

September 5, 2023

For immediate release

Mitsui Fudosan Residential Wellness Co., Ltd.

Mitsui Home Co., Ltd.

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**Obtained LEED<sup>\*1</sup> International Environmental Certification Program) Gold Rank Pre-Certification<sup>\*2</sup>  
Four Story All-Wood Carbon-Free<sup>\*3</sup> Rental Condominium  
Park Axis Kitasenzoku MOCXION<sup>\*4</sup> Completed**

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Tokyo, Japan, September 5, 2023 – Mitsui Fudosan Residential Co., Ltd., a leading housing company headquartered in Tokyo, and Mitsui Home Co., Ltd. announced today that on August 31, 2023, they have completed construction of Park Axis Kitasenzoku MOCXION (hereafter, “the property”), a four-story, all-wood, carbon-free rental condominium aimed at realizing a decarbonized society, a first for the Mitsui Fudosan Group.

The Mitsui Fudosan Group created the Group Action Plan to Realize a Decarbonized Society in November 2021. This new condominium property reduces carbon dioxide emissions from construction by around 50% compared with reinforced concrete (RC) construction<sup>\*5</sup> by using people- and environment-friendly wood for its structural material. It also provides residences in harmony with the environment that reduce CO<sub>2</sub> emissions from occupancy to effectively zero<sup>\*6</sup>, with power supplied through a collective renewable energy service and all electric appliances. In this way, the Mitsui Fudosan Group is pursuing new initiatives to achieve carbon neutrality.

Going forward, under the brand concept of Mitsui Fudosan Residential that is used for all of its housing businesses, “Life-styling x Improving with age,” the Company will promote community development for safe, secure and comfortable living, and contribute to the SDGs and the realization of a sustainable society by providing products and services to accommodate diversifying lifestyles.



【Exterior】

## Property Features

### **1. Rental condominium with considerations for the living environment, harnessing Mitsui Home's MOXICON technology for all wood construction, high-airtightness, and high insulation**

- (1) Utilize people- and global environment-friendly wood in the structural material on all floors..
- (2) Utilize trees owned by the Mitsui Fudosan Group for wall materials.\*<sup>7</sup>  
Contribute to self-sufficient supply of construction materials, sustainable forest management and local economies.
- (3) Improve heat insulation performance of the whole building through Mitsui Home's double shield panels.\*<sup>8</sup>
- (4) Designed and equipped to make wood a familiar presence.

### **2. Achieving net-zero CO<sub>2</sub> emissions and generating energy during occupancy through a collective renewable energy\*<sup>9</sup> service, all electric appliances, and installation of solar panels**

- (1) Achieves net-zero CO<sub>2</sub> emissions during occupancy through a collective renewable energy service and all electric appliances
- (2) Installed rooftop solar panels for on-site power generation

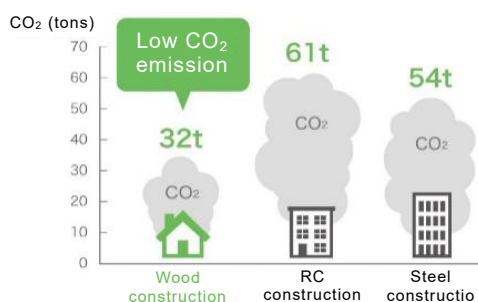
### **3. Acquisition of certifications, starting with LEED certification, and chosen for Program to Promote the Development of Outstanding Wooden Buildings sponsored by the Ministry of Land, Infrastructure, Transport and Tourism**

- (1) First rental condominium in Japan to obtain LEED Gold Rank Pre-Certification\*<sup>10</sup>
- (2) Obtained ZEH-M Ready certification in the BELS assessment
- (3) Chosen for Program to Promote the Development of Outstanding Wooden Buildings sponsored by the Ministry of Land, Infrastructure, Transport and Tourism

### **1. Rental condominium with considerations for the environment, harnessing Mitsui Home's MOXICON technology for all-wood construction, high-airtightness and high insulation**

#### **(1) Utilize people- and global environment-friendly wood in the structural material on all floors.**

Applying Mitsui Home's MOXICON technologies, the property is an all-wood rental condominium that uses wood in the structural material on all floors from 1F through to 4F. Wood construction requires less energy in manufacturing and processing of construction materials as well as during construction, making it possible to reduce total CO<sub>2</sub> emissions by about 50%. Another advantage of wood is its low heat conductivity. The heat conductivity of concrete is 10 times greater than wood and that of steel 350 times greater. In addition, by maximizing Mitsui Home's unique technologies for high insulation and high-airtightness, the property significantly reduces heating and cooling consumption and improves energy efficiency.



