

Guide

HypZert Scoring Model for Sustainability Criteria

Status: Oktober 2024



Guide to the HypZert Scoring Model for Sustainability Criteria

Contents

1 General information on the HypZert scoring model for sustainable criteria (ESG scoring for short)	ility 2
Background	2
ESG in the context of property valuation	3
Impact of sustainability criteria in a valuation	3
Consideration of sustainability in a property and market rating	3
ESG scoring model	4
Criteria groups	6
Glossary	11
2 Special features of the different property types	12
HypZert ESG scoring for residential and office properties	12
Example of measurement standards for residential properties	13
Example of measurement standards for office properties	17
HypZert ESG scoring for local supply properties	22
Exemplary measurement standards for local supply properties	24
HypZert ESG scoring for logistics properties	29
Exemplary measurement standards for logistics properties	31

1 General information on the HypZert scoring model for sustainability criteria (ESG scoring for short)

To be able to value and finance real estate in a future-proof manner today, sustainability factors and ESG risks relating to a property should also be assessed and data collected over the long term should be evaluated accordingly. This is the only way to validly identify influences on a property's value, comprehensively assess property portfolios or holdings and manage and efficiently control steps to be taken. But how can these ESG and sustainability criteria be mapped appropriately?

Experts or valuers can document the opportunities and risks associated with the property to be assessed as part of their valuation by carrying out a comprehensive on-site inspection on the one hand and by evaluating existing information on the other. The following questions arise in this process: What additional information is needed to assess the sustainability of a property? What assessments can be made as part of the ESG risk assessment? This guide outlines a viable approach to the risk assessment of sustainability criteria.

Background

Initiated by the adoption of the Paris Climate Agreement in 2015 and the UN Sustainable Development Goals, an international process has been launched to implement sustainability in all areas of society known as ESG (Environment, Social and Governance).

The European Union is also committed to the above-mentioned goals and is working intensively on their implementation in practice. Achieving this purpose includes channelling capital flows into sustainable economic activities in the future. With the so-called taxonomy, the EU created a standardised European framework for assessing the sustainability of economic activities in summer 2020.

The taxonomy includes the following environmental goals:

- » Climate protection;
- » adaptation to climate change;
- » sustainable use and protection of water and marine resources;
- » transition to a circular economy;
- » prevention and reduction of environmental pollution; and
- » protection and restoration of biodiversity and of the ecosystems.

In the building sector, the taxonomy defines sustainability criteria for new construction, the purchase and ownership of existing buildings and energy-efficient refurbishment measures.

The regulatory requirements from the German and European financial supervisory authorities also require ESG risks to be considered when assessing collateral.

ESG in the context of property valuation

Property financing is closely linked to property valuation, as a market and mortgage lending value appraisal must be prepared for every financing arrangement. The property valuation is usually carried out by certified valuers who, based on their experience, are able to assess the property in accordance with ESG aspects, as they have already taken climate and environmental risks and energy-related building characteristics into account in their valuations for many years, partly quantitatively in the market and mortgage lending value (via valuation parameters) and partly qualitatively in the property and market rating (to assess medium-term saleability). There are various proposals for assessing climate and environmental risks as well as energy-related building characteristics, but as yet there is no detailed, standardised valuation model that is specifically aimed at appraisal activities. As a rule, consideration is still largely given in the context of other assessment criteria and/or in conjunction with a generalised assessment in text form.

Impact of sustainability criteria in a valuation

Sustainability aspects can have an impact on all valuation parameters. Production costs, net rents and the tenant's operating costs will be increasingly influenced by sustainable construction methods, energy consumption, etc. in the future. The level of management costs (e.g. maintenance, allocation of the CO_2 tax to tenants and landlords, ...) and the remaining useful life (e.g. after energy modernisation) will also be directly affected by these aspects. Sustainability criteria influence prices and therefore also the property yield.

ESG risks must also be taken into account when determining the mortgage lending value. The characteristics of the ESG factors can be taken into account by the valuer by adjusting the valuation parameters of the individual valuation methods.

Consideration of sustainability in a property and market rating

The assessment of the medium-term saleability of a property in a typical property and market rating sometimes also evaluates environmental and climate risks as well as energy-related building characteristics in addition to other criteria. However, the rating result itself does not allow any conclusions to be drawn as to the extent to which it will be influenced by sustainability characteristics.

Currently, various ESG assessment procedures are already being developed or applied in financial institutions, especially those that have to implement EBA-GLOM¹ guidelines. If a separate model is not yet available, the following proposal can be helpful as an independent scoring system.

¹ The 'Guidelines on loan origination and monitoring' (GLOM) were issued by the European Banking Authority (EBA) and are intended to ensure that institutions have solid standards for the assumption, management and monitoring of credit risks.

ESG scoring model

Definition

ESG scoring is a standardised procedure that identifies and quantifies the sustainable characteristics of a property. This is done in particular by taking into account the energy properties and the location-relevant environmental and climate risks as well as the environmentally relevant impairments caused by the property. The focus here is on analysing environmental factors (E = Environmental). Social aspects (S = Social) are also taken into account where relevant. Governance (G) refers to compliance with ethical corporate management. As we are looking purely at the property here and compliance with legal regulations (such as the building code BauGB, the Federal Land Utilisation Ordinance BauNVO, state building regulations, monument protection, building energy law, the prohibition to use space for other purposes, preservation ordinance, labour protection law, workplaces ordinance, etc.) are already considered / assessed in valuations, the governance (G) area is not discussed here for now.

Properties within the meaning of the definition are existing properties and, in the case of projects, notionally completed properties. The benchmark is the current and future CO_2 emissions caused by the use of the property at the location on the reporting date and the degree of fulfilment of the existing environmental targets in accordance with the Taxonomy Regulation.

Methodological approach

For ESG scoring, four criteria groups with qualitatively and quantitatively measurable criteria are defined based on the market and property rating. Quantitative (measurable) criteria, such as final energy consumption and CO_2 emissions, can be taken from the energy performance certificate or determined with the help of an energy classification tool. For the qualitative criteria, we provide examples of measurement standards below that can form the basis of the assessment. The basis insofar as it provides information on possible indicators for assessing a criterion without claiming to be exhaustive.

The weighting of the individual criteria in the groups and of the criteria groups among themselves is also predefined. The HypZert ESG scoring for real estate is based on a six-point rating scale and a score as the final result. How the result determined in this way is integrated into the business policy of the credit institution is not the task of the valuers. However, it is a helpful tool for them to create transparency about the sustainability of a property.

Classification of the sustainability criteria by categories

The following four groups of criteria can be used to comprehensively assess the sustainability of a property from an expert's perspective:



Scoring scale

The ESG scoring has a scale with six gradations to visualise the risk:

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6

ESG scoring sheet

ESG scoring			vapke	search	Jypzert
Valuer:					
Valuation date:					
Property type:	Office/R	lesidentail			
Building type:					
Year of construction/					
modernisation:					
	Gesa	mtüberblick			Weighting
Criteria group 1: environ	mental impa	acts & climate risks			15 %
Criteria group 2: property	Ý				20 %
Criteria group 3: building					25 %
Criteria group 4: energy					40 %
Overall scoring for the ex	kisting prop	епту			
Scoring legend:					
very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Criteria group 1: environ	mental imp	acts & climate risks		Valuation	Weighting
Storm/tornado					12,5 %
Holding/storm surge					12,5 %
Emissions					12,5 %
Forest fire					12,5 %
Heat/drought_lightnings	trike				12,5 %
Earthquake/landslide					12.5 %
Mining damage/soil subs	idence				12,5 %
Scoring for criteria group	1				
Criteria group 2: propert	3/			Valuation	Weighting
Social infrastructure	·y			Valuation	25 %
Ecological infrastructure					25 %
Soil pollution					20 %
Property situation					30 %
Scoring for criteria group	2				
Criteria group 3: building	5			Valuation	Weighting
Architecture					25 %
Fit out					35 %
Third-party usability					10 %
Scoring for criteria group	3				
Criteria group 4: energy	auch			Valuation	Weighting
Engenergiebedart/-verbr	auch				50 %
CO -Emissionen					711 1 1 1/2

ESG scoring sheet using the example of the asset class residential



Note: The scoring sheet can be filled out using the Adobe Reader (free download <u>here</u>). Once you have selected the asset class, the relevant criteria and weightings appear in the scoring sheet and can be evaluated. You can save the sheet or print it out and attach it to your report. For all LORA and vdpIB+ users, the scoring sheet is already stored in the evaluation program.

