

## Obayashi Corporation/ Obayashi Sustainability Bond

### Sustainability bond eligibility pre-issue assessment report

### DNV GL second party opinion



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DNV GL Business Assurance Japan K.K.

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## Obayashi Sustainability Bond

### DNV GL Second Party Opinion

#### I Introduction (About issuer and sustainability bond)

##### (1) Obayashi Corporation

The predecessor of Obayashi Corporation (hereafter, Obayashi) was founded on 25 January 1892 as a civil engineering and building construction contractor in Osaka. Obayashi has been as one of the largest general construction company. Obayashi Group has expanded its presence all over the world with 14,739 employees. Obayashi Group is consisted of 89 consolidated subsidiaries and 28 affiliates (as of 31 March 2019).

##### (2) Obayashi Sustainability Initiatives

As “Obayashi Basic Principles”, Obayashi established their Vision and Mission that they have to play a role in society, in “Obayashi Philosophy,” and establishes a guideline that helps us to realize its philosophy in “Obayashi Code of Conduct”.

Obayashi considers sustainability initiatives to be the practical embodiment of Obayashi Basic Principles and its core corporate activities.

**a) Obayashi Philosophy**

Obayashi disclosed its contribution to realize sustainable society considering global environment in its corporate philosophy,

Obayashi's Vision and Mission in Society

A Leading Sustainability Company

- 1 Exercise honest craftsmanship with superior technologies and create new value in every space.
- 2 Care for the global environment and create solutions to social challenges as a good corporate citizen.
- 3 Value each person with a stake in our business.

By keeping these promises, Obayashi Corporation contributes to realizing a sustainable society.

**b) "Obayashi Code of Conduct" and Social Contribution**

Social contribution initiatives have been clearly directed in the guidelines to realize the Obayashi Philosophy and continue being an enterprise trusted by all stakeholders.

Please refer to the Appendix-1 "Obayashi Code of Conduct."

### c) Obayashi Environmental Policy and Vision

The Medium-Term Business Plan 2017 was issued which shows its business goal and initiatives achieved in the first five years of Obayashi's roadmap.

Obayashi established its environmental and social initiative in management foundation strategy.

#### **Environmental Initiative:**

- Based on its medium- to long-term environmental vision "Obayashi Green Vision 2050", Obayashi will promote efforts to solve global environmental issues in constructions and business activities in and around the constructions.

Please refer to the Appendix-2 "Obayashi Environmental Policy and Vision"

#### **Social Initiative:**

- To provide high quality constructions, Obayashi will promote continuous improvement of quality management system, ICT application on construction site, technology development and human resource development.
- Obayashi will ensure the safety and health of workers and promote a comfortable workplace where diverse human resources can work actively.
- As a good corporate citizen, Obayashi will promote positive activities to solve social issues, including preparation for disasters, support for restoration and reconstruction at the time of disasters, and coexistence with local communities, etc.

### d) Obayashi ESG materiality

Obayashi has identified the social issues which Obayashi group faces and how they respond to them. Obayashi has set six materialities. Obayashi also links their ESG initiatives (materiality) and SDGs targets identified by Obayashi. Those are clearly disclosed at Obayashi web site and OBAYASHI Corporate Report 2018.

Please refer to the Appendix-3 "ESG materiality" and Appendix-4 "Obayashi Sustainability projects and SDGs contributions."

### (3) Obayashi Sustainability Bond

Sustainability Bond issued at this time intends to promote its corporate activities aim to realize sustainable society, by raising funds in capital markets regarding to its activities for sustainability promoted as practice of Obayashi Basic Principle. Also, it contributes to the realization of the medium- and long-term environmental vision "Obayashi Green Vision 2050" subsequently to the Obayashi Green Bond issued in October 2018.

Obayashi intends to allocate the fund raised by sustainability bond to following sustainability project/portfolio.

\*Fund allocation includes finance and/or refinance. Please refer to the schedule-1

- **Environmentally friendly "Wellness Building" under the concept "smart buildings that are good for all people"**
- **Secure skilled workers for construction industry and strengthen trust relationship with suppliers**
- **Renewable energy business based on the action plan of "Obayashi Green Vision 2050"**

In this paper, 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. DNV GL Business Assurance Japan K.K.(henceforth referred to as DNV GL) 's objective has been to provide an assessment that the BOND has met the criteria of the Sustainability Bond Guidelines and the associated Technical Criteria on the basis set out below.

## II Scope and Objectives

Obayashi issues a sustainability bond to address its project portfolio ; Environmentally friendly “Wellness Building” under the concept “smart buildings that are good for all people”, Secure skilled workers for construction industry and strengthen trust relationship with suppliers, and Renewable energy business based on the action plan of “Obayashi Green Vision 2050” in order to achieve environmental and social contribution defined in ESG materiality (Appendix-3) which also align with Obayashi Philosophy “sustainability society”. Obayashi also intends to strengthen its business foundation and also addresses to obtain its stakeholder’s deeper understanding of “Obayashi Green Vision 2050” and “ESG materiality” through the sustainability bond.

