

Second-Party Opinion

LPP Green Bond Framework

Hungarian Real Estate Development



Scope ESG Analysis has assessed the alignment of the Green Bond Framework (the framework) of LP Portfólió Vagyonkezelő és Tanácsadó Kft. (LPP) with the 2021 Green Bond Principles (GBP) of the International Capital Markets Association (ICMA). The framework has received two leaves, which is the second highest score in our 'leaf score' system.

This second-party opinion is based on the four GBP components: use of proceeds, process for project evaluation and selection, management of proceeds, and reporting.

Issuance

GBP components	Fulfilment	Overall assessment
Use of proceeds	<ul style="list-style-type: none"> Renewable energy Green buildings Energy efficiency Clean transport 	
Process for project evaluation and selection	<ul style="list-style-type: none"> Establishment of green finance committee comprising three members, including a technical expert to manage the project selection and evaluation process 	✓
Management of proceeds	<ul style="list-style-type: none"> Proceeds documented and updated in internal green finance register Proceeds allocated as soon as possible and held as cash, cash equivalents or other short-term liquid interest-bearing securities until full allocation 	✓
Reporting	<ul style="list-style-type: none"> Annual reporting of allocation of proceeds within 12 months of first issuance Impact metrics including annual energy savings and capacity of renewable energy plants published on a best-effort basis 	✓

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Figure 1: Alignment with United Nations Sustainable Development Goals



Figure 2: Engagement with EU Taxonomy Draft Regulation



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Bloomberg: RESP SCOP

Methodology

We were commissioned by LPP to provide a second-party opinion on its framework. We based our opinion on:

- LPP's internal documents;
- Interviews with relevant stakeholders of LPP and the green finance committee;
- Documents on external market/regulatory research; and
- Data from our internal database.

Our leaf score is a visual representation of our evaluation and verification of the environmental impact of LPP's framework. We assign an individual leaf score to the ambitions set out in LPP's four green project categories. The aggregate of the four scores yields the overall score for our second-party opinion report.

Our minimum requirement for GBP alignment is that each green project category in the framework has a positive environmental impact, as represented by one green leaf.

Scoring	Description	GBP category	Real estate sector criteria
	Transformative environmental/social contribution and strong alignment with all relevant market standards	Renewable energy Green buildings Energy efficiency Clean transport	Self-sufficient building; energy supply exclusively from solar, wind or geothermal LEED (Platinum) or BREEAM (Outstanding) and life cycle assessment Residential energy performance certificate (EPC) of A to A+ Zero direct-emissions transportation and supportive infrastructure such as electric vehicles and public transport, charging stations, bicycle parking
	Significant environmental/social contribution and alignment with selected market standards	Renewable energy Green buildings Energy efficiency Clean transport	Energy demand partly covered by renewable energy; long-term goal is self-sufficiency of the building LEED (Gold) or BREEAM (Excellent or Very Good) Residential EPC of at least B Semi-electric transportation or transportation infrastructure that substantially reduces current emissions output
	Environmentally/socially friendly but limited contribution to long-term transformation	Renewable energy Green buildings Energy efficiency Clean transport	At least one element (e.g. heat pumps, solar cells) is integrated into the building LEED (Silver) or BREEAM (Good) Residential EPC of at least C Transportation that reduces emissions but does not contribute to long-term transformation or transportation infrastructure that can be environmentally harmful in its construction
	No significant environmental/social contribution	Renewable energy Green buildings Energy efficiency Clean transport	Sparse use of renewable energy LEED (Certified) or BREEAM (Pass) Residential EPC of at least D to E Transportation or transportation infrastructure that has the same overall emissions output
	Negative environmental/social impact	Renewable energy Green buildings Energy efficiency Clean transport	No share of renewable energy No certification Residential EPC lower than F; greenfield construction Transportation or transportation infrastructure that increases the emissions output

Introduction

LPP is a family business with portfolio companies operating in renewable energy, real estate and mechanical engineering. In its capacity as a holding company, LPP oversees the implementation of the financial, business and financing strategies of its portfolio companies.

The renewable energy segment is active in the construction and operation of solar power plants and the energy production and sale of these plants. The real estate segment consists of the development and leasing of residential and commercial real estate. Current investments include commercial real estate in Budapest and rural areas of Hungary. LPP aims to further diversify its real estate assets through this issuance.

The mechanical engineering segment produces steel structures, mainly used for the motor and generator housings of wind turbines and other energy equipment. As no funds will be allocated to the mechanical engineering segment, only the activity in the renewable energy and real estate sectors are relevant for this analysis.

In August 2021, the company drafted its Green Bond Framework, under which it plans to issue green bonds. This is LPP's first such framework.

LPP's framework specifies criteria reaching beyond the current Hungarian implementation requirements of the European Energy Performance of Buildings Directive (EPBD).

Overall sustainability strategy

LPP has not defined an overarching climate strategy to date. The sustainability targets in LPP's framework are primarily based on the Sustainable Development Goals (SDGs) of the United Nations and the climate targets determined by EU regulation and the Paris Agreement.

The EU regulates new building construction in line with its aims to reduce emissions by at least 40% by 2030 and become climate-neutral by 2050¹. The EPBD is a core legislative instrument, which has been adopted by EU member states.