Criteria groups

Criteria group 1: environmental and climate risks

This group of criteria assesses the potential environmental and climate risks of a location based on the hazards identified, for example, by the natural hazard model K.A.R.L. (Cologne Insurance Risk Solutions). Eight types of risk that are relevant for Germany are taken into account: storms/tornados, floods/storm surges, hail/heavy rain, emissions, forest fires, heat/drought and lightning, earthquakes/subsidence and landslides. The assessment is made on a scale of 1 (very good) to 6 (poor).

» Storms and tornados

Strong wind events with wind speeds of 75 km/h or more, tornados can reach over 400 km/h, inclusion of regional climate parameters and geographical factors.

	very good	good	slightly above average	slightly below average	mediocre	poor
	1	2	3	4	5	6
Average annual expected damage value as a percentage of the restoration costs due to storms and tornados	<0,05	0,05-0,1	0,1-0,4	0,4-0,7	0,7-1	>1
A risk value of 1% p. a. means that, statistically speaking, a total loss must be expected within 100 years.	The occurrence of natural hazards or associated potential damage is negligible.	Possible damage tornados is lo damage ve	from storms and w. Substantial ry unlikely.	Storm and torr expected to be exceptional cas damage is	ado damage is e moderate. In ses, substantial s possible.	A relevant risk has been identified. Substantial damage is possible.

» Floods and storm surges

Flood maps with different flood zones, statistical probability and intensity of flood events.

	very good	good	slightly above average	slightly below average	mediocre	poor
	1	2	3	4	5	6
In which flood zone is the site located?	outside of flood zones	very rare (>200 years)	not assigned	HQ100	not assigned	HQ10-30
		Location can be affected by a 200-year event ("HQ200").		Location can be affected by a affected by a 100-year event ("HQ100").		The site can be affected by a 10 to 30-year event ("HQ10-30").

» Hail and heavy rain

Hail: frozen precipitation with a diameter of 0.5 cm or more, inclusion of regional climate parameters and local hail potential



Heavy rain: intense rainfall, flash floods and flooding possible, assessment based on the capacity of local sewage systems and exceedance of design rainfall amounts

	very good	good	slightly above average	slightly below average	mediocre	poor
	1	2	3	4	5	6
Average annual expected damage value as a percentage of the restoration costs due to hail and heavy rainfall	<0,05	0,05-0,1	0,1-0,4	0,4-0,7	0,7-1	>1
A risk value of 1% p. a. means that, statistically speaking, a total loss must be expected within 100 years.	The occurrence of natural hazards or associated potential damage is negligible.	Possible damag and heavy r Substantial d unli	e caused by hail rain are low. amage is very kely.	Moderate da expected due to rai In exceptional ci damage is	mage is to be o hail and heavy in. ases, substantial s possible.	A relevant risk has been identified. Substantial damage is possible.

» Emissions

Air quality index: fine dust concentration, nitrogen dioxide, ozone, compliance with EU and WHO limits

	very good	good 2	slightly above average 3	slightly below average 4	mediocre 5	poor 6
Substance/unit						
PM10 (annual average in μ g/m) ³	≤10	≤12,5	≤15	≤20	≤40	>40
PM2.5 (annual average in μ g/m) ³	≤5	≤7,5	≤10	≤15	≤25	>25
NO_2 (annual average in $\mu g/m$) ³	≤10	≤12,5	≤15	≤20	≤40	>40
0 ₂ *	≤10	≤12,5	≤15	≤20	≤25	>25
Evaluation is based on the worst evaluation of the individual pollutants. PM = Particle size smaller than 10 micrometres (PM10) or smaller than 2.5 micrometers (PM2.5)	Values are below the limits recommended by the WHO (WHO global air quality guidelines).	Gradations between the stricter limit values Valu s of the WHO and the values above of the German Federal Immission Control Act (BImSchV). values German Imm Cont (39th B				
	* Number of days	with exceedance of	of the daily maximu	m 8-hour average o	f 120 μg/m³	

» Forest fires

Forest fire index: climatological conditions and amount of combustible material, risk assessment according to these factors

	very good	good	slightly above average	slightly below average	mediocre	poor
	1	2	3	4	5	6
Qualitative risk classification of the						
forest fire risk (according to K.A.R.L.®-TAXO)	not relevant	low	not assigned	medium	not assigned	high
	The occurrence of a forest fire or the associated possible damage is negligible as there are no flammable vegetation components.	Possible damage fires is low, as e amounts of flam are present climatological co site only favor small e	caused by forest either only small mable vegetation and/or the onditions at the forest fires to a extent.	The risk of dam fires is mediu climatological co amount of flam at the	lage from forest im due to the molitions and the nable vegetation e site.	A relevant risk has been identified, meaning that substantial damage is possible. The climatological conditions at the location strongly favor the occurrence of forest fires and there is a medium or large amount of flammable vegetation at the site.

» Heat/drought and lightning

Heat stress: duration and intensity of heat waves Drought stress: water shortage due to low rainfall and high temperatures Lightning strike: sudden discharge of electrical energy, lightning activity

	very good	good	slightly above average	slightly below average	mediocre	poor
	1	2	3	4	5	6
Heat risk for a real estate property assessed on the basis of the heat stress index (values: 1 to 10)	<1	≥1	≥3	≥5	≥7	≥9
Drought risk for a real estate property assessed on the basis of the drought stress index (values: 1 to 10)	<1	≥1	≥3	≥5	≥7	≥9
Lightning strike risk assessed on the basis of a lightning climatology (lightning per km ² per year)	<1	<2	<3	<4	<6	≥6
Qualitative risk classification (according to K.A.R.L.®-TAXO) for the dangers of heat/drought and lightning. The risk classification is decided according to the highest of the three risks.	Possible damage due to heat/drought and lightning strikes are negligible.	Possible dan heat/drought an Substantial dam	mage due to d lightning is low. age very unlikely.	Moderate da expected due t and lightni In exceptional damage is	mage is to be o heat/drought ing strikes. ases, substantial s possible.	A relevant risk for heat/drought and lightning strikes has been identified. Substantial damage is possible.

» Earthquakes and subsidence

Earthquakes: shaking of the ground caused by tectonic processes or human activities; subsidence of the ground due to groundwater depletion

	very good	good	slightly above average	slightly below average	mediocre	poor
		2	3	4	5	6
Average annual expected value of damage as a percentage of reconstruction costs due to earthquakes	<0,05	0,05-0,1	0,1-0,4	0,4-0,7	0,7-1	>1
Risk of ground subsidence assessed on the basis of ground subsidence probability*	not relevant	low	not assigned	medium	not assigned	high
The risk classification is based on the highest of the two risks.	Possible damage caused by earthquakes and/or ground subsidence is negligible.	Possible damage from earthquakes and/or ground subsidence low. Substantial damage very unlikely.		Earthquakes a subsidence are moderate damag cases, substan poss	and/or ground e likely to cause ge. In exceptional ttaal damage is ible.	A relevant risk of earthquakes and/or ground subsidence has been identified. Substantial damage is possible.
	* Qualitative risk c	lassification (accor	rding to K.A.R.L.®-T	AXO) for the risk of	ground subsidence	

» Landslides

Downward movement of material on slopes, analysis of precipitation, earthquakes, geological conditions at a site

	very good	good 2	slightly above average 3	slightly below average 4	mediocre 5	poor 6
Risk of landslide over an area of 1 x 1 km	not relevant	low	not assigned	medium	not assigned	high
Qualitative risk classification (according to K.A.R.L.®-TAXO) for the landslide hazard.	There is no danger of landslides at the site.	The probability for landsli	y of occurrence des is low.	The probability for landslide	v of occurrence s is medium.	The probability of landslide occurrence is high.