Obayashi intends to finance investments in specific sustainability project categories, including:

- Schedule-1 shows the nominated sustainability projects and assets. Those are categorized 3 project portfolios.
- “Environmentally friendly ‘Wellness Buiding’ under the concept ‘smart buildings’ that are good for all people” includes 2 projects and assets, “Secure skilled workers for construction industry and strengthen trust relationship with suppliers” includes 1 social project, and Renewable energy business based on the action plan of “Obayashi Green Vision 2050.” “Renewable energy” includes 3 projects and assets (R&D for hydrogen society, Wind power and Bioenergy), respectively.
- As some directly and/or indirectly green and social benefit of above projects/business, “CO<sub>2</sub> emission reduction” from energy source and contribution to specific target population & social issues are prospected.
- Total fund of Obayashi's sustainability bond, 10 billion JPY (redemption period 5 years) will be fully allocated to sustainability activities which include both finance and refinance. Refinance amount and/or ratio will be reported/disclosed in OBAYASHI Corporate Report or environmental achievement report on its website (homepage) annually.

- In this sustainability bond projects, environmental risks (e.g. land use, ecological system impact) have been identified by issuer and issuer has taken appropriate countermeasures to mitigate its impact for all projects. Issuer also has demonstrated to comply related law and regulation (including discussion with local authority, citizens), environmental impact assessment, public acceptance and required evaluation.
- Environmental benefit will be reported annually by issuer, CO<sub>2</sub> emission reduction by executing renewable energy projects, and social contribution through vocational training and education (e.g. numbers of trainee, certified skilled workers). Above information will be reported/disclosed in OBAYASHI Corporate Report or environmental achievement report on its website(homepage) annually. As for the 'Smart Building' which were certified such as BELS(ZEB) and WELL, Obayashi has published the net efficiency of CO<sub>2</sub> emission reduction evaluation/plan based on its primary energy consumption by eco design basis and implements appropriate monitoring and analysis to maintain WELL certification condition, environmental and social benefits will not be included in annual report by its performance.

DNV GL holds no other engagements with Obayashi including its direct shareholders, for which we foresee conflict of interest to carry out the Scope of Work as defined in the Request for Proposal.



Obayashi intends to distribute any unallocated proceeds in line with the Use of Proceeds and Management of Proceeds sections set out in the Obayashi Sustainability Bond Framework.

DNV GL has been commissioned by Obayashi to provide a Sustainability pre-issue second party opinion. Our methodology to achieve this is described under 'V Work Undertaken' below. We were not commissioned to provide independent assurance or other audit activities.

In this paper, 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 Sustainability Bond Guidelines 2018 (SBG2018) in accordance with Green Bond Principles 2018 (GBP2018) and Social Bond Principles 2018 (SBP2018). DNV GL also considered the requirements of the Green Bond Guidelines, 2017 (MOE, Japan 2017) and Climate Bond Standard Version 2.1 during its assessment, however at the time of review, Technical Criteria for – “Renewable energy (Wind Energy and Bioenergy)” are available for Issuer use. Technical Guidance for 'Energy Efficient' (Green Buildings, commercial property) is applicable to this BOND.

No opinion of conformance with the Standard is provided here and no Certification has been applied for at this time. Any future application for Certification under the Climate Bond Standard would be at the discretion of the Issuer, Obayashi.

### III Responsibilities of the Directors of Issuer (Obayashi) and the Assurance Providers, DNV GL

The management of Obayashi 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 Obayashi 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 Obayashi.

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 Obayashi's management and used as a basis for this assessment were not correct or complete.

## IV Basis of DNV GL's Opinion

To provide as much flexibility for the issuer, Obayashi, as possible, we have adapted our Sustainability Bond Guidelines<sup>\*1</sup> (considering Green Bond Principles<sup>\*2</sup>, Social Bond Principles<sup>\*3</sup>), refer to the Green Bond Guidelines, 2017<sup>\*4</sup> and Climate Bonds Standard<sup>\*5</sup> assessment methodologies, which incorporates the requirements of the above, to create a Obayashi-specific Sustainability Bond Eligibility Assessment Protocol (henceforth referred to as "Protocol").

Obayashi-specific Protocol (eligibility) has the capacity for potential application of the Bond under the Green Bond Guidelines, 2017 and Climate Bond Standard should Technical Criteria under the Standard become available. 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 and social 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 Sustainability 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.

\*1:Sustainability Bond Guidelines (June 2018, International Capital Market Association)

\*2:Green Bond Principles (June 2018, International Capital Market Association)

\*3:Social Bond Principles (June 2018, International Capital Market Association)

\*4:Green Bond Guidelines, 2017 (March 2017, Ministry of the Environment, Japan)

\*5:Climate Bonds Standard | version 2.1 (Climate Bonds Initiative)

## V 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 Obayashi 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 Obayashi-specific Protocol, adapted to the purpose of the BOND, as described above and in Schedule-2 to this Assessment;
- Assessment of documentary evidence provided by Obayashi on the BOND and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
- Discussions with Obayashi 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.

