



Green Bond Framework

Zug Estates Holding AG

January 2022

Green Bond Framework – Zug Estates

1 About Zug Estates

The Zug Estates Group conceives, develops, markets and manages properties in the Zug region. It focuses on central sites which are suitable for a wide range of uses and allow sustainable development. The real estate portfolio is located at two sites in Zug and Risch Rotkreuz and is broadly diversified by type of use.

The actively managed real estate portfolio provides the foundation for the Group's long-term business growth. Based on the site-specific circumstances, overarching concepts for sustainable building development with responsible use of resources are followed.

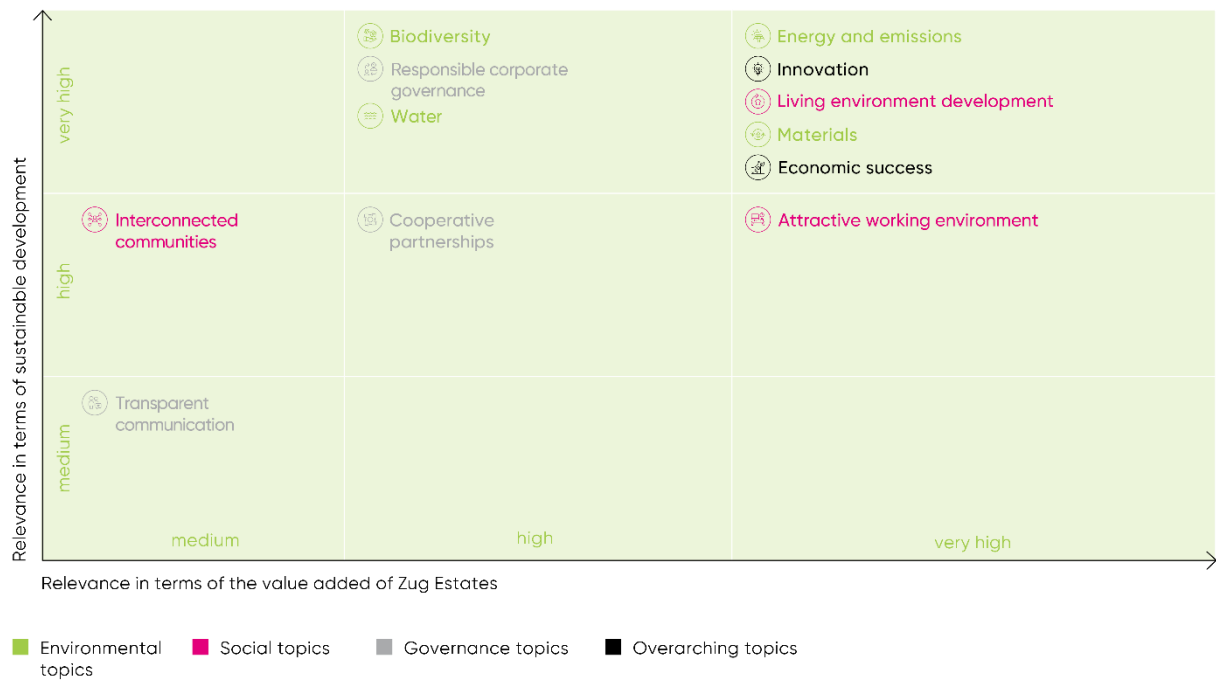
Via its subsidiary Hotelbusiness Zug AG, the Zug Estates Group operates a city resort in Zug comprising two leading business hotels, Parkhotel Zug and City Garden, as well as serviced city apartments. This offering is geared towards business clients and has a capacity of around 250 accommodation units plus ancillary catering facilities.

Zug Estates Holding AG is listed on the SIX Swiss Exchange, Zurich (ticker symbol: ZUGN, securities number: 14 805 212).

2 Sustainability Strategy

According to the United Nations Environment Programme (UNEP), the building sector accounts for around a third of global carbon emissions. 40% of the energy consumption in the world and 50% of the use of natural resources can be assigned to buildings.

Zug Estates has pledged to help cut back on the carbon emissions caused by buildings. For over 10 years now, the company has been building, developing and managing a portfolio of investment properties in line with sustainable principles, with net zero carbon emissions set to almost be reached in 2023. Every step of the way, relevant environmental, social and economic issues are considered and prioritised as per the materiality matrix shown below.



The Zug Estates sustainability strategy is focused on environmental aspects on the understanding that this is where the company can have the biggest impact overall. Social and governance aspects are by no means neglected, though, and are only set to become even more important since the company started reporting in accordance with GRI Standards in the autumn of 2021.