Criteria group 2: property

Criteria group 2 is concerned with the affected property embedded in its surroundings and the property situation itself. These are the following quantitative (measurable) criteria as well as qualitative criteria to be assessed by the valuer using measurement standards:

» Social infrastructure

Accessibility of daycare centres and schools, local amenities, cultural and sports facilities, doctors and medical care facilities, senior citizens' facilities

» Ecological infrastructure

Biodiversity-promoting connected green spaces, cycle paths, e-charging stations, car sharing, connection to public transport

» Soil contamination

Contaminated sites and groundwater contamination, (risk of) use-related pollution or emissions, previous uses*, mining damages



» Property situation

Sealing of the property area, number of/possibilities for bicycle parking spaces, media connection (communication)

*Only for new buildings and/or projects (brownfield/greenfield)

Criteria group 3: buildings

Criteria group 3 looks at the sustainability of the building. The aim here is to focus on criteria that, in contrast to marketability, are aimed at long-term resilience, i.e. the ability to adapt to climatic and social changes:

» Architecture

Building design, building shape, adaptation to climate change, biodiversity in the building, social indicator: floor plan concept with quality of stay for health and well-being in the property

» Construction method

Physical building properties, building materials, recyclability of the building (cradle to cradle), pollutants in the building, recyclability of construction and demolition waste*

» Fit out

Technical fit out of the building, water consumption features, windows, renewable energies (electricity), heating/cooling,

» Third-party usability

Sufficient demand (subjective 3rd party usability), alternative use, easy conversion (objective 3rd party usability), social indicator: accessibility and/or lack of it

*Only for new buildings and/or projects (brownfield/greenfield)

Criteria group 4: energy

The "Energy" criteria group is the most meaningful criterion regarding ESG. Even though consumption depends on many of the criteria already mentioned (fittings, construction, etc.), final energy consumption/demand and CO_2 emissions play an important role in the scoring. The energy performance certificate – if available – helps to assess this. If the relevant data for the assessment is not available, alternative energy classification tools (e.g. from SkenData, Credium or HypZert Professional Group Energy & Environment) can help.

Preconditions

The model should be as simple as possible and be able to be filled with a small amount of data that is usually available for valuations. The following preconditions defined the framework for deriving the measurement standards:

- » Selected measured variables: Final energy parameters and CO₂ emissions.
- Final energy parameters can be taken from the energy performance certificate (in accordance with the Energy Savings Regulation (EnEV) or the Building Energy Act (GEG)); the sum of the building-related heat and electricity demand is decisive. The "user electricity" is not taken into account.
- » No distinction is made between energy demand and consumption.



- If no CO₂ rates are specified in the available data sets for the evaluation of criteria group 4 (energy), these were determined on the basis of the CO₂ emission factors according to the Building Energy Act (GEG).
- The measured variables for final energy and CO₂ emissions are taken into account with equal weighting.
- » The static time model is updated at suitable intervals.

Glossary

In the comprehensive glossary of the DFGE (Institute for Energy, Ecology and Economy) you will find many technical terms regarding sustainability explained in detail.

https://dfge.de/esg-glossar/

2 Special features of the different property types

HypZert ESG scoring for residential and office properties

The following table shows the four criteria groups for residential and office properties, including the individual criteria and their respective weighting:

		12.5%	Storm/tornado
		12.5%	Hail, heavy rain
		12.5%	Flooding, storm surge
	Environmental influences	12.5%	Emissions
15%	& climate risks	12.5%	Forest fire
		12.5%	Heat/drought, lightning strike
		12.5%	Earthquake/ground subsidence
		12.5%	Landslide
		25%	Social infrastructure
000/	Description	25%	Ecological infrastructure
20%	Property	20%	Soil pollution
		30%	Property situation
		25%	Architecture
050/	Desilding	30%	Construction method
25%	Building	35%	Fit out
		10%	Third-party usability
100/	_	50%	Final energy demand and consumption
40% Energy	Energy	50%	CO ₂ emissions

Challenges for the valuation of office properties in criteria group 4

We currently face the following challenges and hurdles when determining measurement standards for the energy quality of office properties: There is no public or official data collection on energy consumption in office buildings and, accordingly, no or hardly any public or official benchmarks. Furthermore, there are no energy efficiency classes for non-residential buildings in Germany from which conclusions could be drawn about the energy quality.

Furthermore, the office building stock is very heterogeneous in terms of building size (and therefore surface-to-volume ratio) and technical building fit out (e.g. air-conditioned versus non-air-conditioned). Accordingly, the energy requirements and consumption vary greatly.



Insofar as individual energy parameters for office buildings have been published (e.g. average values, TOP 15% benchmarks), these are not congruent. To summarise, the data situation for the office asset class is extremely unsatisfactory.

Example of measurement standards for residential properties

(without claiming to be exhaustive)

Measurement standards for residential property; criteria group 2: social infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Very good to go connections to cultural facilitie	ood social and s	Average connec and cultural fac	ction to social ilities	Moderate to poo to social and cu	or connection Itural facilities
 Daycare centre, amenities and do walking distance Cultural, sports a 	schools, local octors are within (max. 20 min.). and senior citizens'	 Daycare centres, amenities and do accessible by pu bicycle. 	schools, local octors are easily blic transport or	 The daycare cent amenities and do than 30 minutes a transport. 	re, schools, local ctors are more away by public
facilities are easi public transport o	ly accessible by or bicycle.	 Cultural, sports a facilities can be r minutes by public 	nd senior citizens' eached within 30 c transport.	 Cultural, sports an facilities are more away, even by pri 	nd senior citizens' than 30 minutes vate transport.

Measurement standards for residential properties; criteria group 2: ecological infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
The ecological i promotes biodiv reduction of CO	nfrastructure versity and the 2 emissions	The ecological has no significa biodiversity and of CO2 emission	infrastructure int impact on d the reduction ns	The ecological i leads to a loss o and has no app reducing CO2 e	nfrastructure of biodiversity roach to missions
 The green spaces the property are of designed to prom A well-developed paths and good p connections are a mobility. There are sufficient stations and share private transport. 	s on and around connected and note biodiversity. network of cycle ublic transport available for ent e-charging ing offers for	 The site and sum averagely greene partially suitable biodiversity. Public transport a networks are ava are gaps in terms space. E-charging static services are avai extent. 	rounding area are ed, but only for promoting and cycle path ilable, but there s of time and ons and car-sharing lable to a limited	 The property and are heavily to pre- Public transport a network are poor E-charging statio services are at be consuming to read 	surrounding area dominantly sealed. and cycle path ly developed. ns and car-sharing est very time- ich.

Measurement standards for residential properties; criteria group 2: soil pollution

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentall soil contaminat present	y hazardous ion is not	No environmenta soil contaminatio	ally hazardous on is known	Environmentally soil contaminati	hazardous on is known
 There is no conta expert opinion of sites is available of the property / not reveal any re contamination. T been affected by use-related pollu (DNSH 5) Contamination w which a contami available. Comp remediation and measures were documented. 	amination. An n contaminated and an inspection previous use did ecognisable signs of 'he property has not 's soil contamination/ tion in the past. vas present, for nated site report is rehensive protective carried out and	 There is no knowr The property has by soil contaminat pollution in the participation 	n contamination. not been affected tion/use-related st.	 There is contamin indications of con- contaminated site available. The pro- by particular soil related pollution i There are indicat contamination, bu documentation is conclusive staten about this. 	nation or tamination. A e report is not operty was affected contamination/use- n the past. ions of it no available. No nents can be made

Measurement standards for residential properties; criteria group 2: property situation

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
The property situation is conducive to sustainability goals		The property situation has no influence on the sustainability goals		The property situation runs counter to the sustainability goals	
 The outdoor facili to be assessed a sealed and suffic infiltration is guar A sufficient numb parking spaces a property or in the of the property. 	ities of the property re only marginally ient water anteed on site. er of bicycle re available on the immediate vicinity	 The outdoor facilito be assessed a average and sufficient infiltration is hard site. Some bicycle pa available on the immediate vicinit 	lities of the property are sealed on ficient water Ily guaranteed on rking spaces are property or in the ty of the property.	 The outdoor faci to be assessed a completely seale water infiltration on site. There are no bic spaces on the pr immediate vicinit 	lities of the property are almost d and sufficient is not guaranteed ycle parking operty or in the ty of the property.
 The location has network infrastruc acceptable capac connection). The property and are barrier-free. 	a state-of-the-art cture with an city (fibre optic outdoor facilities	 The location has standard of netw slow transmissio (broadband). The property situ outdoor facilities barrier-free. 	a minimum ork connection with n rates ation and the are partially	 The property in of have a modern r infrastructure. The property and are not barrier-free 	uestion does not network d outdoor facilities ee.



