedule 4. Sustainability Bond/Sustainability Bond Programme External Review Form for detailed information.

**for DNV Business Assurance Korea Ltd.**

Seoul, Republic of Korea, 7 September 2022



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## Schedule 1. Description of Categories to be financed or refinanced through KHFC's Sustainable Financing Framework

### Green Category

Green Categories	Eligible Criteria	DNV Findings
<p><b>Green Buildings</b></p>  	<ul style="list-style-type: none"> <li>Mortgage loans or projects related to the acquisition, new construction, renovation, maintenance and operation of new or existing buildings that have or will receive, any one of the following certification systems: <ul style="list-style-type: none"> <li>U.S. Leadership in Energy and Environmental Design (LEED)<sup>7</sup> – minimum certification of Gold; or</li> <li>BREEAM<sup>8</sup> – minimum certification level of Excellent; or</li> <li>G-SEED<sup>9</sup> – minimum certification level of 2</li> </ul> </li> <li>Guarantee Service provided to Green Remodeling Businesses that have been certified by Korea Land and Housing Corporation</li> </ul>	<ul style="list-style-type: none"> <li>Mortgage loans or projects <ul style="list-style-type: none"> <li>The certification examples of green buildings (LEED, BREEAM, and G-SEED) which is obtained or will be obtained by KHFC, can ensure green eligibility, and they are appropriately presented in alignment with market practices.</li> </ul> </li> <li>Green Remodeling <ul style="list-style-type: none"> <li>Green Remodeling Businesses aim for increasing energy efficiency of old private and public buildings by renovating existing buildings whose energy efficiency have decreased due to aging, for examples, by enhancing insulation and airtightness. According to Greenhouse Gas Inventory and Research Center of Korea, more than 87% of GHG emissions in Korea comes from energy sector. In particular, energy use of buildings amounts to 30% of total energy use in energy sector. In addition, the proportion of old buildings (used more than 15 years after establishment and required for remodeling as stated by the Korean Law), takes up 74% out of total buildings (5.45 million buildings out of 7 million buildings)<sup>10</sup>.</li> <li>Against this backdrop, energy efficiency improvement by remodeling has been Korean Government's focus area since 2013 with an aim to reduce the emissions from existing buildings. DNV considers that this project brings about positive environmental impact and views positively that the energy efficiency improvement through Green Remodeling reaches up to 20-30%<sup>11</sup>.</li> </ul> </li> </ul>

### Social Category

Green Categories	Eligible Criteria	DNV Findings
<p><b>Affordable Housing</b></p>	<ul style="list-style-type: none"> <li>Enabling people to own their residential house with an affordable mortgage loan through</li> </ul>	<ul style="list-style-type: none"> <li>Bogeumjari Loan and Didimdol Loan <ul style="list-style-type: none"> <li>Two Loans are designed to help low to moderate income people in purchasing houses by restricting the beneficiaries to those with annual income of less than KRW 70 million (Bogeumjari Loan) and KRW 60 million (Didimdol Loan). In</li> </ul> </li> </ul>

<sup>7</sup> <http://leed.usgbc.org/leed.html>

<sup>8</sup> <https://www.breeam.com/discover/how-breeam-certification-works/>

<sup>9</sup> <http://gseed.or.kr/siteMain.do>

<sup>10</sup> <http://www.greenremodeling.or.kr/report/boardView.asp?bid=report&nSeq=2864>

<sup>11</sup> <https://www.greenremodeling.or.kr/report/boardView.asp?bid=report&nSeq=3077>