¹ https://ec.europa.eu/clima/policies/strategies/2050_en

Issuance

Green Bond Principles: assessment of issuance

I. Use of proceeds

Green project category	Fulfilment	Leaf score
Renewable energy	Investment in or installation of solar power or heat pumps or stand-alone solar farms and related infrastructure investments (e.g. grid connections, electric substations or networks)	
Green buildings	<p>Acquisition, construction and refurbishment of buildings that meet recognised industry standards such as</p> <ul style="list-style-type: none"> • BREEAM (ranking 'Very Good' or above) • LEED (ranking 'Gold' or above) • Ranked at least 10% better than the minimum Hungarian Energy Performance Certificate (EPC) for nearly zero-energy buildings (category BB or above) and at least category AA from 2026 <p>Reuse of existing infrastructure, use of resource-saving construction methods or use of recycled material (concrete, wood, insulation materials)</p> <p>Financing of renovation or acquisition of completed low-energy properties that have, or will achieve, at least a 30% decrease in overall energy consumption or that achieve the required energy efficiency in line with the applicable national building code for newly built properties</p>	
Energy efficiency	<p>Investment in R&D, operation, distribution and maintenance of equipment or technology which helps reduce energy consumption and increase energy savings, such as:</p> <ul style="list-style-type: none"> • energy storage • district heating • smart grids • efficient lighting <p>Investment in new or existing buildings belonging to the top 15% most energy-efficient buildings in Hungary.</p> <p>Major renovation or refurbishment of existing properties that results in a minimum 30% reduction in carbon emissions intensity or a two-grade upgrade in the Hungarian energy performance label</p>	
Clean transport	Investment in or financing of supportive infrastructure (charging stations for electric vehicles or other investments supporting low-carbon transportation methods)	

LPP's framework scores two leaves overall

Scope's assessment: LPP's aggregate score of two leaves indicates alignment with selected sector criteria.

We have assigned the 'renewable energy' category two leaves. LPP intends to invest in stand-alone solar farms and to instal solar power and heat pumps in its real estate development projects. We note that solar panels and heat pumps do not contribute equally to the renewable energy category. We provide further information on the environmental impact risks of heat pumps in the risk section on page 13.

The green project categories 'green buildings' and 'energy efficiency' have scored two leaves as the criteria demonstrate significant environmental contribution. LPP aims for a minimum energy efficiency of BB, which signifies a nearly zero-energy building (NZEB) and consumption of less energy than buildings constructed according to the regulatory threshold. However, the Hungarian regulation will be on par with LPP's standards by June 2022.

For the 'clean transport' category, LPP also scores two leaves. In this category, LPP plans to finance charging stations for e-vehicles. LPP has been issued a permit to operate electric charging equipment on behalf of the Hungarian Energy and Public Utilities Regulatory Office. We note that the environmental impact is dependent on the national energy mix which is currently dominated by non-renewable energy sources.

LPP scores two leaves in every green project category. Consequently, LPP's use of proceeds is aligned with the GBP.

II. Process for project evaluation and selection

LPP has established a green finance committee and documented basic rules applying to the use-of-proceeds selection process. The committee will ensure that green bond proceeds are used exclusively to finance and refinance projects and assets that meet framework criteria. The committee selects eligible projects and assets based on external certifications such as the EPC label of a property or the capacity of a solar plant.

The green finance committee comprises three members of the company and is chaired by the CEO. Decisions on behalf of the committee require consensus. The mandate of a member (appointed by the CEO) lasts three years and LPP always appoints a technical expert with a background in engineering or sustainability. The committee convenes at least annually to allocate outstanding proceeds and documents each meeting.

LPP expressly limits the scope of eligible projects and assets to those determined under the GBP. Furthermore, the following sectors are excluded:

- Gambling
- Coal-fired power generation
- Nuclear energy generation
- Pornography
- Tobacco
- Weapons and defense industries
- Negative resource extraction operations

Scope's assessment: LPP's project evaluation process is aligned with the GBP. The inclusion of an engineer or sustainability expert in the green finance committee ensures the quality and credibility of the process. LPP's proven willingness to consult external advisors adds further value.

III. Management of proceeds

The proceeds of the green bonds will be managed by the green finance committee and listed in LPP's green finance register. The register will list the country, category and nature of the asset to identify each green bond and the eligible projects and assets relating to it. If an asset fails to meet the framework requirements or if the underlying project or asset is divested or lost during the life of the bond, it will be removed from the register. An amount equal to the allocated funds will be reinvested in an eligible asset.

Establishment of green finance register

The amount required to finance or refinance eligible assets will be deducted from the register. LPP intends to allocate green bond proceeds as soon as possible after issuance. Before allocation, the proceeds will be held as cash, cash equivalents or other short-term liquid interest-bearing securities, in line with the company's liquidity and/or liability management activities.

LPP's green bond issuance is part of an initiative of the central bank of Hungary. The bonds will be issued to a limited set of investors who will bid in an auction.

Transparent management of proceeds

Scope's assessment: LPP's management of proceeds complies with the Green Bond Principles. LPP provided material evidence of its green finance register and the basic rules of its green finance committee detailing the planned management of proceeds.

IV. Reporting

LPP is committed to publishing annual allocation reports that provide the allocation of its financed projects and assets until full allocation. The first annual report will be published within one year of the first green bond issuance. LPP will also publish annual impact reports on its website. The green finance committee will review and approve the reports.

In accordance with the Harmonized Framework for Impact Reporting approach, LPP pledges to annually report the impact indicators listed in the table below, if they are available.