## VI Findings and DNV GL's Opinion (eligibility against for Sustainability criteria)

### 1. Principle One, Use of Proceed

DNV GL has confirmed that the proceeds from the sustainability bond issued by Obayashi will be allocated to the 3 project portfolios (including 6 projects) which meet the sustainability bond criteria below;

#### **Eligibility Criteria of Sustainability Bond** (brief description):

**Wellness Building (project portfolio 01, including 2 projects)**

**Vocational training and subsidies (project portfolio 02)**

**Renewable energy (project portfolio 03, including 3 projects)**

Schedule-1 shows lists of sustainability project

All the proceeds will be financed and/or refinanced to the sustainability projects.

Detail information about sustainability projects are followings.

**Project Portfolio 01 :**

**Environmentally friendly “Wellness Building” under the concept “smart buildings that are good for all people”** **(fund allocation plan : 5.4billion-JPY)**

**Project 01-1 Technical Research Institution (Techno-station main building)**

Obayashi conducts ZEB-compliant in fiscal year ended May 2014 for the Technical Research Institution (Techno station main building), acquired BELS certification in 27<sup>th</sup> March 2019 by installing solar PV and various energy efficiency improvement. In addition, the techno-station main building became WELL certified™ at the Gold level under WELL Building Standard v1 in the category of New and Existing Building for the first time in the world as the whole building certification, on November 21, 2017, which contributes to creating a working environment that achieved safety, security, health and comfort. Those Obayashi’s initiatives achieve the improvement of both energy consumption and working efficiency.

Obayashi intends to allocate the funds to part of the repayment funds of long-term debt since Obayashi procures the long-term debt as additional introduction cost from financial institutions.

DNV GL conducted the site visiting to Technical Research Institution as well as document review. DNV GL confirmed the above green (energy efficiency) contribution and work environment improvement have been established and appropriately maintained the BELS and WELL certification conditions by continuous monitoring, inspection and investigation, through interview with Obayashi.

**Project 01-2**

**New Environmentally friendly “Wellness Building” under the concept “smart buildings that are good for all people”**

Obayashi will evaluate and select the building which meet the sustainability eligible project against their “process for project evaluation and selection” in their framework. DNV GL will assess the project and revise this opinion.



Project 01-1 Technical Research Institution (Techno-station main building), with Roof top type solar PV

(Kiyose-city, Tokyo) BELS(ZEB) : 27<sup>th</sup> Mar 2019, WELL Certified™ at Gold Level on 21<sup>st</sup> Nov 2017)

**Project Portfolio 02 :**

**Secure the skilled workers of construction industry and strengthen trust relationships with suppliers**

**Project 02 : Vocational training operation and subsidy for developing of the young skilled workers (fund allocation plan : 1.0billion-JPY)**

Construction industries are facing the issues about securing skilled workers and comparably lower salary which need to improve. Those issues are clearly disclosed and requested to improve by MLIT (Ministry of Land, Infrastructure, Transport and Tourism) and Japan Federation of Construction Contractors. Obayashi initiative through this project 02 align with above national and industrial directions. Obayashi also identifies the issues which they need to focus, such as target population and concrete social benefit guided by social bond principles. Project 02 are divided into 2 use of proceeds.

One is for operation of vocational training school. The other is additional subsidy for certified skilled workers (427 skilled workers were certified in 4 categories) according to the MLIT and industrial directions. This subsidy is excess to the industrial standard and regulation, therefore it contributes to improve the issues that construction industry faces and is considered to be eligible as social project.





Project 02 Vocational training operation and subsidy  
for developing of the young skilled workers  
(Vocational training school, accommodation, field training, in Yashio-city, Saitama)

**Project Portfolio 03 : Renewable energy business based on the action plan “Green Vision 2050”**

Obayashi addresses to Promote the renewable energy business in order to achieve low carbon society in “3+1 Society” based on medium-to long-term environmental vision, “Green Vision 2050.”

In this Project Portfolio, 3 projects (Project 03-1 to 3) related to the “Promotion of the renewable energy business” are nominated to the eligible project as Obayashi sustainability bond.

**Project 03-1 : R&D for CO<sub>2</sub>-free hydrogen production and logistics system**

**(fund allocation plan : 0.4billion-JPY\*partially refinance)**

Obayashi will allocate the proceeds from the sustainability bond to the R&D cost for CO<sub>2</sub>-free hydrogen production including pilot manufacturing plant construction and logistics systems (production, storage and distribution). CO<sub>2</sub>-free hydrogen is generated by renewable energy source, using geothermal power generation.