	<p>stable debt payment (Bogejumjari Loan)</p> <ul style="list-style-type: none"> <li>Supporting low to moderate income families with their home purchase (Didimdol Loan)</li> <li>Promoting long-term fixed rate amortized mortgage loans and helping households manage their mortgage payment burden (Conforming Loan)</li> </ul>	<p>reality, the beneficiaries' average annual incomes of these two Loans in 2021 are placed around USD 40,900 (KRW 47 million)<sup>12</sup>, 20% to 30% less than the Loan's targeted income group (KRW 60 million to 70 million). Actual beneficiaries' annual income (KRW 47 million) is also less than annual median income of a family with three households in 2021 (KRW 48 million)<sup>13</sup>.</p> <ul style="list-style-type: none"> <li>Moreover, by having restrictions on value of eligible property (KRW 600 million for Bogejumjari and KRW 500 million for Didimdol), the Loans made the target groups receive benefits for purchasing not luxury properties but affordable ones in Korea. In 2021 the average price of homes purchased by the beneficiaries of the Loans was KRW 320 million, which is less than 36% to 46% lower than the Loans' targeted incomes (KRW 500 million to 600 million). In addition, the sizes of 93% of purchased houses by the Loans were 85m<sup>2</sup> or less (categorized as small to medium size apartment according to the Government's definition). When a small to medium size apartment in Seoul costs about KRW 740 million to 1 billion (median cost) as of December 2021<sup>14</sup>, the average price of homes purchased by the Loans (KRW 320 million) are considered to be highly affordable.</li> <li>Conforming Loan             <ul style="list-style-type: none"> <li>The value of property is restricted to KRW 900 million in order that benefits are not provided to purchasing high value properties. In 2021, the average price of homes purchased through this Loan is KRW 540 million. By providing long-term fixed rate amortized mortgage loans, it helps potential low to moderate income beneficiaries to pay for the loan stably regardless of fluctuation of interest rates. In particular, DNV views that this long-term fixed rate Loan is conducive during the current time when interest rate is expected to increase more frequently and more steeply in order to lower inflation.</li> </ul> </li> </ul> <p>DNV considers that three Loans are beneficial to promote social value through providing loans for affordable housing for low to moderate income.</p>
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<sup>12</sup> Exchange rate of 2021 was USD 1 to KRW 1,144 for conversion to KRW in this SPO.  
<https://www.statista.com/statistics/647920/krw-usd-annual-exchange-rate/>.

<sup>13</sup> [https://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx\\_cd=2762](https://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx_cd=2762)

<sup>14</sup> Korean Statistical Information Service  
[https://kosis.kr/statHtml/statHtml.do?orgId=408&tblId=DT\\_KAB\\_11672\\_S20&vw\\_cd=&list\\_id=00000161&scrId=&seqNo=&lang\\_mode=ko&obj\\_var\\_id=&itm\\_id=&conn\\_path=R1&path=](https://kosis.kr/statHtml/statHtml.do?orgId=408&tblId=DT_KAB_11672_S20&vw_cd=&list_id=00000161&scrId=&seqNo=&lang_mode=ko&obj_var_id=&itm_id=&conn_path=R1&path=)

## Schedule 2. Contributions to UN SDGs

Eligible Project Categories	UN SDGs	DNV Findings
Green Buildings	<ul style="list-style-type: none"> <li>• <b>SDG 9.4:</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.</li> <li>• <b>SDG 11.6:</b> By 2030, reduce the adverse per capita, environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</li> </ul>	DNV is of the opinion that eligible categories outlined in the Framework contribute to the achievement of the UN SDGs.
Affordable Housing	<ul style="list-style-type: none"> <li>• <b>SDG 11.1:</b> By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums</li> </ul>	