Measurement standards for residential properties; criteria group 3: architecture

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-saving features	y friendly, g architectural	Average to gene average archited (environmental	erally below- ctural features friendliness)	Simple architect that no longer n requirements	ural features neet today's
 Green roof, gree inner courtyard Integrated nestin [DNSH2] All reler regard to resilien dimensioning of rainwater retention light wells above return valves in t storm clips for ro available Design lies betw squat cuboid (fav Passive utilisation View/wide view (greenery) Flexibly usable fl various stages o situations (detac extra-living apart 	n façade, green g boxes, bat boxes vant properties with the (above-average the drainage, on basin, doors and ground level, non- he wastewater, of tiles) are een cube and vourable A/V ratio) on of solar energy water, mountains, loor plans for f life and family hed house with ment)	 Potentially planta pitched roof, inne One or a few rele with regard to res Design resemble cuboid Time-limited pass solar energy View of buildings enforcement Floor plans with I various stages of situations (3-4-root) 	ble flat roof or flat r courtyard vant properties ilience are present s an elongated sive utilisation of with green imited flexibility for life and family om flat)	 Unplantable roof, Internal roof drain heating oil tank flucheavy rain or floo height, funnel-sha basement window The design is ang with several bays No utilisation of p energy View of commerce property or techni No flexibility in ter utilisation (1-roon Severely oversize room heights 	inner courtyard hage, risk of a bating up during ding, high building aped slope to v gular or a cuboid /projections assive solar hal or industrial fical infrastructure rms of floor plan h flat) ed/undersized

Measurement standards for residential properties; criteria group 3: construction method

very good	good	slightly above average slightly	ntly below average	mediocre	poor
1	2	3	4	5	6
Environmentall resource-saving features	y friendly, g architectural	Average to general average architectur (environmental frie	ly below- ral features ndliness)	Simple architect that no longer n requirements	tural features neet today's
 Green roof, gree inner courtyard Integrated nestin [DNSH2] All rele regard to resilier dimensioning of rainwater retentil light wells above return valves in t storm clips for ro available Design lies betw squat cuboid (far Passive utilisation View/wide view (greenery) Flexibly usable f various stages o situations (detace extra-living apart 	in façade, green ing boxes, bat boxes vant properties with ince (above-average the drainage, on basin, doors and ground level, non- the wastewater, bof tiles) are even cube and vourable A/V ratio) on of solar energy (water, mountains, loor plans for f life and family hed house with tment)	 Potentially plantable pitched roof, inner co One or a few relevan with regard to resilier Design resembles an cuboid Time-limited passive solar energy View of buildings with enforcement Floor plans with limite various stages of life situations (3-4-room for the situations (3-4-room for	flat roof or flat ourtyard t properties nee are present a elongated utilisation of n green ed flexibility for and family flat)	 Unplantable roof, Internal roof drain heating oil tank fl heavy rain or floo height, funnel-sha basement window The design is ang with several bays No utilisation of p energy View of commerce property or techn No flexibility in te utilisation (1-roon Severely oversize room heights 	inner courtyard nage, risk of a oating up during ding, high building aped slope to v gular or a cuboid /projections nassive solar sial or industrial ical infrastructure rms of floor plan n flat) ed/undersized

Measurement standards for residential properties; criteria group 3: fit out

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-saving	/ friendly, j fit out	Average to generate average fit out fe (environmental f	rally below- eatures riendliness)	Simple fit out fea longer meet toda requirements	atures that no ay's
 Windows with trig glazing, external Centralised contrasystem, decentrasystem Heating via fuel of production via clie electricity generasystem), heat pu or log heating, di Solar system for and/or central he PV system (with [DNSH3] Resourt the sanitary sector Rainwater and git 	ple-pane insulating sun protection rolled ventilation alised ventilation cell with hydrogen imate-neutral tion (e.g. PV mp, modern pellet strict heating DHW heating ating backup wallbox) rce-saving fittings in or	 Windows with dou insulating glazing, type windows Low-temperature l condensing boiler years old Single lever mixer, water volume cont button") 	ble-pane refurbished box- heating or heating up to 10 , toilet flush with trol ("economy	 Composite window windows Outdated low-tem heating via individ heating oil, gas), o without thermosta Hot water prepara instantaneous wa climate-neutral ele generation) Two-handle mixer toilet flush 	ws, single-glazed perature heating, lual stoves (coal, central heating t control tion via electric ter heater (without ectricity , unregulated

Measurement standards for residential properties; criteria group 3: third-party usability

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-conse subsequent util conversion	r friendly, rving isation or	Conditionally en friendly, resourd subsequent util conversion	nvironmentally ce-conserving isation or	Only very costly environmentally resource-conset subsequent utili conversion	y or impossible friendly, rving isation or
 Functional floor p Existing building used Barrier-free, low-internal developm plans (threshold-free ad 1.4 m, clear door straight flights of both sides) 	lan fabric can still be barrier access, hent and floor ccess, lift > 1.1 x width > 80 cm, stairs, handrails on	 Limited functiona Accessible development (multi-storey apares) with lift, but steps area, clear door wand 80 cm) 	l floor plan opment rtment building s in the entrance width between 69	 "very individually Considerable acc (multi-storey apar building/ETW on lift or lift stop only mezzanine floor, clear width, spira 	designed" villa eessibility issues rtment upper floor without on every second doors <69 cm I staircase in EFH)

	very g	ood	good	slig	htly above average	slightly below average	mediocre	2	poor	
	1		2		3	4	5		6	
	very good	go	od	slightly abo	ove average	slightly below average	mediocre	ро	or	Weight
Energy efficiency class	A+	А	В	С	D	Е	F	G	Н	
*	30						200	250	>250	
Final energy (kWh/sqm/a)	<=30	>30 – 50	>50 – 75	>75 – 100	>100 – 130	>130 – 160	>160 - 200	>200 – 250	>250	50%
**	7,2				31,2		48	60	60	
CO2 emissions (kg/sqm/a)	<=7,2	>7,2 – 12	>12 – 18	>18 – 24	>24 – 31,2	>31,2-38,4	>38,4-48	>48 - 60	>60	50%
	Good, lo energy c	ng-term ma quality and l emissions	arketable low CO2	Ave av	rage energy c erage CO2 er	quality and missions	Problematio CO2 emi	c energy quali ssions in the l	ity and high long term	
	• Classificati	on Maximum	alue accordir	ng to the Germa	n Building Energy	Act (Gebäudeenergie	-Gesetz)			

Measurement standards for residential properties; criteria group 4: energy

** CO2 emission factor natural gas according to German Building Energy Act (Gebäudeenergie-Gesetz) 0.24 kg/kWh CO2 emissions (kg/sqm/a)

Example of measurement standards for office properties

(without claiming to be exhaustive)

Measurement standards for office properties; criteria group 2: social infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Very good to go connections to and service pro short-term need	ood social facilities widers for ds	Average connect facilities and se for short-term n	ction to social rvice providers eeds	Moderate to poo to social facilitie providers for sh	or connections es and service ort-term needs
 Restaurants, loc providers, doctor day care centre walking distance minutes). 	al shops, service rs, a gym and a are all within (max. 10	 Restaurants, loca providers, a gym centre are easily public transport o 	al shops, service and daycare accessible by or bike.	 Restaurants, loca providers, a gym centre are more t away by public tra 	al shops, service and daycare han 30 minutes ansport.

Measurement standards for office properties; criteria group 2: ecological infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
The ecological infr promotes biodiver reduction of CO2 e	astructure sity and the emissions	The ecological in has no significa biodiversity and of CO2 emission	nfrastructure nt impact on I the reduction Is	The ecological leads to a loss and has no app reducing CO2 e	infrastructure of biodiversity roach to missions
 The green spaces of the property are network designed to promote [DNSH6] A well-developed ne paths and good public connections are avail mobility. There are sufficient of stations and sharing private transport. 	n and around vorked and biodiversity. twork of cycle ic transport ilable for e-charging options for	 The site and surraveragely greener partially suitable to biodiversity. Public transport an etworks are ava are gaps in terms space. E-charging station services are avail extent. 	ounding area are ed, but only for promoting and cycle path ilable, but there s of time and ns and car sharing lable to a limited	 The property and are heavily to pre- sealed. Public transport a network are poor E-charging static services are at b consuming to real 	a surrounding area edominantly and cycle path rly developed. ons and car sharing est very time- ach.