【Comparison diagram of CO<sub>2</sub> emissions during construction】

Natural wood (class 1 – 3)

0.12~0.19

Concrete

1.6

Steel

53

【Comparison of heat conductivity between wood and other construction materials】

#### **(2) Utilize trees owned by the Mitsui Fudosan Group for wall materials. Contribute to self-sufficient supply of construction materials, sustainable forest management and local economies.**

Wood from trees owned by the Mitsui Fudosan Group were used for wall materials in the interior of the entrance lounge to give this common area the calm, soothing atmosphere unique to wood. The Mitsui Fudosan Group owns and manages approximately 5,000 hectares of forestland mainly in northern Hokkaido and makes active use of it for the main materials in wooden rental buildings and houses and finishing materials of various facilities. Through such forest preservation activities and utilization of wood materials, the Group will create a self-sufficient supply of building materials and positive, sustainable cycles for forest resources and local economies.





【Area of forest owned by the Mitsui Fudosan Group】



【Production cycle of owned forests】



【Wall surface of communal lounge】

**(3) Improve heat insulation performance of the whole building through Mitsui Home's double shield panels**

Mitsui Home uses double shield panels (a structural roof insulation material) as standard for its main business of built-to-order houses. By applying this unique technology to the roof of the property, whose roof truss structure is unlike that of a traditional wooden building consisting of purlins and struts and provides a wide space with no obstructions, the Company was able to convert these small attic spaces into lofts as part of fourth floor residences. Moreover, the roof structure itself offers excellent heat insulation performance, thereby reducing the impact the outside air has on interior spaces. In this way, Mitsui Home not only improved the heat insulation performance of the whole property, but made comfortable living spaces possible in the loft area, which is impacted more by roof temperature changes.



【Loft (Unit 402)】

**(4) Designed and equipped to make wood a familiar presence.**

1 Exterior design and approach

The exterior design consistently emphasizes wood, centered on wood-look balcony slabs and vertical louvers. Wood look design is used throughout, from the internal approach from the entrance to the lounge and hallways on the first floor, stressing the sense of continuity from outside to inside. The ornamental plantings on the approach were selected for their seasonal leaf color changes so that occupants can appreciate their beauty every season.



【Balcony slab and vertical louver】



【Wood look eaves】



【Approach】

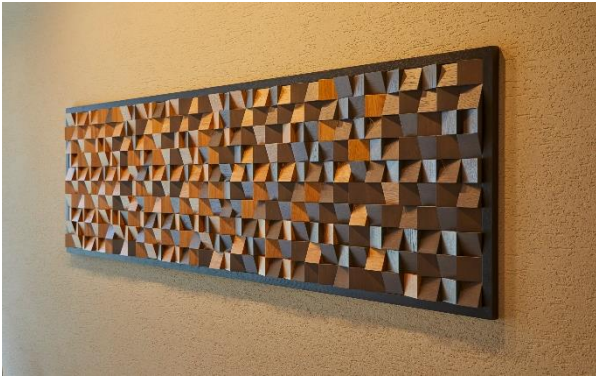


【Plantings】

## 2. Artwork on lounge wall

The lounge is designed to make wood a familiar presence for occupants, featuring an artwork made from domestic broadleaf trees, whose existing commercial uses include wood chips and fuel.

The ceiling of the first-floor windbreak room, entrance hall, and common area lounge is finished with red birch (natural wood). The striking color of red birch creates a consistent flow line from the windbreak room to the lounge and elevator hall as well as creating a space where variations in color and hue of natural wood can be appreciated.



【Broadleaf art】



【Entrance lounge ceiling】

## 3. Green Hybrid Box<sup>\*11</sup> wood look home delivery boxes<sup>※11</sup>

The doors of the parcel delivery boxes (a product called Green Hybrid Box) are made from double-sided laminated particle board using an eco-wood material. Particle board is made from crushed wood waste, which helps to conserve resources, while the low-pressure melamine laminate surface layers are resistant to heat, contamination, and abrasion. They are therefore more environment-friendly than conventional parcel delivery boxes.



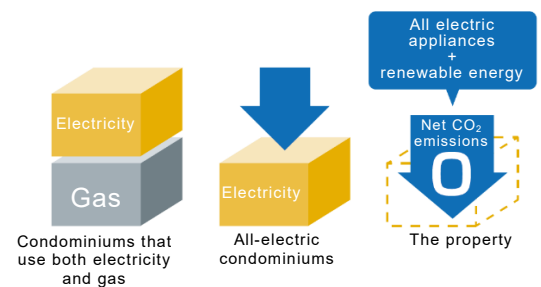
【Green Hybrid Box】

## 2. Achieved net-zero CO<sub>2</sub> emissions and energy production with power supplied through a collective renewable energy service, all electric appliances, and installation of solar panels

### (1) Achieves net-zero CO<sub>2</sub> emissions during occupancy through a collective renewable energy service and all electric appliances

The property uses power supplied through a collective renewable energy service and has all electric appliances, effectively achieving net-zero CO<sub>2</sub> emissions during occupancy.