## Schedule 3. Eligibility Assessment Protocol

### 1. Use of Proceeds

Ref.	Criteria	Requirements	DNV Findings				
1a	Type of bond / loan	<p>The Bond and Loan must fall in one of the following categories, as defined by the Social/Green Bond Principles:</p> <ul style="list-style-type: none"> <li>Social/Green Use of Proceeds Bond</li> <li>Social/Green Use of Proceeds Revenue Bond</li> <li>Social/Green Project Bond</li> <li>Social/Green Securitized Bond</li> <li>Loan instrument made available for Social/Green project (Social and Green use of loan proceeds)</li> </ul>	<p>KHFC' Sustainability Financing Framework clearly describes it intends to issue Green, Social, Sustainability Bonds ("GSS Bonds"). KHFC also clarifies that the Framework is aligned with the most up-to-date principles such as GBP, SBP, and SBG.</p> <p><b>From the Framework</b></p> <p><i>Green, Social, Sustainability Bonds ("GSS Bonds") issued under this Framework may be in the form of Covered Bonds, Mortgage-Backed Securities("MBS") and Senior Unsecured Bonds. They will be aligned with the ICMA principles released in June 2022 : 2021 Green Bond Principles ("GBP"), 2021 Social Bond Principles ("SBP") and 2021 Sustainability Bond Guidelines ("SBG") or as they may subsequently be updated. Covered Bonds and MBS are types of Secured Green Bond / Secured Social Bond / Secured Sustainability Bond which follow the Sustainable Securitisation requirement as specified in the Guidance Handbook.</i></p>				
1b	Sustainable Project Categories	<p>The cornerstones of Sustainability Bond and Loan are the utilization of the proceeds of the bond and the loan which should be appropriately described in the legal documentation for the security.</p>	<p>Eligible project categories presented by KHFC are as follows:</p> <table border="1"> <thead> <tr> <th>Eligible Green Assets</th> <th>Eligible Social Assets</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>Green Buildings</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>Affordable Housing</li> </ul> </td> </tr> </tbody> </table> <p>KHFC also specified exclusionary criteria to strengthen eligibility as green and social projects:</p> <p><b>From the Framework</b></p> <ul style="list-style-type: none"> <li>Large-scale hydropower projects (&gt;25 MW capacity)</li> <li>Electricity transmission infrastructure / systems where 25 per cent or more of electricity transmitted to the grid is generated using fossil fuels</li> <li>Extraction, refining or transportation of fossil fuels</li> <li>Nuclear energy</li> <li>Agricultural or afforestation operations on land designated as primary forest, high conservation value areas, or legally preserved areas</li> <li>Production and refining of palm oil</li> <li>Payday loans and predatory lending activities</li> <li>Adult entertainment</li> <li>Alcohol / alcoholic beverages</li> <li>Tobacco products</li> <li>Gambling</li> <li>Weapons and small arms</li> </ul>	Eligible Green Assets	Eligible Social Assets	<ul style="list-style-type: none"> <li>Green Buildings</li> </ul>	<ul style="list-style-type: none"> <li>Affordable Housing</li> </ul>
Eligible Green Assets	Eligible Social Assets						
<ul style="list-style-type: none"> <li>Green Buildings</li> </ul>	<ul style="list-style-type: none"> <li>Affordable Housing</li> </ul>						
1c	Environmental benefits	<p>All designated Green Project categories should provide clear environmentally sustainable benefits, which, where feasible, will be quantified or assessed by the Issuer.</p>	<p>By adopting threshold in alignment with international or national regulations, eligibility of green projects is secured, leading to clear environmental benefit. Where possible and subject to data availability and confidentiality, KHFC also plans to carry out impact reporting.</p>				

Ref.	Criteria	Requirements	DNV Findings
1c	Social Benefits	All designated Social Project categories should provide clear social benefits, which, where feasible, will be quantified or assessed by the Issuer.	By adopting threshold in alignment with international or national regulations, eligibility of social projects is secured, leading to clear social benefit. Where possible and subject to data availability and confidentiality, KHFC also plans to carry out impact reporting.
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. refinancing, and where appropriate, also clarify which investments or project portfolios may be refinanced.	<p>In the Framework, the KHFC indicates that the net proceeds of the GSS Bonds will be used to finance or refinance, in whole or in part, new or existing Eligible Social Project Categories and Eligible Green Project Categories (“Eligible Project Categories”). The company has also set the look-back period of 24 months prior to the issuance or signing dates of the respective bonds.</p> <p>In the reporting section, it also includes the refining share.</p> <p><b>From the Framework</b></p> <p><i>The net proceeds of the GSS Bonds will be used to finance or refinance, in whole or in part, new or existing Eligible Social Project Categories and Eligible Green Project Categories (“Eligible Project Categories”) meeting the Eligibility Criteria (“Eligibility Criteria”)</i></p> <ul style="list-style-type: none"> <li>• <i>The proceeds of a Green Bond issued under this Framework will be applied to projects that fall under the Eligible Green Project Categories set out in Section 2.1.1 below.</i></li> <li>• <i>The proceeds of a Social Bond issued under this Framework will be applied to projects that fall under the Eligible Social Project Categories set out in Section 2.1.2 below.</i></li> <li>• <i>The proceeds of a Sustainability Bond issued under this Framework will be applied to projects that fall under the Eligible Green Project Categories set out in Section 2.1.1 and Eligible Social Project Categories set out in Section 2.1.2.</i></li> </ul>