Category	Impact report
Renewable energy	Estimated yearly renewable energy production (MWh)
	Capacity of renewable energy plant(s) constructed or rehabilitated using LPP's green bond proceeds (MW)
Green buildings	Type of certification and degree of certification for buildings (e.g. LEED, BREEAM, EPC)
	kWh/m ² of gross building area p.a.; and % of energy use reduced/avoided vs the local building code
	kgCO ₂ /m ² of gross building area
	Annual greenhouse gas emissions reduced/avoided (tonnes of CO ₂ equivalents)
Energy efficiency	Annual energy savings in MWh/GWh (electricity) or GJ/TJ (other energy savings)
	Annual greenhouse gas emissions reduced/avoided (tonnes of CO ₂ equivalents)
Clean transport	Number of clean (e.g. electric) vehicle chargers deployed
	Annual absolute (gross) greenhouse gas emissions (in tonnes of CO ₂ equivalents)
	Electric vehicle charging station total power (MWh)

Allocation report
Total amount of green bond proceeds
Remaining balance of unallocated bond proceeds
Sum of the green bond register balance, including the unallocated amount
Geographical distribution of the projects/assets
Share of financing/refinancing
Status of the eligible projects and assets

LPP's framework is linked to SDGs

Scope's assessment: The reporting proposed by LPP is aligned with the GBP, particularly the ambition to comply with the harmonized framework approach.

Share of financing versus refinancing

LPP intends to use the green bond proceeds to finance new projects, rather than to refinance existing assets.

Scope's opinion

Alignment with SDGs

The SDGs adopted by all UN member states in 2015 are a collection of 17 global targets that form an agenda for achieving sustainable development by 2030. LPP's framework deems the following SDGs relevant:

- **7. Affordable and clean energy:** Ensure access to affordable, reliable, sustainable and modern energy for all
- **8. Decent work and economic growth:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **9. Industry, innovation and infrastructure:** Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- **11. Sustainable cities and communities:** Make cities and human settlements inclusive, safe, resilient and sustainable
- **13. Climate action:** Take urgent action to combat climate change and its impacts

Appendix 3 lists the relevant indicators for measuring LPP's contribution to each SDG. The contribution to the SDGs can be quantified in post-issuance impact reporting.

LPP's framework voluntarily engages with EU Taxonomy Regulation draft

Alignment with EU taxonomy

The Taxonomy Regulation was published in the Official Journal of the European Union on 22 June 2020 and entered into force on 12 July 2020. It establishes a basis for the EU taxonomy by setting out four overarching conditions that a particular economic activity must meet to qualify as environmentally sustainable. The Taxonomy Regulation establishes six environmental objectives: climate change mitigation, climate change adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, and the protection and restoration of biodiversity and ecosystems. A first delegated act on sustainable activities for climate change adaptation and mitigation objectives was approved in principle on 21 April 2021 and formally adopted on 4 June 2021 for scrutiny by the co-legislators. A second delegated act for the remaining objectives will be published in 2022.

The project categories of LPP's framework pertain to the following taxonomy sectors for which the first delegated act specifies technical screening criteria:

- Residential real estate construction;
- Renovation of existing buildings;
- Installation, maintenance and repair of renewable energy technologies;
- Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings).

The technical criteria for residential real estate construction specify that the net primary energy demand of new construction must be at least 10% lower than the primary energy demand resulting from the relevant NZEB requirements. LPP's framework sets the minimum requirement of outperforming the EPC of NZEBs at 10%. For the renovation of existing buildings, the taxonomy's technical criteria require a reduction in primary energy

demand by at least 30% or compliance with national and regional building regulations for 'major renovation'. LPP's framework aligns with these criteria. For the installation, maintenance and repair of renewable energy technologies, the activity complies with the technical screening criteria as LPP's framework will finance solar photovoltaic systems and the ancillary technical equipment and heat pumps, contributing to the targets for renewable energy for heating and cooling in accordance with Directive (EU) 2018/2001. Finally, the requirement for electric vehicle-charging stations specifies the installation, maintenance or repair of charging stations for electric vehicles. LPP's framework also complies with these technical screening criteria.

The EU taxonomy defines a 'do no significant harm' (DNSH) assessment. The DNSH assessment ensures that other environmental objectives are not harmed while a substantial contribution is made to one or more environmental objectives.

The DNSH specify a set of criteria for activities relating to residential real estate construction and the renovation of existing buildings. LPP has stated its intention to align with these criteria but does not currently provide sufficient documentation to prove alignment. The EU taxonomy has not specified DNSH criteria for the remaining sectors.

An assessment of minimum social safeguards is not included in the analysis.

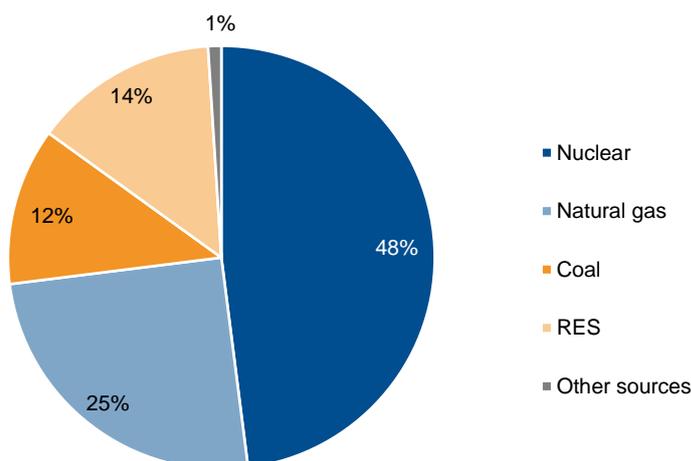
Impact of proceeds

LPP's impact: renewable energy

The EU is setting energy targets that aim to derive at least 32% of energy from renewables in 2030². Hungary's Energy Strategy is aiming for approximately 20% of primary energy derived from renewables by 2030³. Figure 3 shows that obtaining a significant share of electricity from renewable sources is proving difficult for Hungary. While the share is increasing, at approximately 14%, it is still below the European average of 19%⁴.