Obayashi has launched this project according to the joint research agreement with Tuaropaqui Trust in December 2018, who owns geothermal power station in New Zealand. CO<sub>2</sub>-free hydrogen pilot manufacturing plant construction (target hydrogen production capacity; 100t/year) will be completed in 2020.

**Project 03-2 Otsuki biomass power plant**

**(fund allocation plan\* : approx. 3.2billion-JPY \*including Project03-3)**

Otsuki biomass (wood chip) power plant is located in Otsuki city, Yamanashi prefecture started commercial operation in December. 2018. The rated output is 14.5MW (net output 12.5MW).

DNV GL confirmed that fuel for the power generation is wood chip only\* and Obayashi secures supply of wood chip by the long-term(20-year) contraction. (\*exception for emergency operation)

The funds from sustainability bond will be allocated to the subsidiary company (OC Finance Corporation, 100% owned by Obayashi) then be financed to the subordinated loan for the SPC (Specific Purpose Company).



**Outline**

Rated output	14.5MW (net 12.5MW)
fuel	Biomass (Wood chip only*) *exception for emergency operation
location	Otsuki city, Yamanashi prefecture
Commercial operation	From 2nd Dec 2018

Project 03-2 Otsuki biomass power plant

**Project 03-3 : Kamikita ogawara onshore wind power (Plan)**

**(fund allocation plan\* : approx. 3.2billion-JPY \*including Project03-2)**

Kamikita ogawara onshore wind power is located in Rokkasho, Aomori which consists 6 towers of wind power. Total rated power is max. 21.6MW (3.6MW/tower) and capacity factor will be 22 to 25% at the planning. Kamikita ogawara onshore wind power is planned to start commercial operation form Jan. 2022.

The proceeds from sustainability bond to will be allocated to the subsidiary company (OC Finance Corporation, 100% owned by Obayashi) then be financed to the subordinated loan for the SPC (Specific Purpose Company), specially established for renewable energy projects.

## 2. Principle Two, Process for Project Evaluation and Selection

DNV GL has confirmed that the sustainability projects of all three project portfolios including 6 projects described in the Schedule-1, were evaluated and selected through the appropriate process by the relevant department of Obayashi based on its corporate philosophy, management foundation strategy (environmental and social initiatives) based on the of Medium-Term Business Plan 2017 and in line with 6 ESG materiality defined by Obayashi, through interview and document review. Projects are evaluated and selected with deliberations between expert divisions, such as Head Office Corporate Strategy Division ESG & SDGs Department. President, who is CSR committee chairman, approves and authorizes the sustainability eligible projects.

DNV GL has reviewed evidence that demonstrates that Obayashi regularly assesses opportunities for improvement and devises action plans and initiatives to mitigate negative environmental and social impacts from its operation. DNV GL also confirmed that Obayashi plans the project and asset integrity for long-term and appropriate environmental and social benefits evaluation in the project and asset life time.

Specifically, as for the negative impact (environmental risks, such as land use, ecological system and public acceptance) caused by these projects, appropriate countermeasures and practical action plans which comply relevant regulations and laws have been taken and will be taken after the evaluation (e.g. Environmental assessment report). DNV GL confirmed that Obayashi resulted its effect is limited and appropriate action will be executed if required. DNV GL also confirmed that Obayashi appropriately conducted periodical monitoring and analysis in order to maintain the energy saving and working environment for WELL and BELS(ZEB) certification, through Obayashi Technical Research Institute site observation and interviewing as well as document review.

### 3. Principle Three, Management of Proceeds

DNV GL has reviewed and confirmed Obayashi's plans to trace/manage the proceeds from the Bond, from the time of issuance to the time of disbursement, as well as the appropriateness and clarity of their plan to manage total amount of the proceeds. Obayashi will manage the cash or cash equivalents which equals to fund, until decision of the proceed allocation. DNV GL has confirmed that Obayashi will periodically (at least every quarter) review the outstanding balance of the Bond. Total amount of fund has not been defined in this document, then will be disclosed in the legal documentation. Obayashi will allocate the fund till Mar. 2024. If the unallocated funds arise, Obayashi will allocate them to the other sustainability (green and/or social) eligible projects according to their sustainability bond framework.

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.

#### 4. Principle Four, Reporting

DNV GL has confirmed that Obayashi has plans to report/disclose the specific information required by the Sustainability Bond Guidelines 2018 in OBAYASHI Corporate Report and/or Obayashi's website annually. These will include description of the project list and its progress, allocation including refinance amount and management of the proceeds invested, as well as the associated qualitative or quantitative environmental and social impacts\* [e.g. amount of CO<sub>2</sub> emission reduction evaluation according to the renewable energy power generation, and vocational training and education (e.g. numbers of trainee, certified skilled workers)].

DNV GL will conduct periodic ongoing reviews and state about validity of evaluation/calculation process and its result in the periodical report.