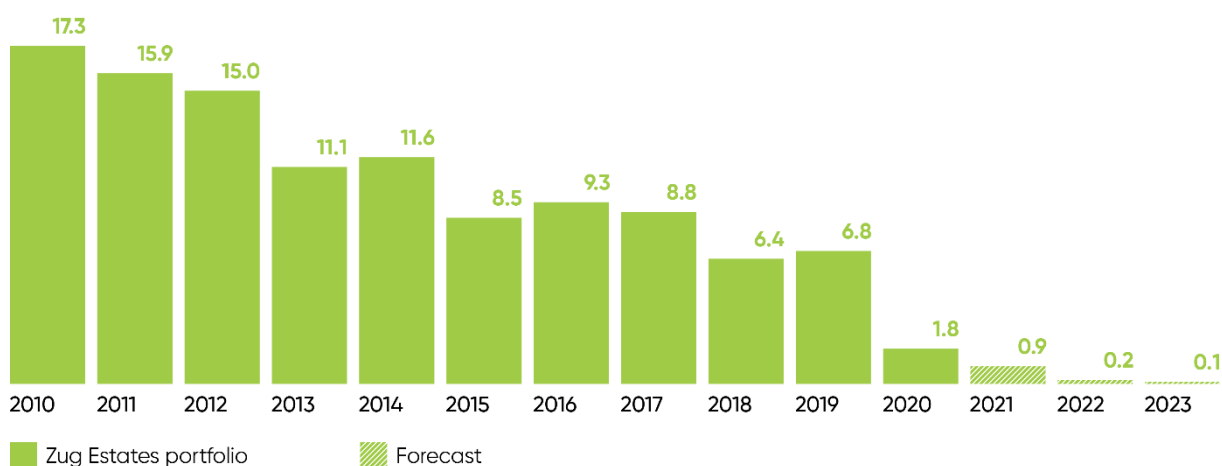
Zug Estates has already been on a positive sustainability journey, having targeted various sustainability issues within the real estate sector over the years and led the way in this area in Switzerland on many occasions.



These ongoing efforts on behalf of the environment mean that Zug Estates has achieved impressive sustainability results compared with other businesses within the same sector and beyond, and is even set to almost reach net zero carbon emissions in 2023. As it stands, Zug Estates holds a top position within the Swiss real estate sector with a figure of 1.8 kg per square metre of energy reference area.

Reduction path for Scopes 1+2 for the Zug Estates portfolio

Spec. greenhouse gas emissions [kg/m² ERA]



Zug Estates is also committed to introducing innovations to improve the quality of its products and services, whilst optimising its processes with the aim of creating added value for people and the planet.

Zug Estates needs to be operating profitably over the long term if the company is to hit all its ambitious sustainability targets and keep all the important promises it has made to the relevant stakeholder groups. This goal appears under “Economic success” in the materiality matrix. One important aspect is sufficient and sustainable funding for investment activities.

3 Green Bond Framework

Issuing green bonds is the logical consequence of Zug Estates’ commitment to sustainable economic development since this integrates the company’s entire strategy with its access to the financial markets.

With a view to ensuring compliance with international market practices, the Zug Estates Green Bond Framework complies with the main points covered by the Green Bond Principles (GBP) set out by the International Capital Market Association (ICMA).

The GBP (edition from June 2021) are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of this fast-growing market.

In line with this framework, the subsequent disclosures follow this structure:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting
- External Reviews

3.1 Use of Proceeds

The proceeds from the placement of the green bond are invested directly into the Suurstoffi site in Risch Rotkreuz, which meets very high sustainability standards and already operates with net zero carbon emissions.

The mixed-use Suurstoffi site covers an area of 105,000 m², providing enough space for 1,400 residents, almost 2,000 students and over 2,500 jobs. With that in mind, green buildings are not the only consideration of the site development project. Other sustainable aspects include renewable energy sources, natural landscape design, clean transportation and social mixing.

The initiatives in place make contributions under the following eligible green project categories listed in the GBP:

- Green buildings
- Renewable energy
- Energy efficiency
- Sustainable water and wastewater management
- Clean transportation
- Terrestrial biodiversity

Green buildings

All buildings on the Suurstoffi site will be operated with net zero carbon emissions thanks to an energy system that was unique within Switzerland at the time of construction. An energy grid with heat pumps supplies all buildings on site with heating and cooling energy from the geothermal installations that are underground by as much as 280 metres, meaning that the ground underneath the site is being used to store heat and cold naturally without any carbon emissions.