Low share of renewables in Hungary

Figure 3: Net electricity generation structure in Hungary



Source: <https://www.mdpi.com/2071-1050/13/16/8826>

LPP's ambitions in the renewable energy sector are twofold: it plans to finance stand-alone solar farms with this issuance as well as solar panels or heat pumps to directly supply real estate with renewable energy.

² https://ec.europa.eu/clima/policies/strategies/2030_en

³ <https://www.iea.org/policies/5913-2030-energy-strategy-of-hungary>

⁴ https://www.destatis.de/Europa/EN/Topic/Environment-energy/_node.html;jsessionid=B84CAE3B50C87A095766BA4C2208304B.live722

LPP's is focusing on national and EU level requirements for green buildings

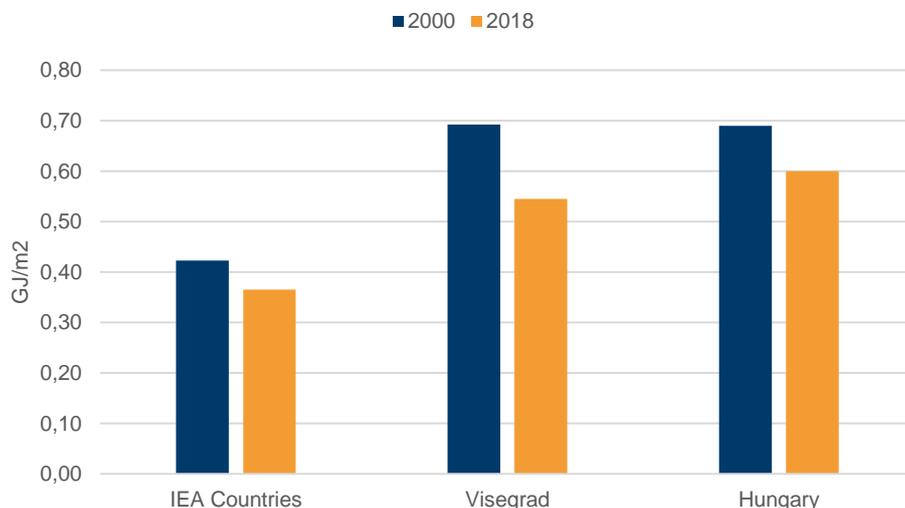
By financing solar farms, LPP contributes to increasing renewable energy generation (Figure 3). Furthermore, this goal contributes to less dependence on energy imports.

According to Hungary's Energy Strategy, 75% of Hungarian household energy consumption relates to heating⁵. Hot water production in households accounts for a further 10% of energy consumption. Currently, heating is largely supplied with natural gas⁶. Hungarian regulation has prescribed an average 25% share of renewable energy for new property construction after 2020 to reach the NZEB performance level⁷. To realise this objective, the strategy strongly encourages the installation of decentralised heat pumps and solar power.

LPP's impact: green buildings

In addition to the taxonomy on sustainable finance, the EU has set targets to realise the Paris Agreement, including a reduction in greenhouse gas emissions by at least 40% by 2030⁸. For Hungary, a 40% reduction means its gross emissions may not exceed an equivalent of 56.19bn tonnes of CO₂⁹. The National Building Energy Performance Strategy has found that buildings account for approximately 40% of primary energy use in Hungary. Figure 4 shows that Hungary's energy consumption levels per residential m² were significantly higher than that of IEA countries¹⁰ in both 2000 and 2018. While other Visegrad countries¹¹ have reduced the energy consumption since 2000, Hungary's average consumption level remains high. Energy efficiency in buildings and renewable energy provisions are central to Hungary's discussions on how it can reach its energy targets by 2030.

Figure 4: Residential Energy Intensity



Source: <https://www.iea.org/data-and-statistics/charts/energy-intensity-per-floor-area-of-residential-space-heating-in-selected-iea-countries-2000-2018>

In alignment with national environmental targets, LPP focuses on the energy consumption of its real estate after construction.