Measurement standards for office properties; criteria group 2: soil pollution

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentall soil contaminat present	y hazardous ion is not	No environment soil contaminati	ally hazardous on is known	Environmentally soil contaminati	/ hazardous on is known
 There is no contact contaminated site and an inspection property/previous recognisable sig contamination. T not been affected contamination. 	amination. A te report is available n of the s use revealed no ns of 'he property has d by soil se-related	 There is no know The property has by soil contamina pollution caused l 	n contamination. not been affected ation/use-related by use in the past	 There is contami indications of cor contaminated site available. In the was affected by p contamination/us contamination in There are indicat 	nation or ntamination. A e report is not past, the property particular soil ee-related the past. ions of
 Contamination w which a contami available. Comp remediation and measures were documented. 	vas present, for nated site report is rehensive protective carried out and			contamination, bu documentation is conclusive stater about this.	ut no : available. No nents can be made

Measurement standards for office properties; criteria group 2: property situation

very good	good	slightly above average	slightly below average		mediocre	poor
1	2	3	4		5	6
The property si conducive to si and inclusion g	ituation is ustainability joals	The property si influence on the and inclusion g	tuation has no e sustainability loals	Th co an	e property sit unter to the s d inclusion g	uation runs ustainability oals
 The outdoor fact to be assessed a sealed and suffice is guaranteed or A sufficient num 	lities of the property are only marginally cient water seepage n site. ber of bicycle	 The outdoor faci to be assessed a average and suf infiltration is hard site. 	lities of the property are sealed on ficient water dly guaranteed on	■ T te c v c	The outdoor facil o be assessed a completely seale water infiltration i on site.	ities of the property re almost d and sufficient s not guaranteed
parking spaces a property or in the of the property.	are available on the e immediate vicinity	 Some bicycle pa available on the immediate vicinit 	rking spaces are property or in the ty of the property.	= T s ii	There are no bicy spaces on the pro mmediate vicinity	vcle parking operty or in the y of the property.
 The property and are barrier-free. 	d outdoor facilities	 The property situ outdoor facilities barrier-free. 	uation and the are partially	= T c fi	The property situ putdoor facilities ree.	ation and the are not barrier-

Measurement standards for office properties; criteria group 3: architecture

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-saving features	y friendly, g architectural	Average to generate average archite (environmental	erally below- ctural features friendliness)	Simple architectu that no longer mo requirements	ural features eet today's
 Green roof, gree inner courtyard Integrated nestin [DNSH2] All relevent regard to resilient dimensioning of the rainwater retention light wells above return valves in the storm clips for ro- available Design lies betwee squat cuboid (A/V) Passive utilisation View/wide view (greenery) Flexibly usable fill 	n façade, green g boxes, bat boxes vant properties with ice (above-average the drainage, on basin, doors and ground level, non- he wastewater, of tiles) are een cube and V ratio) in of solar energy water, mountains, oor plans for	 Potentially planta pitched roof, inne One or a few rele with regard to res average dimensi drainage, rainwa basins, doors an ground level, nor the wastewater, s tiles) are available Design resemble cuboid Time-limited pass energy View of buildings enforcement Limited flexible fl varieur office and 	able flat roof or flat er courtyard evant properties silience (above- oning of the ter retention d light wells above n-return valves in storm clips for roof le es an elongated sive use of solar s with green	 Unplantable roof, i Internal roof draina heating oil tank flo heavy rain or flood height, funnel-shap basement window The design is angu with several bays/p No utilisation of parenergy View of commercia properties or techr No flexibility in terr utilisation 	nner courtyard age, risk of a ating up during ling, high building ped slope to ular or a cuboid projections assive solar al or industrial nical infrastructure ms of floor plan



Measurement standards for office properties; criteria group 3: construction method

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-saving the construction	y friendly, g features of n method	Average to below characteristics of construction me	v-average of the thod	Simple construct that no longer r requirements	ction features neet today's
 Blower door test exchange rate 3/h or < 1.5/h v system Insulation made materials, untreated U-value from EN 2002) Easily recyclable easy to dispose of cycle (untreated natural fibres) Use of recycled of plaster [DNSH5] No hard [DNSH5] No hard [DNSH5] No hard [DNSH4] for new 70 % of the non- construction and generated on the must be reused of 	results in air with ventilation from recycled ted natural fibres EV (1 February e materials that are of during their life wood, steel, clay, concrete and mful substances buildings: at least hazardous demolition waste e construction site or recycled	 Blower door test r exchange rate of 3 Insulation with art (KMF) produced a polystyrene U-value in accord Thermal Insulation 1 November 1977 Recyclable mater masonry) Harmful substanc installation is perr based materials c formaldehyde labor sealant containing 	esults in an air 3 to 6/h ificial mineral fibre fiter 2000; ance with the n Ordinance (from) ials (concrete, es whose nitted (wood- ontaining elled "E", parquet g solvents)	 Blower door test exchange rate > unplastered mas Insulation with ar (KMF) produced missing insulatio ceiling or roof Composite buildi are difficult or im separate (externa insulation compo Pollutants whose longer permitted asbestos) 	results in air 6/h, interior onry exterior walls tificial mineral fibre before 2000; n of the top storey ng materials that possible to al thermal bsite system) ⇒ installation is no (PCB, lead,

Measurement standards for office properties; criteria group 3: fit out

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-saving features	/ friendly, j fit out	Average to belo out features (en friendliness)	w-average fit wironmental	Simple fit out fe longer meet tod requirements	atures that no ay's
 Windows with trip glazing, external 	ble-pane insulating sun protection	 Windows with do insulating glazing 	ouble-pane J	 Composite windo without thermal b 	w, metal frame reak
 Central air condit Heating via fuel c 	ioning cell with hvdrogen	 Central partial air ventilation syster 	r conditioning, m	 Outdated low-ten (heating oil, gas), 	nperature heating central heating
production via cli electricity genera system), heat pu heating, district c	mate-neutral tion (e.g. PV mp, district ooling	 Low-temperature condensing boile years old 	e heating or er heating up to 10	without thermosta Two-handle mixe toilet flush	at control r, unregulated
 Solar system for and/or central he 	DHW heating ating backup	instantaneous wa climate-neutral e	aton via electric ater heater (without lectricity		
PV system		generation)			
[DNSH3] Resourt the sanitary sector	ce-saving fittings in or	 Single lever mixe water volume con button") 	er, toilet flush with ntrol ("economy		
Rainwater and gr	rey water utilisation	button)			
 Wallboxes 					



Measurement standards for office properties; criteria group 3: third-party usability

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally resource-conse subsequent util conversion	/ friendly, rving isation or	Conditionally er friendly, resourc subsequent utili conversion	vironmentally e-conserving sation or	Only very costly environmentally resource-conser subsequent utili conversion	r or impossible friendly, rving sation or
 Functional floor p single and multi- Technical infrastr premises for can use provided Barrier-free, low- internal developm plans (threshold-free a 1.4 m, clear door straight flights of both sides) 	olans, suitable for tenants ructure and teen with multiple barrier access, nent and floor ccess, lift > 1.1 x width > 80 cm, stairs, handrails on	 Single-tenant floo only be converted floor plans with constructural effort Accessible develor (lift but steps in the clear door width be cm) 	or plans that can I into multi-tenant considerable opment ne entrance area, petween 69 and 80	 Floor plans speci owner. Significant barrier (without lift or lift second mezzanin cm clear width) 	ally tailored to the -free accessibility stop only on every e floor, doors < 69

Measurement standards for office properties; criteria group 4: energy

	very good	good	slightly above average	slightly below average	mediocre	poor	Weight
Final energy (kWh/sqm/a)	<=75	>75 – 110	>110 – 150	>150 – 200	>200 – 275	>275	50%
CO2 emissions (kg/sqm/a)	<=25	>25 – 37	>37 – 50	>50 – 67	>67 – 92	>92	50%
	Good, long-term marketable energy quality and low CO2 emissions		Average ener average CO	gy quality and 2 emissions	Problematic en high CO2 emiss te	ergy quality and sions in the long rm	

HypZert ESG scoring for local supply properties

Due to the heterogeneous structure of the German retail market and the buildings assigned to the individual types of business, as well as the number of analysable energy performance certificates available to our professional group, this publication is deliberately limited exclusively to the sub-sector of local supply properties.