## 2. Process for Project Selection and Evaluation

Ref.	Criteria	Requirements	DNV Findings
2a	Investment-decision process	<p>The Issuer of a Sustainability Bond and Loan should outline the decision-making process it follows to determine the eligibility of projects using Sustainability Bond and Loan proceeds. This includes, without limitation:</p> <ul style="list-style-type: none"> <li>• A process to determine how the projects fit within the eligible Social and Green Projects categories identified in the Social/Green Bond Principles and Social/Green Loan Principles;</li> <li>• The criteria making the projects eligible for</li> </ul>	<p>KHFC describes the process for project evaluation and selection in the section of 1) launching of mortgage products, 2) loan disbursement, 3) covered bonds and mortgage-backed securities issuance, and 4) the KHFC GSS Bonds Work Group. DNV can confirm that process for project selection and evaluations is in place.</p>

Ref.	Criteria	Requirements	DNV Findings
		<p>using the Sustainability Bond and Loan proceeds;</p> <ul style="list-style-type: none"> <li>The social objectives, and the environmental sustainability objectives, and; and</li> <li>Complementary information on process by which the issuer identifies and manages perceived social and environmental risks associated with the relevant project</li> </ul>	
<b>2b</b>	Issuer/borrower's environmental and social and governance framework	In addition to information disclosed by an issuer on its Sustainability Bond/Loan process, criteria and assurances, Sustainability Bond and Loan investors may also take into consideration the quality of the issuer's overall framework and performance regarding environmental and social sustainability.	<p>The KHFC's annual report includes its sustainability strategy and activities along with performance result.</p> <p><a href="https://www.hf.go.kr/ehf/sub05/sub03.do">https://www.hf.go.kr/ehf/sub05/sub03.do</a></p>

### 3. Management of Proceeds

Ref.	Criteria	Requirements	DNV Findings
<b>3a</b>	Tracking procedure	The net proceeds of Green Bond 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 Issuer's lending and investment operations for Green/Social Projects.	<p>The net proceeds of the GSS Bonds will be fully used to purchase pre-determined pools of KHFC mortgage loans from its partner banks on the closing date of each GSS Bonds, according to the Loan Purchase Agreements between KHFC and its partner banks.</p> <p>The Framework also shows that according to Article 30 of the KHFC Act, KHFC is required to (a) physically separate the purchased mortgage loans from KHFC's other asset; and (b) separately manage the mortgage loans according to a securitization plan. KHFC is also committed to maintain a minimum amount of over-collateralisation loans over the life of the issuance.</p> <p>The Framework states how KHFC plans to track the allocation of the proceeds in an appropriate manner. KHFC's Securitisation Work Group will maintain a register to keep track of the use of proceeds for each bond. The register will contain the following information.</p> <p><b>From the Framework</b></p> <p><i>2.3.1 Type of Funding Transaction</i></p> <ul style="list-style-type: none"> <li>Key information includes issuer/borrower entity, transaction date, number of transactions, principal amount of proceeds, repayment or amortization profile, maturity date, interest or coupon, and the ISIN number in case of bond transaction.</li> </ul>

Ref.	Criteria	Requirements	DNV Findings
			<p>2.3.2 <i>Allocation of Use of Proceeds</i></p> <ul style="list-style-type: none"> <li>• <i>Name and description of Eligible Projects to which the proceeds of the bonds have been allocated in accordance with the Framework</i></li> <li>• <i>Allocation of the proceeds of bonds to Eligible Projects</i></li> <li>• <i>The balance of unallocated proceeds</i></li> <li>• <i>Information of temporary investment for unallocated proceeds</i></li> </ul>
3b	Tracking procedure	So long as the Green Bond/Loan is 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>KHFC is committed to allocating all proceeds from the bonds issued to Eligible Project on a best effort basis within two years of the bond issuance in accordance with the evaluation and selection process set out above.</p> <p>KHFC will monitor the allocation to Eligible Project and track the net proceeds through its internal accounting system.</p> <p><b>From the Framework</b></p> <p><i>KHFC is committed to allocating all proceeds from the bonds issued to Eligible Project on a best effort basis within two years of the bond issuance in accordance with the evaluation and selection process set out above. KHFC will monitor the allocation to Eligible Project and track the net proceeds through its internal accounting system.</i></p>
3c	Temporary holdings	Pending such investments or disbursements to eligible Green Projects, the Issuer should make known to investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	<p>Pending allocation, the net proceeds from the bonds issued may be invested in cash or cash equivalents, or other liquid marketable instruments with KHFC's treasury and in accordance with its liquidity policies.</p> <p><b>From the Framework</b></p> <p><i>KHFC will monitor the allocation to Eligible Project and track the net proceeds through its internal accounting system. Pending allocation, the net proceeds from the bonds issued may be invested in cash or cash equivalents, or other liquid marketable instruments with KHFC's treasury and in accordance with its liquidity policies.</i></p>