Sustainability is a big part of the construction work at the Suurstoffi site too, with wood being used as an important building material. One project with 156 homes made from wood was established back in 2014, when it was the largest wood-based construction project in Central Switzerland. Zug Estates built Switzerland's first wooden high-rise building in 2018 and the current tallest wooden high-rise building has been on this very site since 2019, standing at 60 metres tall. 33.2% of the rentable space is currently attributable to buildings made from wood.

Whenever any of the buildings were erected on site, Zug Estates followed the Minergie limits but did not obtain the relevant certification. A company called OekoWatt checked that the buildings do indeed comply with the Minergie standards. Upon exemption from obligatory consumption-based billing for heating and hot water, this was confirmed by the Energy Department of the Building Office for the Canton of Zug in March 2019.

As a way of ensuring that the buildings would be coherent as standalone structures and as part of the whole site, a project competition was launched to find teams of general planners for each construction site within the overall Suurstoffi site as per SIA 142. Each interdisciplinary judging panel was made up of specialists from Zug Estates and external experts, with the voting majority going to the external

experts. The criteria used to assess the teams included architecture, urban development, open space, economic viability, sustainability, functionality, materials and building ecology.

Renewable energy sources

Where possible, solar power systems are installed on the roofs (and sometimes even the fronts) of the buildings at the Suurstoffi site. This equipment generated 810 MWh in 2020. Zug Estates has set up its own private consumption community (PCC) on site that can be joined by all residents and business tenants. As of 31 December 2021, 343 parties had signed up. With this in place, Zug Estates can sell solar power directly to residents on site, thereby reducing the strain on the national and international power grid. If the power being produced on site cannot meet demand, extra can be bought in. All power comes from renewable energy sources. Agreements are in place to ensure that external energy sources are local to further reduce the strain on the power grid and save on resources required to set up and maintain large power networks.

Natural landscape design

When designing the Suurstoffi site, Zug Estates was committed to natural landscaping with a focus on biodiversity. Research by the Lucerne University of Applied Sciences and Arts has proven that the outside temperature on the site is lower than in nearby neighbourhoods thanks to the shading provided, the high proportion of green spaces and the clever positioning of the buildings.

The clear focus on broad and balanced biodiversity as part of the landscape design has led to the whole area being certified as a “natural living space” by the Nature & Economy Foundation.

Clean transportation

Suurstoffi is a largely vehicle-free site. Otherwise, Zug Estates encourages environmentally friendly transportation on the basis of a two-pronged strategy.

First and foremost, there has been a conscious effort to reduce the need for transportation through the mixed land use and extensive infrastructure on site. On top of that, preference is given to potential residential tenants who work on site to reduce the amount of commuting required.

Secondly, Zug Estates is actively involved in processes and projects aimed at making mobility sustainable.

- The company has joined forces with the Rotkreuz community to form a local group committed to finding transportation solutions with other big landowners.
- Since the Suurstoffi site is right next to the local train station, Zug Estates contributed a large amount of funding for an extra railway crossing to be built so that the platform can be accessed directly from the site.
- All tenants have the option of being allocated an electric vehicle charging station.
- There are plenty of mobility vehicles available for use on site too.
- Zug Estates is currently working with PostAuto, Mobility and the Mobility Academy on a pilot project for carefree mobility called “Sorglos mobil”. Public transport, electric bikes, cargo bikes and car shares are all pooled together on one mobile app. The plan is for the scheme to be rolled out across Switzerland one day.

Social aspects

The social aspects of life on site are another key focus. At the heart of this is the fact that the site has multiple uses, bringing together home, work, leisure, health and education in one location. The extensive neighbourhood infrastructure is valued highly and actively managed by Zug Estates.

With the aim of social mixing in mind, Zug Estates included 74 affordable rooms for students on site. 160 serviced apartments are also available to encourage people of retirement age to move here. Zug Estates also has staff representation on site to maintain contact with residents and offer exemplary customer service. On top of the services on offer, there is also a digital app that tenants can use to communicate with the building management team and other residents on site.

United Nations' Sustainable Development Goals (SDGs)

With the Suurstoffi site and the measures that have already been taken and are continually evolving, Zug Estates is contributing to some of the United Nations' Sustainable Development Goals (SDGs):

- Affordable and clean energy (Goal 7)
- Industry, innovation and infrastructure (Goal 9)
- Sustainable cities and communities (Goal 11)
- Climate action (Goal 13)

3.2 Process for Project Evaluation and Selection

All proceeds from the placement of the green bond are invested into the Suurstoffi site, which already meets very high sustainability standards. As a result, many of the processes for project evaluation and selection relating to sustainability had already been taken care of whilst the whole site was being developed over the past decade.