The following table shows the four criteria groups for local supply properties, including the individual criteria and their respective weighting:

		12.5%	Storm/tornado
		12.5%	Hail, heavy rain
		12.5%	Flooding, storm surge
150/	Environmental influ-	12.5%	Emissions
15%	ences & climate risks	12.5%	Forest fire
		12.5%	Heat/drought, lightning strike
		12.5%	Earthquake/ground subsidence
		12.5%	Landslide
		20%	Social infrastructure
259/	Property	30%	Ecological infrastructure
23%		20%	Soil pollution
		30%	Property situation
		25%	Architecture
200/	Puilding	30%	Construction method
20%	Building	30%	Fit out
		15%	Third-party usability
400/	Francis	50%	Final energy demand and consumption
40%	Energy	50%	CO ₂ emissions

Challenges in the assessment of local supply properties

We currently face the following challenges and hurdles when determining measurement standards for the energy quality of retail properties: There is no public or official data collection on energy demand or energy consumption for retail properties and, accordingly, no or hardly any public or official benchmarks. Furthermore, there are no energy efficiency classes for non-residential buildings in Germany from which conclusions could be drawn about the energy quality.



Furthermore, the building stock is very heterogeneous depending on the different types of business in terms of building size, property utilisation (buildings versus open spaces or outdoor facilities) and the technical building equipment. Accordingly, energy requirements and consumption vary greatly depending on the type of business.

Nevertheless, there are similarities between the most widespread local shopping centres and food-anchored properties, from which generally applicable standards and benchmarks can be derived. Specifically, these are the following generally free-standing business types, which are defined by the professional group in its study 'Valuation of retail properties' (as at April 2023) in Fig. 2.3:

- » Food markets
- » Drugstores
- » Speciality stores (up to 5,000 m² sales area)
- » Local supply centres

With a sales area of 5,000 m² or more, retail properties, particularly multi-storey or mallbased types of business, are considered more individually, so that measurement standards can only serve as a guide or be applied by analogy.

Special features of local supply in criteria group 2: property

Criteria group 2 is concerned with the property in question embedded in its surroundings and the property situation itself. These are the following quantitative (measurable) criteria as well as qualitative criteria to be assessed by the valuer using the measurement standards:

» Social infrastructure

Location in a residential area, at transport hubs and other frequented locations – accessibility for customers in the catchment area – mixed use at the location, e.g. with other retail offerings (one-stop shopping) and/or medical care facilities – meeting point function, e.g. through on-site catering – outdoor space quality (marketplace character)

» Ecological infrastructure

Connection to the catchment area's cycle path network – connection to public transport e-charging points (in public spaces) – connected green spaces that promote biodiversity

» Soil pollution

Contaminated sites and groundwater contamination – (risk of) use-related pollution or emissions – previous uses (for new buildings/projects)

» Property situation

Sealing of the land – bicycle parking spaces – e-charging stations (on the site) – media connection-communication – outdoor landscaping that supports biodiversity

Special features of local supply in criteria group 4: energy

A data set of over 300 properties for which energy performance certificate data was available was used to derive these measurement standards. Measurement standards were derived for the parameters final energy and CO₂ emissions. In accordance with the system of energy performance certificates specified in the Building Energy Act (GEG) and its predecessor, the



Energy Savings Ordinance (EnEV) (regardless of whether it is an energy demand or consumption certificate), the final energy parameters for heat and electricity only include the energy required to operate the building, but not the user-specific electricity demand. Where CO_2 emission values are not shown in the data set in individual cases, these were derived using the CO_2 emission factors specified in the Building Energy Act.

Exemplary measurement standards for local supply properties

(without claiming to be exhaustive)

Measurement standards for local supply properties; criteria group 2: social infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
(Very) good connections to social and cultural facilities as well as service providers for short-term needs		Average connection to social and cultural facilities and service providers for shortterm needs		Moderate/poor connection to social and cultural facilities and service providers for shortterm needs	
 Short distances location with g connections fo customers in th Marketplace ch in a local suppl mixed use (var medical care, c services, gastro areas with recr Barrier-free act approachability 	s: integrated ood to very good r residents and ne catchment area naracter: location y center with ious retail uses, other social onomy, outdoor eational quality) cess and	 Peripheral loca connections Location with v Bake shop/café Property is the location in the Limited accessi access and app 	tion with average various retail uses with seating only local supply rural area ibility in terms of proachability	 Moderately to plocation; only a Location with response (supermarket/control by store) in solid without addition No barrier-free approachability 	poorly connected ccessible by car etail use discounter/specia tary location anal offerings access and

Measurement standards for local supply properties; criteria group 2: ecological infrastructure

very good good	slightly above average	slightly below average	mediocre	poor
1 2	3	4	5	6
The ecological infrastructure promotes biodiversity and the reduction of CO ₂ emissions	The ecological infrastructure has no significant impact on biodiversity and the reduction of CO ₂ emissions		The ecological infrastructure leads to the loss of biodiversity and has no effect reducing CO ₂ emissions	
 Good to very good public transport connections Good to very good network of cycle paths E-charging stations available in public spaces Green spaces available to promote biodiversity 	 Average connect transport Partially access the cycle path Limited availab charging station spaces Green spaces to 	ction to public ible by bike/on ility of e- ns in public o promote	 Moderate to portransport connections No cycle paths accessible via b No e-charging sin public spaces No green space biodiversity 	oor public ections available, only ousy roads stations available s es to promote

Measurement standards for local supply properties; criteria group 2: soil contamination

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally hazardous soil contamination does not exist		No environmenta soil contaminatio	ally hazardous on is known	Environmentally contamination is	hazardous soil known
 The property h affected by soil contamination, pollution in the Contaminated s available or an property and p give no recogn contamination. Contamination which a contam report is availa protective mea comprehensive and verified. 	as not been /use-related e past. [DNSH5] is not present. A site report is inspection of the revious use(s) izable signs of was present for ninated site ble. Removal and isures have been ely carried out	There is no kno contamination. has not been at contamination/ pollution in the	wn The property ffected by soil (use-related past.	 There is contantindications of contaminated savailable. The property has by particular so contamination/pollution in the There are indication, documents are conclusive state made about this 	nination or ontamination. A ite report is not as been affected iil 'use-related past. ations of but no available. No ements can be is.

Measurement standards for local supply properties; criteria group 2: property situation

very good	good	slightly above average	slightly below average	mediocre	poor	
1	2	3	4	5	6	
The property situation is conducive to sustainability and inclusion goals		The property situation has no influence on sustainability and inclusion goals		The property situation prevents the realization of sustainability and inclusion goals		
 There are suffic water infiltratio are broken up b strips/green isla Numerous bicyd are available on in the immedial of which are co The legal requir charging statior The location ha art network infi acceptable tran (fiber optic con The property its facilities are based 	ient areas for n; parking areas by green ands. cle parking spaces of the property or te vicinity, some vered. rements for e- ns are met. s a state-of-the- rastructure with smission capacity nection). self and outdoor crier-free.	 Areas for water partially availab are not completed A sufficient num parking spaces the property or vicinity. The site has a m of network comp transmission rates The property its outdoor facilities barrier-free. 	infiltration are le, parking areas tely sealed. her of bicycle are available on in the immediate ninimum standard nection with slow tes (broadband). self and the es are partially	 The outdoor fac (almost) comple sufficient water guaranteed on s There are no or parking spaces There are no e- available. The property its any modern net infrastructure. The property its outdoor facilities free. 	cilities are etely sealed, and supply is not site. too few bicycle on the property. charging points self does not offer twork self and the es are not barrier-	

Measurement standards for local supply properties; criteria group 3: architecture