#### 4. Reporting

Ref.	Criteria	Requirements	DNV 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 Green 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	<p>KHFC will report on the allocation of net proceeds and associated impact metrics of its bonds annually until maturity, which will be available in the public domain, and as necessary in the event of material development. KHFC may consolidate information of all bonds into one single report. The relevant information of reporting is described in the Framework as follows:</p> <p><b>From the Framework</b></p> <p><i>KHFC will provide the following information for the net proceeds of all the bonds during the reporting period:</i></p> <ul style="list-style-type: none"> <li>• <i>Confirmation that Eligible Assets included in the Portfolio comply with the Framework</i></li> <li>• <i>Total amount of Eligible Assets</i></li> <li>• <i>List of projects allocated with descriptions and the respective Eligible Project Category</i></li> </ul>

		<p>environmentally and social sustainable impact.</p>	<ul style="list-style-type: none"> <li>• <i>The percentage of proceed allocation by Eligible Project Category</i></li> <li>• <i>Balance of unallocated proceeds and form of treatment (if any)</i></li> <li>• <i>Case studies of selected allocated eligible projects, subject to confidentiality</i></li> </ul> <p><b>Eligible Green Assets</b></p> <table border="1"> <thead> <tr> <th>Eligible Category</th> <th>Potential reporting indicators</th> </tr> </thead> <tbody> <tr> <td>Green Buildings</td> <td> <ul style="list-style-type: none"> <li>• Level of certification by property</li> <li>• Energy efficiency gains in MWh or % vs. baseline</li> <li>• Annual GHG emissions reduced/avoided (tCO2eq)</li> <li>• Annual energy savings (MWh pa)</li> <li>• Annual reduction in water consumption (litres)</li> </ul> </td> </tr> </tbody> </table> <p><b>Eligible Social Categories</b></p> <table border="1"> <thead> <tr> <th>Eligible Category</th> <th>Potential reporting indicators</th> </tr> </thead> <tbody> <tr> <td>Affordable Housing</td> <td> <ul style="list-style-type: none"> <li>• Number of households benefitting from eligible mortgage loans</li> <li>• Average eligible loan balance per person</li> <li>• Average house value</li> <li>• Average household income of borrowers</li> </ul> </td> </tr> </tbody> </table>	Eligible Category	Potential reporting indicators	Green Buildings	<ul style="list-style-type: none"> <li>• Level of certification by property</li> <li>• Energy efficiency gains in MWh or % vs. baseline</li> <li>• Annual GHG emissions reduced/avoided (tCO2eq)</li> <li>• Annual energy savings (MWh pa)</li> <li>• Annual reduction in water consumption (litres)</li> </ul>	Eligible Category	Potential reporting indicators	Affordable Housing	<ul style="list-style-type: none"> <li>• Number of households benefitting from eligible mortgage loans</li> <li>• Average eligible loan balance per person</li> <li>• Average house value</li> <li>• Average household income of borrowers</li> </ul>
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## Schedule 4. Sustainability Bond / Sustainability Bond Programme External Review Form

### Section 1. Basic Information

**Issuer/Guarantor name:**

Korea Housing Finance Corporation (KHFC)

**Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:**

KHFC Sustainable Financing Framework, September 2022

**Independent External Review provider's name:**

DNV Business Assurance Korea Ltd.

**Completion date of this form:**

7 September 2022

**Publication date of review publication:**

7 September 2022

### 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:

- |  |  |
|--|--|
| <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 type="checkbox"/> Verification                    | <input type="checkbox"/> Scoring/Rating |
| <input type="checkbox"/> Other (please specify):         |   |

*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 KHFC and the work undertaken, it is DNV's opinion that the KHFC's Sustainable Financing Framework meets the criteria established in the Protocol and are aligned with the GBP, SBP and SBG 2021.

### 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):**

KHFC intends to use the proceeds issued under the Framework to finance or refinance, in whole or in part, for new and/or existing Eligible Green and/or Social Projects. DNV concludes that use of proceeds in the Framework is aligned with the GBP, SBP and SBG 2021.