\* Evaluation/Calculation process of environmental and social benefit

- Renewable energy (Wind power, Bioenergy) : CO<sub>2</sub> emission reduction amount based on the actual operation record (electricity generation) (t-CO<sub>2</sub>/kg)
- CO<sub>2</sub> free hydrogen production: Project progress
- Vocational training and education record (e.g. numbers of trainee, certified skilled workers)

(note; Green building environmental benefit)

Obayashi has published the efficiency of CO<sub>2</sub> emission reduction evaluation/plan based on its primary energy consumption by eco design basis (such as BELS certification on the Environmental achievement report in Obayashi web site), environmental benefit will not be included in annual report by its performance.

Considering all of the above assessments, DNV GL has confirmed that the nominated sustainability projects of Obayashi are designed and are planned to be executed in accordance with related criteria of the Sustainability Bond (considering Sustainability Bond Guidelines 2018, Green Bond Principles 2018, Social Bond Principles and Green Bond Guidelines, 2017 by Ministry of the Environment, Japan).

DNV GL Business Assurance Japan K.K.

30<sup>th</sup>. May. 2019



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#### 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.

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### Schedule-1 Sustainability Bond Nominated Projects & Assets Outline

No.	Project Portfolio	Nominated projects and assets	Green Project category	Social Project category (target population, social benefit)	Fund amount	Remarks (location, plan, size, etc)
01	Environmentally friendly "Wellness Building" under the concept "smart buildings that are good for all people"	01-1 : Obayashi's Technical Research Institute *refinance	Energy Efficiency building (comparable with certified Green, low carbon building)	Promoting Well-being residence and work environment (population who use wellness building building. Improvement of Health, Work efficiency)	5.4b-JPY	Kiyose, Tokyo. Built in 2014. WELL certification(gold, 2017), BELS(ZEB, 2019) CASBEE(S-class, 2013),LEED-EBOM-Platinum(2013)
		01-2 : Sustainability eligible project (Wellness Building, TBA)				Project eligibility will be evaluated by external reviewer (TBA)
02	Secure skilled workers for construction industry and strengthen trust relationship with suppliers	02-1 : Vocational training and subsidy	–	Providing Education and vocational training (skilled workers, secure to maintain/upgrade infrastructure and respond to natural disaster)	1.0b-JPY	Various location in Japan, 2019~2023(plan), management(operation and maintain) cost of vocational training and subsidy to the skilled workers certified by Obayashi.
03	"Renewable energy business based on the action plan "Green Vision 2050"	03-1 : R&D for CO <sub>2</sub> Free hydrogen manufacturing and logistics *partially refinance	Renewable energy (R&D)	–	0.4b-JPY	New Zealand, 2018-2019, R&D including the construction of pilot plant.
		03-2 : Otsuki Biomass power	Renewable energy (Bioenergy, wood chip)	–	approx. 3.2b-JPY	Otsuki, Yamanashi, Nov 2018 started commercial operation, 14.5MW
		03-3 : Kamikita ogawara onshore wind power (Plan)	Renewable energy (Onshore wind power)	–		(Plan) Rokkasho, Aomori. Mar 2021 start commercial operation, max21.6MW
Total bond proceeds : 10.0b-JPY						

Obayashi will evaluate and select the project and assets which meet the sustainable eligible project against their Framework (process for Project Evaluation and Selection). External reviewer will revise pre-issuance opinion before funding.

## Schedule-2 Sustainability Bond Eligibility Assessment Protocol

Obayashi Sustainability Bond Framework and Amendment to Shelf Registration Statement will be published for explanation materials to investor

### (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 Sustainability Bond Guidelines in accordance with Green and Social Bond Principles:</p> <ul style="list-style-type: none"> <li>• Sustainability Use of Proceeds Bond</li> <li>• Sustainability Use of Proceeds Revenue Bond</li> <li>• Sustainability Project Bond</li> <li>• Sustainability Securitized Bond</li> </ul>	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Amendment to Shelf Registration Statement (draft)</li> </ul> <p>Discussions with Obayashi management</p>	<p>The reviewed evidence confirms that the BOND falls in the category:</p> <p>Sustainability 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>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Amendment to Shelf Registration Statement (draft)</li> <li>- Project documents (including asset specifications)</li> </ul> <p>Discussions with Obayashi management</p>	<p>As identified by the purpose of the BOND, Green and/or Social project and assets, is to use the proceeds to finance and refinance for projects falling under the following categories:</p> <ul style="list-style-type: none"> <li>-Green and Social, Wellness Buildings (2projects) <ul style="list-style-type: none"> <li>• Obayashi Technical Research Institute</li> <li>• Sustainability eligible asset (TBA)</li> </ul> </li> <li>- Vocational Training and subsidy (1project) <ul style="list-style-type: none"> <li>• Vocational Training and subsidy</li> </ul> </li> <li>-Finance and Refinance to Renewable energy (3 projects) <ul style="list-style-type: none"> <li>• R&amp;D for CO<sub>2</sub> Free hydrogen manufacturing and logistics</li> <li>• Otsuki biomass power</li> <li>• Kamikita ogawara onshore wind power</li> </ul> </li> </ul> <p>DNV GL's assessment concluded that these assets</p>