As site developer, Zug Estates goes beyond sustainable processes for project evaluation and selection relating to the acquisition and development of new buildings. There are also ongoing considerations as to how existing sites can be developed and improved with sustainability in mind.

In fact, Zug Estates has a dedicated interdisciplinary sustainability team that meets several times a year and reports to the Board of Directors.

The team is made up of a core group headed up by the CEO, which coordinates any relevant initiatives. There is also an extended group of employees working in project development, strategic site management, HR, portfolio management, communications and finance. Responsible for the implementation of any approved initiatives, they meet at regular intervals throughout the year, sometimes getting input from external contributors. An in-depth look at all things sustainability can be found online here: <https://www.zugestates.ch/nachhaltigkeit>.

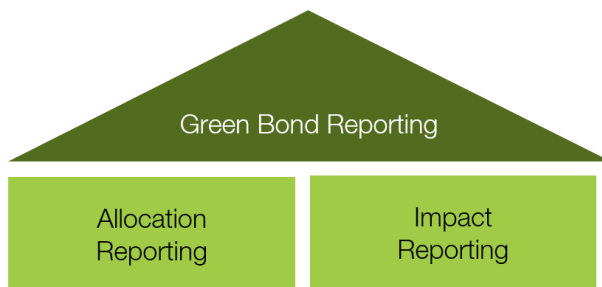
3.3 Management of Proceeds

The proceeds from the green bond are used exclusively to directly finance and refinance the Suurstoffi site projects described in section 3.1. This direct allocation means that proceeds from the green bond do not need to be placed temporarily.

3.4 Reporting

Alongside the company's general sustainability reporting, Zug Estates publishes a specific green bond report every year here: <https://www.zugestates.ch/stories/green-bond-reporting>.

The green bond report consists of an allocation reporting and an impact reporting.



3.4.1 Allocation Reporting

The proceeds from the green bond are used exclusively to directly finance and refinance the Suurstoffi site projects described in section 3.1.

The Corporate Finance Department is responsible for allocating proceeds as far as internal reporting and liquidity management are concerned. The use of proceeds is documented once a year in a public green bond report.

The allocation report consists of the following information:

- Market value of the Suurstoffi site
- Total value of green bond proceeds
- Share of allocated proceeds

If the Suurstoffi site were to be sold, the funds would be reinvested into sustainable projects within 24 months in line with the requirements of the Green Bond Principles. In that case, the proceeds would be allocated by the sustainability team in consultation with the Board of Directors and the Framework would be amended accordingly. The investors would be informed about this change to the use of proceeds in an ad hoc report and then in the annual green bond report.

3.4.2 Impact Reporting

At the end of every August, Zug Estates publishes a detailed sustainability report on all the company's relevant activities. This report is made available to the public on our website: <https://www.zugestates.ch/downloads>. The ESG report is compiled in accordance with the Global Reporting Initiative (GRI) standards.

Zug Estates also complements its sustainability report with an annual sustainability forum that is open to the general public in the autumn. After an update on the current Zug Estates environmental projects, national and international experts are invited to discuss relevant topics and initiatives relating to all things sustainability.

Beside the sustainability report on company level, green bond report includes a break down of detailed sustainability figures for each of the properties and parts of the portfolio pledged as security for green bonds. As far as the Suurstoffi site is concerned, the following figures are to be published every year:

- Percentage of space certified as a natural living space by the Nature & Economy Foundation
- Number of private consumption community (PCC) agreements
- Percentage of parking spaces available as electric vehicle charging stations
- Final energy consumption per square metre of energy reference area (in kWh/m²)
- Scope 1 and 2 greenhouse gas emissions per square metre of energy reference area (in kg CO₂eq/m²)
- Power production (PV installations) (MWh)
- Percentage of rentable space in wooden buildings
- Water intensity (m³/m² rentable space)
- Water withdrawal (m³)

3.5 External Reviews

Zug Estates hired independent auditing company ISS ESG to check its framework for green financing against the GBP. The report by ISS ESG can be accessed on the Zug Estates website:

https://zugestates.ch/assets/img/png/220113_SPO_ISS_ESG_Zug_Estates_Green_Bond.pdf

Since the proceeds from the green bond are being invested directly into an existing sustainable site, the allocation of proceeds does not need to be checked regularly by an external auditor.