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, resource-saving architecture		Average architec friendliness)	ture (eco-	Simple architector longer meets too requirements	ure that no lay's
 Green roof, gree gardening All relevant pro regard to resilie average drainag rainwater reter wells above gro return valves in are available. [I Design lies bety squat cuboid (fr volume ratio) Integrated nest boxes Adaptable designed 	en façade, urban perties with ence (above- ge dimensions, ition basins, light bund level, non- the wastewater) DNSH2] ween cube and avorable area-to- ing boxes and bat gn (divisibility)	 Roof partially gl Potentially plan flat pitched roo One or a few re terms of resilien Design resembl cuboid Limited divisibil 	reened table flat roof or f levant features in nce present es an elongated ity	 Unused roof ard Unplantable roof Internal roof dr heating oil tank during heavy ra high building heavy shaped slope to window Building shape cuboid with sev porches No flexibility in plan utilization, possible Severely oversiz room heights 	eas (no greenery) of ainage, risk of a floating up in or flooding, eight, funnel- b basement is angular or a reral bays or terms of floor no divisibility zed/undersized

Measurement standards for local supply properties; criteria group 3: construction method

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, resource-saving construction method		Average construction (environmental friendliness)		Simple design that no longer meets today's requirements	
 Energetically u building condit construction o modernized), U Energy Savings (01/02/2002) Insulation made materials or un fibers Easily recyclab are easy to dis the life cycle (u steel, clay, nate Cradle to Cradl No harmful sul 	p-to-date tion (new r extensively J-value meets Regulation e from recycled threated natural le materials that pose of during intreated wood, ural fibers) > e ostances [DNSH5]	 Insulation with fibers produced polystyrene U-value in acco Thermal Insula (from 01/11/19) Recyclable mat masonry) Pollutants who permitted (woo materials conta formaldehyde y 	artificial mineral d after 2000; ordance with the tion Ordinance 977) cerials (concrete, se installation is od-based aining with "E" label)	 No contempora efficient buildir Exterior mason plastered on th Insulation with fibers produced lack of insulation floor ceiling or Composite buil that are difficul to separate (ex insulation composite) Pollutants who no longer permosite 	ary energy- ng condition ary walls not e inside artificial mineral d before 2000; on of the top roof ding materials It or impossible ternal thermal posite system) se installation is hitted (PCB, lead,

Measurement standards for local supply properties; criteria group 3: fit out

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, resource-saving fit out		Average fit out (environmental friendliness)		Simple fit out that no longer meets today's requirements	
 Ventilation and with integrated Heating via fue neutral electric heat pump Rainwater and utilization Photovoltaic sy self-consumpti parking lot, fac Windows with insulating glazi protection Resource-savin sanitary area [[cooling system I heat recovery I cell, climate- ity generation, gray water stem (PV) for on (on roof, ade) triple-pane ng, external sun g fittings in the DNSH3]	 Conventional resystem up to 10 Windows with insulating glazin Low-temperatu condensing boi years old Photovoltaic sy electricity is exit the grid 	efrigeration 0 years old double-pane ng ure heating or iler up to 10 stem exists, clusively fed into	 Refrigeration sy 10 years Heating with fo Composite wing glazed windows No photovoltaid 	vstem older than ossil fuels dows, single- s c system

Measurement standards for local supply properties; criteria group 3: third-party usability

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, resource-saving subsequent use or conversion		Eco-friendly to a limited extent, resource-conserving subsequent use or conversion		Only very costly or not at all possible eco-friendly, resource- conserving reuse or conversion	
 Building condit technology can changing user r Flexible floor pl Barrier-free or access, internal floor plans 	ion and be adapted to requirements an concept low-barrier circulation and	 Building fabric and technology can only be adapted with great effort Limited flexibility in the basic floor plan concept Barrier-prone development Conversi possible Floor pla to chang effort Conversi possible Floor pla to chang effort 		 Conversion har possible / econ Floor plan cann to change or or effort Considerable ar problems 	dly or not omical ot or is difficult nly with great ccessibility

Measurement standards for local supply properties; criteria group 4: energy



HypZert ESG scoring for logistics properties

The following table shows the four criteria groups for logistics properties, including the individual criteria and their respective weighting:

		12.5%	Storm/tornado
		12.5%	Hail, heavy rain
		12.5%	Flooding, storm surge
450/	Environmental influ-	12.5%	Emissions
15%	ences & climate risks	12.5%	Forest fire
		12.5%	Heat/drought, lightning strike
		12.5%	Earthquake/ground subsidence
		12.5%	Landslide
		35%	Social infrastructure
250/	Property	25%	Ecological infrastructure
23%		15%	Soil pollution
		25%	Property situation
		20%	Architecture
200/	Duilding	25%	Construction method
20%	Building	25%	Fit out
		30%	Third-party usability
400/	-	50%	Final energy demand and consumption
40% I	Energy	50%	CO ₂ emissions

Special features of logistics properties in criteria group 2: property

Criteria group 2 is concerned with the respective property within its surroundings and the property situation itself. These are the following quantitative (measurable) criteria as well as qualitative criteria to be assessed by the valuer on the basis of the measurement standards:

» Transport infrastructure

Number of local roads and stops – distance to the motorway network, airport, railway or seaport – connection to public transport – accessibility of the location on cycle paths – filling stations and e-charging stations – parking situation – catering facilities or supply offers – integration into the urban environment

» Ecological infrastructure

Connected green spaces and small biotopes that promote biodiversity – degree of sealing



» Soil contamination

Contaminated sites and groundwater contamination – risk of use-related pollution or emissions and previous use*

Property situation Employee car parks (for bicycles and cars) – utilities (energy and media) – accessibility and break facilities

* Only for new buildings or construction projects (brownfield/greenfield).

Criteria group 4: energy – challenges for the assessment of logistics properties

We currently face the following challenges and hurdles when determining measurement standards for the energy quality of logistics properties:

- There is no public or official data collection on energy consumption in logistics buildings and, accordingly, no or hardly any public or official benchmarks. In addition, there are currently no energy efficiency classes for non-residential buildings in Germany from which conclusions could be drawn about the energy quality.
- » Furthermore, the logistics building stock is heterogeneous in terms of building size and technical building equipment (e.g. heated, air-conditioned, cold storage). Accordingly, energy requirements and consumption vary greatly. The fundamentally lower energy demand and consumption of logistics properties compared to other asset classes is recognised by the weighting of the ESG scoring.
- Insofar as individual energy indicators for logistics buildings have been published (e.g. average values, TOP 15% benchmarks), these are not directly comparable. This categorisation can serve as a basis for assessment if the owners do not provide their own classification of the energy parameters (e.g. according to the BVI method* or the Fraunhofer model).

To summarise, it must be noted that the public data situation for the logistics asset class is currently intransparent.

* https://www.bvi.de/uploads/tx_bvibcenter/BVI_2015_01_BVI_Methode.pdf#:~:text=BVI% 20Methode%20beruht%20auf%20der%20%E2%80%9Etime%20weighted%20rate%20of

Special premises for logistics properties

The model should be as simple as possible and be able to be filled with the limited data generally available for valuations. The following premises defined the framework for deriving the measurement standards:

- Energy performance certificates were analysed on the basis of a separate statistical survey. The classification of logistics properties is based on a sufficient internal database. Valid energy performance certificates for logistics properties up to the year 2023 form the data basis for the statistical survey. The majority of the logistics properties analysed are heated logistics buildings.
- » A 'one-size-fits-all' approach is chosen, which does not differentiate between propertyspecific features of the individual logistics property types (e.g. refrigerated warehouse, parcel distribution centre, cold warehouse).