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
				would present a low risk of CO <sub>2</sub> emissions and relative to environmental negative effect quantify and qualify for inclusion under the Green Bond Principles within the Renewable Energy category and Energy Efficiency category, as well as Social aspects under the Social Bond Principles (Social contribution and target population of each project). Above information is included in legal documents such as Amendment to Shelf Registration Statement. DNV GL concluded that 1b requirement is satisfied.
1c	Environmental , social benefits	All designated Sustainability Project categories should provide clear environmentally, socially sustainable benefits, which, where feasible, will be quantified or assessed by the issuer.	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Project documents (including asset specifications (e.g. BELS, WELL), social issues (secure skilled workers and technology) and countermeasure in construction industry faces, environmental impact report)</li> <li>- Renewable energy CO<sub>2</sub> emission reduction evaluation spread sheet</li> </ul> <p>- Discussions with Obayashi management</p>	<p>DNV GL notes that Wind power project and Biomass power project can present risks of land use and ecology system through construction and operation. DNV GL reviewed Obayashi's provided document and confirmed that Obayashi already identified the environmental risk and addressed appropriate countermeasure. Obayashi has clearly demonstrated those projects will contribute benefit for environment such as CO<sub>2</sub> emission reduction. Obayashi also provided documents to DNV GL which are related to the social issues and countermeasures for construction industry that aligns with Social Bond Principles (Social contribution and target population of each project).</p> <p>DNV GL concluded that 1c requirement is satisfied.</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 appropriate, also clarify which investments or project portfolios may be refinanced.	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Amendment to Shelf Registration Statement (draft)</li> </ul> <p>Discussions with Obayashi management</p>	<p>The proceeds of the BOND, in their entirety (10 billion JPY), will be allocated to sustainability project. Following project will be refinanced (Refinance share will be disclosed in annual report)</p> <ul style="list-style-type: none"> <li>-Refinance to the Wellness Buildings project portfolio</li> <li>-Refinance to renewable energy project portfolio</li> </ul>

## (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"> <li>• A process to determine how the projects fit within the eligible Sustainability Projects categories identified in the Sustainability Bond Guidelines considering Green and Social Bond Principles;</li> <li>• The criteria making the projects eligible for using the Sustainability Bond proceeds; and</li> <li>• The environmental and social sustainability objectives</li> </ul>	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Obayashi document (internal protocol and procedures)</li> </ul> <p>Discussions with Obayashi management.</p>	<p>As per the Obayashi Sustainability bond frame work, the issuer has set out the following criteria including Sustainability Bond Guidelines (ICMA 2018) and Green Bond Guidelines (MOE, 2017) for project selection :</p> <p>“Eligible sustainability project” means alignment with their corporate philosophy and environmental and social policy including</p> <ul style="list-style-type: none"> <li>-Promote the renewable energy business</li> <li>-Promote environmentally responsible real estate development projects</li> </ul> <p>whose eligible criterial is stated in ‘Obayashi Green Vision 2050’. In this sustainability bond, Obayashi has decided eligible project overarching it and considering the compliance with GBP 2018 as follows.</p> <p>Those nominated projects and assets are discussed with Obayashi’s related department and responsibilities (e.g. ESGs &amp; SDGs department, Financial department, Environmental department, CSR committee representatives (representative director, President))</p> <p>DNV GL concluded that 2a requirement is satisfied through interview, discussion and document review.</p>
2b	Issuer’s environmental and social and governance framework	<p>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>	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Obayashi corporate philosophy, environmental and social policies</li> </ul> <p>Discussions with Obayashi management</p>	<p>As per the interview and review documents provided by Obayashi, DNV GL confirmed that Obayashi has addressed to achieve sustainable society through its business based on the Obayashi Green Vision 2050 established in 2011, ESG materiality. Obayashi has published and disclose OBAYASHI Corporate Report and web site including its sustainable activities and initiatives described above.</p> <p><a href="https://www.obayashi.co.jp/en/sustainability/environment.html">https://www.obayashi.co.jp/en/sustainability/environment.html</a></p> <p><a href="https://www.obayashi.co.jp/en/sustainability/esg.html">https://www.obayashi.co.jp/en/sustainability/esg.html</a></p> <p>DNV GL confirmed and found nothing to suggest that Obayashi’s environmental and social activity is not in line with their activity to contribute sustainable environment and society through its projects in sustainability bond</p>