⁵ https://ec.europa.eu/energy/sites/ener/files/documents/hu_final_necp_main_en.pdf

⁶ https://ec.europa.eu/energy/sites/ener/files/documents/hungaryActionPlan2014_en.pdf

⁷ https://ec.europa.eu/energy/sites/ener/files/documents/hu_final_necp_main_en.pdf

⁸ https://ec.europa.eu/clima/policies/strategies/2030_en

⁹ https://ec.europa.eu/energy/sites/ener/files/documents/hu_final_necp_main_en.pdf

¹⁰ IEA Countries include Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Spain, Switzerland, United Kingdom, United States

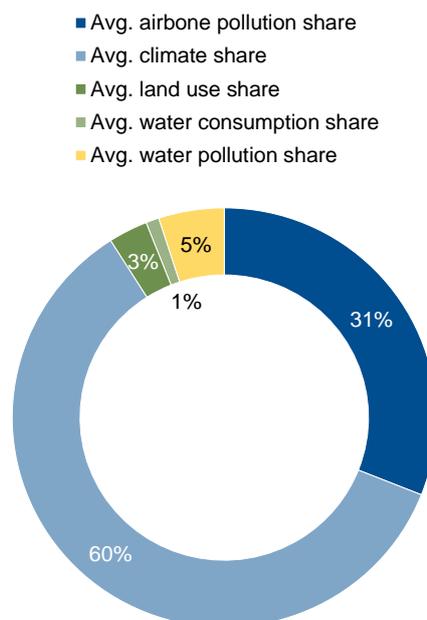
¹¹ Visegrad countries include the Czech Republic, Hungary, Poland, and Slovakia

Greenhouse gas emissions are main impact of Hungarian construction companies

Upstream impact

Our ESG impact model sheds light on the upstream impacts from the construction of new buildings. The environmental impact of real estate construction is significant: on average, 13 cents of negative environmental impacts are generated for each euro of revenue.

Figure 5: Upstream environmental impact of average Hungarian construction company



Source: Scope ESG Analysis

Of the drivers of the negative environmental impact shown in Figure 5, climate share (greenhouse gas emissions) is the largest, accounting for 60% of the environmental impact.

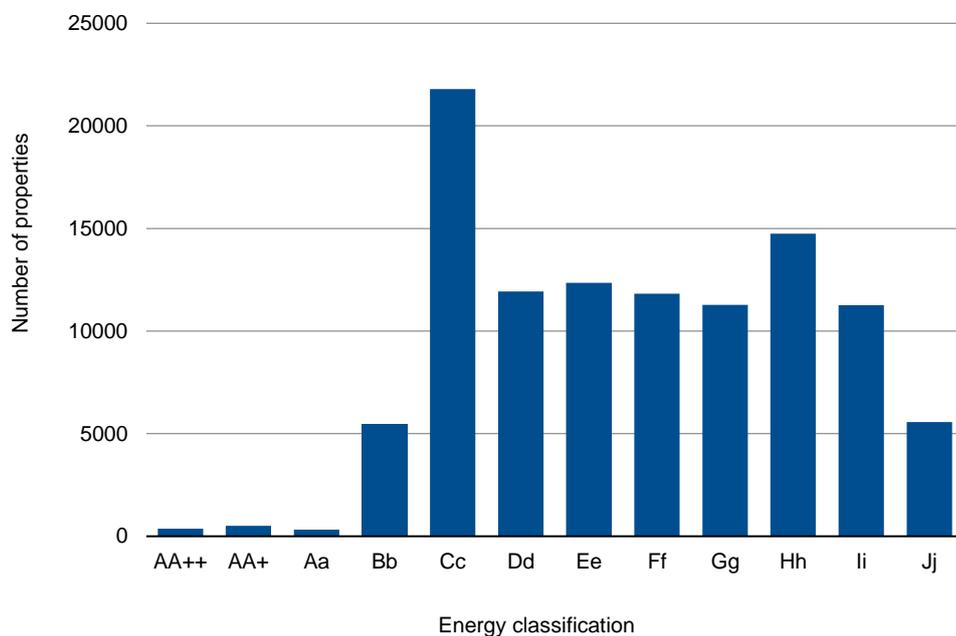
While LPP has emphasised its efforts to use quality materials, the framework does not refer to environmental standards in construction. An assessment of risks related to the use of environmentally sustainable materials in refurbishing or building new units is therefore not possible in the context of this assessment.

Downstream impact

By primarily focusing on energy efficiency, LPP aims to reduce its downstream emissions. This objective reflects the EU Taxonomy technical screening criteria for the construction of new builds and renovation of existing buildings which also focus on the downstream energy consumption.

Figure 6 depicts the energy efficiency of the current stock of commercial and residential buildings in Hungary. LPP plans to invest in projects with a minimum energy efficiency of BB. In 2021, only 6.2% of the building stock in Hungary is classified as BB or above.

Figure 6: Commercial and residential real estate in Hungary, 2021



Source: https://entan.e-epites.hu/?stat_megoszlas

LPP focuses on the criteria for green buildings, aiming to ensure that the buildings it acquires, constructs or refurbishes achieve at least ‘Very Good’ under the BREEAM certification standard, at least the ‘Gold’ standard under LEED or perform at least 10% better than the minimum Hungarian EPC for NZEBs (category BB or above), and at least category AA from 2026.

Currently 75% of the building stock in the EU is not energy-efficient and only 1% of European buildings undergo renovation to increase energy-efficiency each year.¹² The European Union promotes the refurbishment of buildings as part of its Renovation Wave initiative. The action taken by LPP to renovate Hungarian buildings will contribute to EU climate targets of reducing greenhouse gas emissions by 40% by 2030 compared to 1990 levels.

LPP’s impact: energy efficiency

By 2030, the EU intends to improve energy efficiency among its member states by 32.5%.¹³ Hungary’s national targets for residential real estate closely follow EU recommendations. The framework’s energy efficiency targets exceed the relevant national regulation criteria by at least 10%.