EcoCute is used for hot water supply equipment. EcoCute is an eco-friendly hot water heater that uses heat extracted from the air, which reduces electricity consumption, as well as providing an emergency household water supply in the water tank.



【Image of CO<sub>2</sub> emissions】

### (2) Onsite power generation devised through rooftop solar panels

In order to generate electricity onsite, the rooftop will be equipped with 54 solar panels with a total area of 139.32m<sup>2</sup> that will generate around 29,566 kWh of electricity per year, which exceeds the amount estimated to be needed by the building's common areas. When the electricity supply is interrupted, emergency power points installed in the lounge will be available to occupants for free so that they can charge their mobile devices, etc. using power generated by the solar panels.



【Some of the solar panels installed on the roof】



### **3. Acquisition of environmental certifications such as LEED certification, and chosen for Program to Promote the Development of Outstanding Wooden Buildings sponsored by the Ministry of Land, Infrastructure, Transport and Tourism**

#### **(1) First rental condominium in Japan to obtain LEED Gold Rank Pre-Certification<sup>\*10</sup>**



This project has achieved pre-certification under the LEED green building program.

The property is the first rental condominium in Japan to obtain LEED (international environmental certification program) – BD+C NC (new construction) Gold Rank Pre-Certification for the various environment-friendly measures implemented, from the use of wood (with low environmental impact) as the structural material, power supplied through a collective renewable energy service, and utilization of on-site solar power generation.

#### **(2) Obtained ZEH-M Ready certification in the BELS assessment**



The property uses wood with high insulation performance as a structural material and acquired ZEH-M Ready certification based on an assessment by the BuildingHousing Energy-efficiency Labeling System (BELS) through its increased energy-saving performance from low-e double glazing, LED lights and other features as well as utilization of onsite solar power generation.

#### **(3) Chosen for Program to Promote the Development of Outstanding Wooden Buildings sponsored by the Ministry of Land, Infrastructure, Transport and Tourism**

The property was chosen for the fiscal 2022 Program to Promote the Development of Outstanding Wooden Buildings sponsored by the Ministry of Land, Infrastructure, Transport and Tourism toward achieving carbon neutrality. The program provides support for outstanding wooden mid- and high-rise condominiums and non-housing structures expected to have a carbon storage effect.

\*1 LEED certification: An environmental performance certification program run by the U.S. Green Building Council (USGBC). LEED stands for Leadership in Energy and Environmental Design. The program assesses environment-friendly buildings and land use. It is divided into categories such as BD+C (building design and construction), ID+C (interior design and construction), O+M (operation and maintenance of existing buildings), and ND (neighborhood development) to assess environmental performance from various perspectives. The property received pre-certification in the BD+C category. In the U.S., where the certifying organization is based, obtaining LEED certification can lead to tax breaks, with more than 76,000 projects certified to date. This trend has spread from the U.S. to the rest of the world. Projects in more than 160 countries have been registered and almost 93,000 certified worldwide. Registrations are trending up every year in Japan as well. As of March 2022, 201 projects have been certified.

\*2 Pre-certification is certification that can be obtained based on the plan content before a project is completed.

\*3 All-Wood carbon-free rental condominium means that wood is used in the structural areas on all floors (1–4) with net zero CO<sub>2</sub> emissions (see \*6 below) during occupancy.

\*4 MOCXION is Mitsui Home's brand of sustainable wood condominiums to realize a decarbonized society

\*5 Reduces carbon dioxide emissions from construction by around 50%: This value is provided for reference, calculated by the Forestry Agency based on a comparison with a 120m<sup>2</sup> house of reinforced concrete (RC) construction (Source: White Paper on Forest and Forestry FY2011, p. 61, Figure II-5)

\*6 Reduce CO<sub>2</sub> emissions from occupancy to effectively zero: All electricity used in the building is renewable as a result of using power supplied through a collective, effectively renewable energy service. All appliances are electric, and combined with the EcoCute hot water supply equipment means that net CO<sub>2</sub> emissions from the building during occupancy are effectively zero.

\*7 Utilizing trees owned by the Mitsui Fudosan Group for wall materials: Refers to the use of wood from approximately 5,000 hectares of forestland mainly in northern Hokkaido owned and managed by Mitsui Fudosan Group

\*8 Double shield panel: A panel made by sandwiching an expanded polystyrene (EPS) foam layer between two oriented strand boards (OSB) made from layering and compressing wood materials such as broadleaf woodchip. It is Mitsui Home's proprietary roof panel with superior tensile strength and heat insulation performance.