### (3) Management of Proceeds

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings
3a	Tracking procedure-1	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 issuer's lending and investment operations for Sustainability Projects.	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Procurement scheme</li> <li>- Amendment to Shelf Registration Statement (draft)</li> <li>- Obayashi's internal protocol (e.g. accounting management procedure, document control procedure)</li> </ul> <p>Discussions with Obayashi management</p>	<p>DNV GL confirmed by reviewing documents and interviewing that Obayashi plans to trace the proceeds from the Bond, from the time of issuance to the time of disbursement are appropriate. The full amount of the proceeds will be managed by Obayashi's financial department with existing accounting system and using sustainability bond request for approval document form.</p> <p>DNV GL confirmed Obayashi internal process can manage and track the outstanding balance of the sustainability bond proceeds.</p> <p>DNV GL concluded that 3a requirement is satisfied.</p>
3b	Tracking procedure-2	So long as the Sustainability Bonds are outstanding, the balance of the tracked proceeds should be periodically reduced by amounts matching eligible sustainability investments or loan disbursements made during that period.	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Obayashi's internal protocol (e.g. accounting management procedure)</li> </ul> <p>Discussions with Obayashi management</p>	<p>DNV GL reviewed documents and interviewed that Obayashi plans to trace at the proceeds from the Bond, from the time of issuance to the time or disbursement period, and reduce the net balance of proceeds by amounts in line with the projects and assets debt refinance schedule. At the end of each financial period (at least every one quarter), the outstanding balance of the Bond will be reviewed by Obayashi financial department.</p> <p>DNV GL concluded that 3b requirement is satisfied.</p>
3c	Temporary holdings	Pending such investments or disbursements to eligible Sustainability Projects, the issuer should make known to investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Amendment to Shelf Registration Statement (draft)</li> </ul> <p>Discussions with Obayashi management</p>	<p>The net proceeds of the Bond will be placed in a existing accounting system and managed by financial department using request for approval document form for sustainability bond proceeds.</p> <p>The net proceeds of the bond also will be fully and immediately disbursed where possible or held in cash or cash equivalent until disbursement to the nominated projects and assets as per the Obayashi sustainability bond framework.</p> <p>DNV GL concluded that 3c requirement is satisfied.</p>

(4) Reporting

Ref.	Criteria	Requirements	Work Undertaken	DNV GL Findings (DNV GL 觀察結果)
4a	Periodical reporting	<p>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</p> <ul style="list-style-type: none"> <li>- when possible with regards to confidentiality and/or competitive considerations</li> <li>- a brief description of the projects and the amounts disbursed, as well as the expected environmentally sustainable impact.</li> </ul>	<p>Documents reviewed:</p> <ul style="list-style-type: none"> <li>- Obayashi Sustainability Bond Framework</li> <li>- Environmental benefit evaluation spread sheets (CO<sub>2</sub> emission reduction evaluation spread sheet)</li> </ul> <p>Discussions with Obayashi management</p>	<p>Obayashi will publish the annual report including a dedicated section on the sustainability bond in OBAYASHI Corporate Report or website. This will include description of the project and value of the proceeds invested, as well as the associated qualitative and quantitative environmental and social impacts. Obayashi plans to report on the total amount of CO<sub>2</sub> emission reduction evaluation based on the operation records (e.g. amount of electricity generation per year, MWh/y) as environmental benefit and green projects progress, vocational training skilled workers numbers and certified skilled workers number as social contribution.</p> <p>. DNV GL concluded that 4a requirement is satisfied.</p>

### Obayashi Code of Conduct

The guidelines help us realize the Obayashi Philosophy and continue being an enterprise trusted by all stakeholders.

- 1 Fulfill our social mission
    - (1) Provide high-quality buildings, infrastructure, and services
    - (2) Foster an environmentally responsible society
    - (3) Value every one of our associates
    - (4) Build stronger mutual trust with suppliers
    - (5) Build good relationships with communities
  
  - 2 Ensure strict adherence to corporate ethics
    - (1) Comply with laws and regulations and take a sensible course of action
    - (2) Promote fair and free competition
    - (3) Maintain appropriate relationships with stakeholders
    - (4) Avoid all contact with antisocial forces
    - (5) Ensure appropriate information disclosure and transparency of management
-

## **Obayashi Environmental Policy and Vision**

### ( i )Environmental Policy

#### -Principles

As a good corporate citizen, Obayashi considers active efforts and continuous improvement of environmental issues to be integral components of business management. We envision our future society, seeking to contribute to a realization of sustainable society.

#### -Policies

- 1 We strive to protect the environment, acting in full compliance with all environmental statutes and ordinances, communicating with local communities.
- 2 We gather our knowledge for realization of resilient society that integrates the elements of low-carbon, recycling-oriented and respecting the natural world.
- 3 We use the expertise we have acquired through our environmental protection activities, developing even more effective technologies and implementing new businesses to realize sustainable society.

We sincerely focus on our business, with our affiliates, subcontractors and suppliers, holding targets and vision to realize a sustainable society.