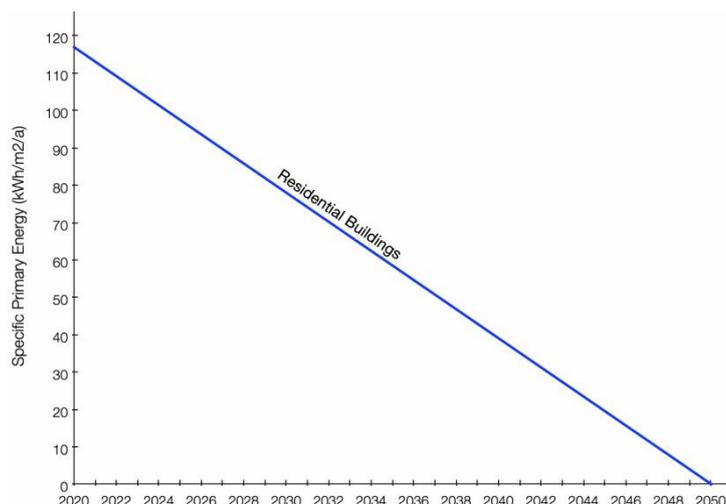
LPP aims to provide highly energy-efficient buildings in Hungary. New buildings to be developed and constructed by LPP will be among the 15% most energy-efficient buildings in Hungary. Major renovations or the refurbishment of existing properties undertaken by LPP will result in a minimum 30% reduction in carbon emissions intensity or a two-grade upgrade in the Hungarian energy performance label. LPP also plans to invest in R&D activities to improve energy efficiency in different technologies such as smart grids, energy storage, district heating and efficient lighting.

¹² https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en

¹³ https://ec.europa.eu/clima/policies/strategies/2030_en

As shown in Figure 7, the Climate Bonds Standard has established a recognised criterion whereby a building's primary energy consumption must lie below the hurdle rate established for the midpoint of the bond's term. LPP's framework criteria require a minimum energy efficiency level that lies below the hurdle rate in 2021. Whether or not LPP's buildings fulfil this criterion will depend on the future primary energy consumption of the building and the term of the issued bond.

Figure 7: Low-carbon building criteria under the Climate Bonds Standard



Source: <https://www.climatebonds.net/standard/buildings/residential/calculator>

LPP's impact: clean transport

In Europe, transport is the largest source of carbon emissions at 27%, of which two-thirds are produced by automobiles and vans¹⁴. Focusing on clean transport in Hungary is therefore key to meeting EU emission targets. LPP plans to use a non-specified share of bond proceeds to finance supportive infrastructure such as charging stations for electric vehicles or other investment supporting low-carbon transportation methods.

¹⁴ <https://www.transportenvironment.org/publications/co2-emissions-cars-facts>

LPP manages risks through internal control systems

Risks

The framework's eligible categories include social and environmental risks. We consider LPP to have the ambition to address the common risks associated with its green project categories. In Hungary, existing labour laws and environmental protection standards comply with the EU-wide minimum threshold that reduces risks.

Associated project risks	LPP's risk mitigation measures
Health and safety risks	In Hungary, the Act of 1993 concerning Occupational Safety and Health aims to ensure the health and safe working conditions of workers. ¹⁵ In addition, there are EU-level regulations and minimum standards regarding the health and safety of workers. ¹⁶
Biodiversity risks	LPP has confirmed that it does not operate on land that is at risk of biodiversity loss, such as natural areas designated as Natura 2000. Since LPP primarily operates in the suburbs of Budapest, there is no increased risk of greenfield construction or other biodiversity harm. The EU has implemented its own biodiversity strategy for 2030 ¹⁷ , which also includes buildings. The strategy aims to counteract the loss of green spaces and ecosystems in urban areas by promoting the inclusion of environmentally friendly designs of buildings that have a connection to nature.
High impact of material resources on ESG score for the construction sector	According to our ESG Impact Review Methodology, almost 40% of the global environmental impact of the construction sector can be attributed to the materials sector. LPP emphasises its efforts to use quality materials in construction.
Environmental risk	No information on an environmental management system or external environmental impact assessments was provided by LPP or included in corporate governance reports.
Energy mix risk	Since increased energy may be required for heat pumps, Hungary's current electricity mix may pose a risk (Figure 3). The share of renewable energy is still low for EU standards, implying a high probability that heat pumps will remain powered by polluting sources of energy. Similarly, the energy consumed by electric vehicle charging stations is expected to largely come from polluting sources. Therefore, the share of renewable energy consumed is unclear.

¹⁵ <https://www.ilo.org/dyn/natlex/docs/WEBTEXT/38155/64930/E93HUN01.htm>

¹⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31989L0391&from=EN>

¹⁷ https://ec.europa.eu/environment/strategy/biodiversity-strategy-2030_en

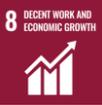
I. Appendix: Documents provided by LPP

Issuer document	Document description
Market research on Hungarian real estate standards	Hungarian housing market database
	Central Bank of Hungary document: Financing the Hungarian Renewable Energy Sector
	Central Bank of Hungary document: Notice on the criteria for the Preferential Green Capital Requirements
	Central Bank of Hungary document: Analysis of Housing Market
	Hungarian building regulation EPC
General information provided by LPP	Company overview
	LP Portfolio Green Framework Presentation
	Environmental performance of LPP's past projects
Green bond-specific documentation provided by LPP	Green Bond Framework
	Green Finance Register
	Minutes of LP Portfolio Green Finance Committee
	Basic Rules of the Green Finance Committee
	Information on use of proceeds
	Operation of electric charging equipment permit