\*9 Renewable energy: The property ensures that it uses renewable energy by means of non-fossil fuel energy certificates.

\*10 First rental condominium in Japan to obtain LEED Gold Rank pre-certification: The property is the first rental condominium in Japan to obtain LEED (international environmental certification program) – BD+C NC (new construction) Gold Rank Pre-Certification.

\*11 Green Hybrid Box: Electric parcel delivery boxes made from wood by Japan Delivery System Corporation

## ■ Park Axis Kitasenzoku MOCXION Project Overview

Location	14-3, 2-chome, Kita-senzoku, Ota-ku, Tokyo
Access	4-minute walk from Kita-senzoku Station on the Tokyu Oimachi Line 7-minute walk from Nagahara Station on the Tokyu Ikegami Line 10-minute walk from Senzoku Station on the Tokyu Meguro Line
Zoning	Category 1 medium-to-high-rise exclusive residential district
Structure, size	Wood (timber-frame construction), four aboveground floors
Site area	7873.54 ft <sup>2</sup> (approx.731.47 m <sup>2</sup> )
Building area	5484.85ft <sup>2</sup> (approx.509.56 m <sup>2</sup> )
Total floor area	17,932.76ft <sup>2</sup> (approx. 1,666.01m <sup>2</sup> )
Floor plans	1DK–2LDK
Occupied area	302.68 ft <sup>2</sup> –591.48 ft <sup>2</sup> (approx.28.12 m <sup>2</sup> -54.95 m <sup>2</sup> )
Units	33
Completion	August 31, 2023 (can be occupied from early September 2023)
Owner	Mitsui Fudosan Residential Co., Ltd.
Architect/Builder	Mitsui Home Co., Ltd.
Property URL	URL : <a href="https://www.mitsui-chintai.co.jp/resident/original/pax_kitasenzoku_mocxion/">https://www.mitsui-chintai.co.jp/resident/original/pax_kitasenzoku_mocxion/</a>

## ■ Park Axis Kitasenzoku MOCXION Area Map



■ About Mitsui Fudosan Group’s forest preservation activities

[https://www.mitsuifudosan.co.jp/and\\_forest/english/](https://www.mitsuifudosan.co.jp/and_forest/english/)

■ About Mitsui Home’s MOCXION brand

<https://www.mitsuihome.co.jp/property/mocxion/> (In Japanese)

■ Mitsui Fudosan Group’s Contribution to SDGs

[https://www.mitsuifudosan.co.jp/english/esg\\_csr/](https://www.mitsuifudosan.co.jp/english/esg_csr/)

The Mitsui Fudosan Group aims for a society that enriches both people and the planet under the principles of coexist in harmony with society, link diverse values and achieve a sustainable society, and advances business with an awareness of the environment (E), society (S) and governance (G), thus promoting ESG management. By further accelerating its ESG management, the Group will realize Society 5.0, which the Japanese government has been advocating, and contribute significantly to achieving the SDGs. Additionally, the Group formulated the following Group guidelines related to “Realize a Decarbonized Society” and “Diversity & Inclusion Promotion” in November 2021, and “Biodiversity” in March 2023. The Mitsui Fudosan Group will continue to work toward solving social issues through neighborhood creation.

【References】

• Group Action Plan to Realize a Decarbonized Society

<https://www.mitsuifudosan.co.jp/english/corporate/news/2021/1124/>

• Formulated Diversity and Inclusion Promotion Declaration and Initiatives Policy

[https://www.mitsuifudosan.co.jp/english/corporate/news/2021/1129\\_02/](https://www.mitsuifudosan.co.jp/english/corporate/news/2021/1129_02/)

• Mitsui Fudosan Group Biodiversity Policy

<https://www.mitsuifudosan.co.jp/english/corporate/news/2023/0413/>

■ About Mitsui Fudosan Residential’s Carbon Neutral Design Promotion Plan (only in Japanese)

[https://www.mfr.co.jp/content/dam/mfrcojp/company/news/2022/0315\\_01.pdf](https://www.mfr.co.jp/content/dam/mfrcojp/company/news/2022/0315_01.pdf)

Initiatives include saving energy by improving the performance and durability of homes and promoting the introduction of renewable energy as well as provision of services that enable residents to enjoy contributing to the environment through energy conservation and other activities after moving into this condominium. In this way, the Company aims to realize carbon neutrality in both homes and living.

The initiatives covered in this press release are contributing to five of the UN’s SDGs.

Goal 7 Affordable and Clean Energy  
Goal 11 Sustainable Cities and Communities  
Goal 12 Responsible Consumption and Production  
Goal 13 Climate Action  
Goal 15 Life on Land