### ( ii ) Vision (Obayashi Green Vision 2050)

Our medium- to long-term environmental vision, "Obayashi Green Vision 2050," which was established by using backcasting methodology in February 2011, outlines the future course of our business activities in terms of helping to build a sustainable society. It sets forth specific action plans and numerical CO<sub>2</sub> emissions reduction targets that will be crucial to achieving our vision for society in 2050.

Our vision for society in 2050 is what we call a "3+1 Society," an approach that integrates the elements of "low-carbon," "recycling-oriented" and "respect for the natural world," predicated on "safety and security." To achieve that, we have established a concrete action plan and are moving forward with various initiatives.



### **Obayashi ESG materiality**

Upon the start of Medium-Term Business Plan 2017, Obayashi set its sights on Vision for the Future. Inspired by it, we are better clarifying and promoting initiatives to solve social challenges and realize a sustainable society. In FY2019.3, we have set out six ESG materialities.

#### **1. Establish Environmentally Responsible Society**

- Response to climate change (pursue a decarbonized society)
- Contribution to the establishment of recycling-oriented society (promoting effective use of resources through the 3 R's (reduce, reuse, recycle))

(Impact on our business)

- Expansion of construction demand through development of environmentally related technology and generation of new businesses
- Delay in response to stricter environmental laws and regulation, increase in the costs of environment management, decline in competitiveness

#### **2. Enhance Quality Control and Technological Capabilities**

- Improvement in construction management skills to maintain high quality
- Development of groundbreaking technology to meet many different needs and resolve problems

(Impact on our business)

- Improvement in productivity, strengthening of competitiveness, and increase in business opportunities
- Loss of trust, decline in competitiveness, loss of business opportunities

#### **3. Ensure Occupational Health and Safety**

- Comprehensive occupational health and safety management system
- Promotion of safety training and other efforts

(Impact on our business)

- Securing talented human resources, strengthening the supply network of excellent suppliers
  - Deterioration in trust in the company from ordering customers and decline in productivity due to occurrence of accidents
-

#### **4. Develop and Retain Human Resources**

- Hiring diverse human resources, comprehensive flexible personnel and training systems to respond to globalization
- Promoting diversity and establishing a work place environment that is easy for anyone to work in effectively

(Impact on our business)

- Securing talented human resources, improving organizational capabilities, and expanding business domains
- Outflow of talented human resources, decline in productivity, increasing organizational rigidity

#### **5. Implement Rigorous Compliance**

- Promoting management that places highest priority on compliance with laws and regulations
- Improvement of the system of internal controls

(Impact on our business)

- Improvement of trust in the company by society, improvement in organizational capabilities, strengthening of business base
- Suspension/cessation of business activities, loss of trust, loss of business opportunities

#### **6. Conduct Responsible Supply Chain Management**

- Ensuring that everyone understands the procurement guidelines and strictly adheres to them
- Conducting surveys of the procurement process and conditions

(Impact on our business)






- Improving competitiveness by building a strong network with suppliers and strengthening the ability to respond in the BCP (business continuity plan) in the event of a disaster
  - Suspension/cessation of business due to halting of procurement, and a loss of trust and loss of business opportunities from the occurrence of human rights issues and other problems
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### Obayashi Sustainability projects and SDGs contributions

Obayashi identified the social issues and those countermeasures which Obayashi group execute. Obayashi has established “ESG issued (materiality)” (divided into 6 categories) based on above (Appendix-3).

Obayashi links Sustainability projects related to the ESG materiality, its initiatives and SDGs contribution, as following table. Obayashi also does same links with other their business area which are disclosed in its web site and OBAYASHI corporate report 2018.

Table ESG materiality, their initiatives and SDGs contribution

No.	Project Portfolio	Nominated projects and assets	Green Project category	Social Project category	SDGs Contribution
01	Environmentally friendly “Wellness Building” under the concept “smart buildings that are good for all people”	01-1 : Obayashi's Technical Research Institute	Energy Efficiency building (comparable with certified Green building, low carbon building)	Promoting Well-being residence and work environment	 
		01-2 : Sustainability eligible project (Wellness Building TBA)			
02	Secure skilled workers for construction industry and strengthen trust relationship with suppliers	02-1 : Vocational training and subsidy	–	Providing Education and vocational training	 
03	“Renewable energy business based on the action plan “Green Vision 2050”	03-1 : R&D for CO <sub>2</sub> Free hydrogen manufacturing and logistics	Renewable energy (Energy storage using geothermal R&D)	–	
		03-2 : Otsuki Biomass power	Renewable energy (Bioenergy, wood chip)	–	
		03-3 : Kamikita ogawara onshore wind power	Renewable energy (Onshore wind power) (Plan)	–	

SDGs 3 : Good Health and Well-being

SDGs 11 : Sustainable Cities and Communities

SDGs 4 : Quality Education

SDGs 9 : Industry, Innovation and Infrastructure

SDGs 7 : Affordable and Clean energy