II. Appendix: Green building certification schemes & regulation

	LEED	BREEAM	Hungarian EPC
Description	The LEED (Leadership in Energy and Environmental Design) certification process developed by the US Green Building Council is widely used globally, with high acceptance among users and international real estate markets.	BREEAM certification (Building Research Establishment Environmental Assessment Method) is a sustainability assessment method used to certify projects, infrastructure, and buildings. It sets benchmarks for the environmental characteristics of buildings through the design, specification, construction, and operational phases and can be applied to new buildings or refurbishment plans.	The Energy Performance of Buildings Directive in Hungary sets requirements in terms of energy generation and efficiency that buildings need to fulfil to qualify for public funding.
Certification levels	<ul style="list-style-type: none"> Platinum Gold Silver Certified 	<ul style="list-style-type: none"> Outstanding Excellent Very Good Good Pass 	Yes/no
Areas of assessment	<ul style="list-style-type: none"> Sustainable sites Water efficiency Energy & atmosphere Materials & resources Indoor environmental quality Innovation in design 	<ul style="list-style-type: none"> Energy Health and wellbeing Innovation Land use Materials Management Pollution Transport Waste Water 	<ul style="list-style-type: none"> Energy efficiency Renewable share Energy generation
Requirements	Prerequisites (independent of level of certification) and credits with associated points LEED has different rating systems that apply to specific sectors	Prerequisites depending on the levels of certification and credits with associated points	<ul style="list-style-type: none"> Energy efficiency of at least BB Minimum renewable share of 25% Thresholds for U-values of building elements
Accreditation	Internationally accepted, widespread and guaranteed high quality	Can be easily applied to local requirements; predominant environmental focus; standards less strict than LEED	Mandatory European regulation

III. Appendix: SDG alignment

GBP category	SDG alignment	Indicators to be evaluated
Renewable energy	   	<ul style="list-style-type: none"> Annual energy production on-site, in MWh or GWh Quantity of installed solar power panels or heat pumps per square metre
Green buildings		<ul style="list-style-type: none"> Avoided kWh per square metre, or in percentage terms (%) below national building standards Annual greenhouse gas emissions reduced or avoided, in tonnes of CO₂ equivalents
Energy efficiency	   	<ul style="list-style-type: none"> Annual energy reduced or avoided in MWh or GWh (electricity) and MWh or GWh (other energy savings) Other indicators: annual gross greenhouse gas emissions from the project in tonnes of CO₂ equivalents
Clean transport	  	<ul style="list-style-type: none"> Quantity of installed electric vehicle charging stations

IV. Appendix: EU taxonomy alignment mitigation

Issuer's framework activity	Renewable energy	
Taxonomy activity	7.6. Installation, maintenance and repair of renewable energy technologies	
	EU technical mitigation criteria	Comments on potential alignment
Mitigation criteria (metric and threshold)	<p>The activity consists of one of the following individual measures, if installed on-site as technical building systems:</p> <p>(a) installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment;</p> <p>(b) installation, maintenance and repair of solar hot water panels and the ancillary technical equipment;</p> <p>(c) installation, maintenance, repair and upgrade of heat pumps contributing to the targets for renewable energy for heating and cooling in accordance with Directive (EU) 2018/2001 and the ancillary technical equipment;</p> <p>(d) installation, maintenance and repair of wind turbines and the ancillary technical equipment;</p> <p>(e) installation, maintenance and repair of solar transpired collectors and the ancillary technical equipment;</p> <p>(f) installation, maintenance and repair of thermal or electric energy storage units and the ancillary technical equipment;</p> <p>(g) installation, maintenance and repair of high efficiency micro CHP (combined heat and power) plants;</p> <p>(h) installation, maintenance and repair of heat exchanger/recovery systems.</p>	<p>The activity is aligned as it consists of:</p> <p>(a) the installation, maintenance and repair of solar photovoltaic systems and the ancillary technical equipment;</p> <p>(c) the installation, maintenance, repair and upgrade of heat pumps contributing to the targets for renewable energy for heating and cooling in accordance with Directive (EU) 2018/2001 and the ancillary technical equipment;</p>
	EU taxonomy DNSH criteria	Comments on potential alignment
Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex	No climate risk or vulnerability assessment has been conducted because the climate-related hazards listed in Section II of Appendix A are not directly material to the activity financed under this framework.
Sustainable use and protection of water and marine resources	N/A	N/A
Transition to a circular economy	N/A.	N/A
Pollution prevention and control	N/A	N/A
Protection and restoration of biodiversity and ecosystems	N/A	N/A