- |  |  |
|--|--|
| <input type="checkbox"/> Renewable energy  | <input 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 type="checkbox"/> Clean transportation  |
| <input 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 checked="" 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 (please specify):   |

If applicable please specify the environmental taxonomy, if other than GBPs: EU Taxonomy and Climate Bonds Taxonomy

**Use of proceeds categories as per SBP:**

- |  |  |
|--|--|
| <input type="checkbox"/> Affordable basic infrastructure   | <input type="checkbox"/> Access to essential services  |
| <input checked="" 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   |
| <input type="checkbox"/> Sustainable water and wastewater management   | <input type="checkbox"/> Climate change adaptation   |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs | <input type="checkbox"/> Other (please specify):   |

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

**Target populations:**

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

**2. PROCESS FOR PROJECT EVALUATION AND SELECTION**

**Overall comment on section (if applicable):**

KHFC describes the process for project evaluation and selection in the section of 1) launching of mortgage products, 2) loan disbursement, 3) covered bonds and mortgage-backed securities issuance, and 4) the KHFC GSS Bonds Work Group. DNV can confirm that process for project selection and evaluations is in place. KHFC also set 24 months of look-back period for refinancing. DNV can confirm that the KHFC's Framework in relation to project evaluation and selection is aligned with the GBP, SBP and SBG 2021.

**Evaluation and selection**

- Credentials on the issuer's green objectives
- Defined and transparent criteria for projects eligible for Sustainability Bond proceeds
- Summary criteria for project evaluation and selection publicly available
- Documented process to determine that projects fit within defined categories
- Documented process to identify and manage potential ESG risks associated with the project
- Other *(please specify)*:

**Information on Responsibilities and Accountability**

- Evaluation / Selection criteria subject to external advice or verification
- Other *(please specify)*:
- In-house assessment

**3. MANAGEMENT OF PROCEEDS**

**Overall comment on section *(if applicable)*:**

The Framework states that the net proceeds of the GSS Bonds will be fully used to purchase pre-determined pools of KHFC mortgage loans from its partner banks and KHFC is required to a) physically separate the mortgage loans from KHFC's other assets and b) separately manage the mortgage loans according to the KHFC Act. The Framework also states how KHFC plans to track the allocation of the proceeds in an appropriate manner by describing that KHFC's Securitization Work Group will maintain a register to keep track of the use of proceeds for each bond.

DNV views that the proceeds arising from the future issuances will be appropriately managed.

**Tracking of proceeds:**

- Sustainability Bond proceeds segregated or tracked by the issuer in an appropriate manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other *(please specify)*:

**Additional disclosure:**

- Allocations to future investments only
- Allocation to individual disbursements
- Disclosure of portfolio balance of unallocated proceeds
- Allocations to both existing and future investments
- Allocation to a portfolio of disbursements
- Other *(please specify)*:

**4. REPORTING**

**Overall comment on section *(if applicable)*:**

KHFC will report on the allocation of net proceeds and associated impact metrics of its bonds annually until maturity, which will be available in the public domain, and as necessary in the event of material development. KHFC may consolidate information of all bonds into one single report. Where possible, KHFC will make best efforts to report on the environmental and social impacts associated with the Eligible Projects funded with the net proceeds of the GSS Bonds. DNV concludes that KHFC's reporting is aligned with the relevant principles.

**Use of proceeds reporting:**

- Project-by-project
- On a project portfolio basis

Linkage to individual bond(s)

Other (please specify):

**Information reported:**

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): to be developed later

**Means of Disclosure**

Information published in financial report

Information published in sustainability report

Information published in ad hoc documents

Other (please specify): KHFC will post the allocation/impact reports on the KHFC's website

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.)

<https://kmbs.hf.go.kr:7443/kmbseng/911/subview.do>  
<https://kmbs.hf.go.kr:7443/kmbseng/912/subview.do>  
<https://kmbs.hf.go.kr:7443/kmbseng/913/subview.do>

**SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**

**Type(s) of Review provided:**

Second Party Opinion

Certification

Verification

Scoring/Rating

Other (please specify):

**Review provider(s):**

DNV Business Assurance Korea Ltd.

**Date of publication:**

7 September 2022

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

- 1. Second Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green 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 Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental 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 environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally 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 Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- 3. Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green 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 Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green 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 performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.



## About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV 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.

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