LPP's framework activity	Green buildings	
Taxonomy activity	7.1. Construction of new buildings	
	EU technical mitigation criteria	Comments on potential alignment
Mitigation criteria (metric and threshold)	<p>1. The Primary Energy Demand (PED), defining the energy performance of the building resulting from the construction, is at least 10 % lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national measures implementing Directive 2010/31/EU of the European Parliament and of the Council. The energy performance is certified using an as built Energy Performance Certificate (EPC).</p> <p>2. For buildings larger than 5000 m², upon completion, the building resulting from the construction undergoes testing for air-tightness and thermal integrity, and any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. As an alternative; where robust and traceable quality control processes are in place during the construction process this is acceptable as an alternative to thermal integrity testing.</p> <p>3. For buildings larger than 5000 m², the life-cycle Global Warming Potential (GWP) of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand.</p>	<p>LPP's framework sets the minimum requirement of outperforming the EPC of NZEBs at 10%. Therefore, the assets financed by the issuance are aligned. Therefore, the assets financed by the issuance are aligned with the criteria for buildings under 5000 m². The criteria for heating and cooling systems could be met due to the planned installation of heat pumps in newly developed buildings.</p>
	EU taxonomy DNSH criteria	Comments on potential alignment
Climate change adaptation	<p>The activity complies with the criteria set out in Appendix A to this Annex.</p>	<p>No climate risk or vulnerability assessment has been conducted because the climate-related hazards listed in Section II of Appendix A are not directly material to the activity financed under this framework.</p>
Sustainable use and protection of water and marine resources	<p>Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to this Annex:</p>	<p>LPP has confirmed that all water appliances used either receive a dark-green or light-green water label. Therefore, all appliances fall into the top two classes for water consumption.</p>
Transition to a circular economy	<p>(a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min;</p>	<p>LPP does not specify how the waste generated in the construction phase is recycled.</p>
Pollution prevention and control	<p>Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex. Building components and materials used in the construction that may come into contact with occupiers emit less than 0,06 mg of formaldehyde per m³ of material or component upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m³ of material or component, upon testing in accordance with CEN/EN 16516290 or ISO 16000-3:2011291 or other equivalent standardised test conditions and determination methods. Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants, for example using standard ISO 18400293 . Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.</p>	<p>LPP has stated that asbestos is not used in the construction of its buildings. All real estate projects must be in line with national legislation. If national or regional legislation determines that the land targeted for development is polluted, LPP will rely on local authorities for instructions on how to investigate and restore the land. If LPP were to use toxic materials or operate on a contaminated site, it would be prevented from proceeding with the development.</p>



Second-Party Opinion

LPP Green Bond Framework

Protection and restoration of biodiversity and ecosystems

The activity complies with the criteria set out in Appendix D to this Annex. The new construction is not built on one of the following:

LPP has confirmed that it does not construct on protected natural areas or greenfield land and highlights that this would violate national regulation.

Issuer's framework activity	Green buildings	
Taxonomy activity	7.2. Renovation of existing buildings	
	EU technical mitigation criteria	Comments on potential alignment
Mitigation criteria (metric and threshold)	<p>Building renovation complies with the applicable requirements for major renovations¹⁸</p> <p>Alternatively, it leads to a reduction of primary energy demand by at least 30 %¹⁹</p>	LPP is aligned with these criteria as its framework sets the same criteria for the renovation of existing buildings.
	EU taxonomy DNSH criteria	Comments on potential alignment
Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex	No climate risk or vulnerability assessment has been conducted because the climate-related hazards listed in Section II of Appendix A are not directly material to the activity financed under this framework.
Sustainable use and protection of water and marine resources	<p>Where installed as part of the renovation works, except for renovation works in residential building units, the specified water use for the following water appliances is attested by product datasheets, a building certification or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to this Annex:</p> <p>(a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min;</p> <p>(b) showers have a maximum water flow of 8 litres/min;</p> <p>(c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres;</p> <p>(d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.</p>	In its framework, LPP expresses its efforts to comply with the DNSH criteria. LPP has not provided further details regarding water consumption, the circular economy or pollution prevention and control.
Transition to a circular economy	<p>At least 70 % (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol³⁰⁰. Operators limit waste generation in processes related to construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable the removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste. Building designs and construction techniques support circularity and in particular demonstrate, with reference to ISO 20887301 or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling.</p>	
Pollution prevention and control	<p>Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex. Building components and materials used in the building renovation that may come into contact with occupiers emit less than 0.06 mg of formaldehyde per m³ of material or component upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0.001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m³ of material or component, upon testing in accordance with CEN/EN 16516 or ISO 16000-3:2011303 or other equivalent standardised test conditions and determination methods. Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.</p>	
Protection and restoration of biodiversity and ecosystems	N/A	N/A

¹⁸ As set out in the applicable national and regional building regulations for 'major renovation' implementing Directive 2010/31/EU. The energy performance of the building or the renovated part that is upgraded must meet cost-optimal minimum energy performance requirements in accordance with the respective directive.

¹⁹ The initial primary energy demand and the estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method, and validated with an Energy Performance Certificate. The 30% improvement results from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy sources are not taken into account) and can be achieved via a succession of measures within a maximum of three years.

Issuer's framework activity	Clean transport	
Taxonomy activity	7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	
	EU technical mitigation criteria	Comments on potential alignment
Mitigation criteria (metric and threshold)	Installation, maintenance or repair of charging stations for electric vehicles	LPP's framework is aligned with the mitigation criteria, as the activity within clean transportation specifies the installation of charging stations for electric vehicles.
	EU taxonomy DNSH criteria	Comments on potential alignment
Climate change adaptation	The activity complies with the criteria set out in Appendix A to this Annex	No climate risk or vulnerability assessment has been conducted because the climate-related hazards listed in Section II of Appendix A are not directly material to the activity financed under this framework.
Sustainable use and protection of water and marine resources	N/A	N/A
Transition to a circular economy	N/A.	N/A
Pollution prevention and control	N/A	N/A
Protection and restoration of biodiversity and ecosystems	N/A	N/A



Second-Party Opinion

LPP Green Bond Framework

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