Exemplary measurement standards for logistics properties

(without claiming to be exhaustive)

Measurement standards for logistics real estate; criteria group 2: transport infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Good to very goo to the transport r mobility facilities	d connections network and	Average connection to the transport n mobility facilities	on etwork and	Moderate to poo from a transport perspective	or connections t and supply
 Convenient con short distance a the transportat (highway, rail co and seaport) 	nection (with and travel time) to ion network onnection, airport	 Average connect and travel time) transport netwo connection, airp seaport) 	tion (distance to the ork (highway, rail port and	 Unfavorable co (distance and transport network rail connection seaport) 	onnection travel time) to the vork (highway, no n, no airport or
 Few to no throus stopping points Good transport 	ugh roads without to the property infrastructure for	 Several through stops up to the Average transport 	roads with property ort	 Many through or restrictions restrictions) to 	roads with stops (road and usage the property
employees (pul cycle paths, par charging statior available Catering facilitie suppliers withir (maximum 15 r	blic transport, rking spaces, e- ns, filling stations) es and any local n walking distance ninutes) or	 Average transpor infrastructure for (public transport few parking spac stations, filling st available Catering facilities 	er employees t, cycle paths, ces, e-charging tations) es and local e reached by	Poor to no train infrastructure (public transport no parking spate employees, no stations, no fil available	nsport for employees ort, cycle paths, aces for o e-charging ling stations)
provided on site		bike (in a maximum o minutes)	num of 30	 No catering far suppliers acce maximum of 2 	cilities and local ssible by car (in a 0 minutes)
				 No local amen immediate vic property 	ities in the inity of the

Measurement standards for logistics real estate; criteria group 2: ecological infrastructure

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
The ecological infrastructure promotes biodiversity and the reduction of CO ₂ emissions		The ecological infrastructure has no significant impact on biodiversity and the reduction of CO ₂ emissions		The ecological infrastructure leads to the loss of biodiversity and has no effect on reducing CO ₂ emissions	
 The green space the property and promote biodix minimal disrup For mobility, the public transport and a well-developt of cycle paths. Charging and contrastructure for electromobility into the propertion 	es on and around re designed to versity with tion. here are good t connections eloped network able or r is integrated ty.	 The site and suchave an average greenery, but a suitable for probiodiversity. Public transport network are avare gaps in terms space. Property-integ and cable infra electromobility 	arrounding area ge amount of are only partially pmoting rt and cycle path vailable, but there ms of time and rated charging structure for y is limited.	 The property at area are heavily predominantly Public transpornetwork are pornetwork are pornetwork	nd surrounding y to heavily sealed. t and cycle path orly developed. rated charging structure for t is only available consuming

Measurement standards for logistics properties; criteria group 2: soil contamination

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally contamination of	/ hazardous soil loes not exist	No environmenta soil contaminatio	lly hazardous n is known	Environmentally contamination is	hazardous soil known
 The property has affected by soil related contam past. [DNSH5] (on the present. A distribution of the previous use(s) recognizable sign contamination. Contamination which a contamination which a contamination which a contamination and verified. The property has affected by soil related contamination past. 	as not been pollution/use- ination in the Contamination is contaminated ailable or an be property and give no gns of was present for hinated site ble. Removal and sures have been ly carried out as not been pollution/use- ination in the	 No contamination According to assign property was not soil pollution or contamination in the second se	on is known. sessments, the ot affected by use-related n the past.	 There is contantindications of contaminated savailable. The property huby particular so contamination/pollution in the There are indic contamination, documents are conclusive state made about this 	nination or ontamination. A site report is not as been affected oil (use-related e past. ations of but no available. No ements can be is.

Measurement standards for logistics properties; criteria group 2: property situation

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
The property situ conducive to sus inclusion goals	uation is tainability and	The property situation has no influence on the sustainability and inclusion goals		The property situation prevents the realization of sustainability and inclusion goals	
 The outdoor fa property to be only sealed for necessary area water infiltratic site. Rainwater reused in a con A sufficient nur and electrified spaces are avai employees on a the immediate property. There are suffic site for staff to The property h art network inf an acceptable t capacity (fiber connection). The property it outdoor facilitie free for employ customers. 	cilities of the assessed are the technically s and sufficient on is ensured on is collected and drolled manner. mber of bicycle car parking lable for the property or in vicinity of the cient areas on the take breaks. as a state-of-the- trastructure with transmission optic self and the es are barrier- yees, guests and	 The outdoor fac property to be v on average and i infiltration or co guaranteed to a on site. A limited numbe electrified car pa for employees a the property or immediate vicin property. There are few at property for stat The site has a m standard of netw with slow transr (broadband). The site situatio outdoor facilitie barrier-free. 	ilities of the ralue are sealed sufficient water llection is only limited extent er of bicycle and arking spaces re available on in the ity of the reas on the ff breaks. inimum work connection mission rates n and the s are partially	 The outdoor far property to be almost complet sufficient water retention is not site. There are no or bicycle and elect parking spaces on the property immediate vicin property. No space availabreaks. The property ir not offer a moor infrastructure. The property si outdoor facilitie barrier-free. 	cilities of the valued are tely sealed and r infiltration or t guaranteed on r only a few ctrified car for employees y or in the nity of the able for staff n question does dern network tuation and es are not

Measurement standards for logistics real estate; criteria group 3: architecture

very good good	slightly above average	slightly below average	mediocre	poor
1 2	3	4	5	6
Eco-friendly, resource-saving architecture	Average architec friendliness)	ture (eco-	Simple architectu longer meets tod requirements	ure that no lay's
 Optimized construction shap Sufficient structural reserves roof/façade use (e.g. photovoltaics, green roofs) Attractive façade design, use different materials in the faç design User requirements: areas highlighted structurally for e recognition by staff and visit Social and recreational areas with a recreation and well-be concept Use of daylight Separate social and sanitary facilities for staff and visitors/drivers Catering in the building (cafeteria) for a high proport of employees Biodiversity on the building (green façades/façades clad with natural materials), nest opportunities Holistic concept for rainwate fresh water and service wate use Safety concept for hazardous substances in place 	e Less optimized for Partial structur roof/façade usi photovoltaics, of Average façade uniform materi design User requirema areas highlight ors easy recognition visitors eing Social and recr with recreation concept partial Biodiversity on partially preser façades/ façade natural materia ion Concept for rai water and serv utilization parti	building shape ral reserves for e (e.g. roof greening) e design, use of ials for the façade ents: individual ed structurally for on by staff and eational areas n and well-being lly available the building nt (green es clad with als) inwater, fresh- rice water ially available for hazardous tially available	 Individual build No structural report façade use photovoltaics, g No façade desig User requirement without structur staff and visitor Social and recrease without recreate being concept No biodiversity (no green façade with natural mater and servit in place No safety concept substances avaitable 	ling shape eserves for e (e.g. green roofs) gn ents: areas ural emphasis for rs eational areas tion and well- r on the building des/façades clad aterials) nwater, fresh ice water use not ept for hazardous ilable

Measurement standards for logistics real estate; criteria group 3: construction method

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, resource-saving construction method		Average construction (environmental friendliness)		Simple design that no longer meets today's requirements	
 Energetically u building condit construction of modernized), U Energy Savings (01/02/2002) Insulation mad materials or un fibers Easily recyclabl are easy to dis the life cycle (u steel, clay, natu Cradle to Cradl No harmful sub 	p-to-date ion (new r extensively J-value meets Regulation e from recycled atreated natural e materials that pose of during intreated wood, ural fibers) > e ostances [DNSH5]	 Insulation with fibers produced polystyrene U-value in acco Thermal Insulat (from 01/11/19) Recyclable mat masonry) Pollutants who permitted (woo materials conta formaldehyde v 	artificial mineral d after 2000; ordance with the tion Ordinance 277) erials (concrete, se installation is od-based hining with "E" label)	 No contempora efficient buildir Exterior mason plastered on th Insulation with fibers produced lack of insulation floor ceiling or Composite buil that are difficul to separate (ex insulation composite Pollutants who no longer permasbestos) 	ary energy- ng condition ary walls not e inside artificial mineral d before 2000; on of the top roof ding materials It or impossible ternal thermal posite system) se installation is nitted (PCB, lead,

Measurement standards for logistics properties; criteria group 3: fit out

very good good		slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, reso out	ource-saving fit-	Average fit out (e friendliness)	nvironmental	Simple fit out the meets today's re	at no longer quirements
 Use of renewals PV, solar, wind, hydrogen H2), a consumption o to local users (r storage/transfe tenants (e.g. pr facilities, low-fl /H2 charging st and for employ charging station bikes) No use of fossil renewable energeothermal energeothermale energeothermal energeothermal ener	ble energies (e.g. , geothermal, at least for own r surplus transfer heighborhood) or tr both for ooduction oor vehicles, e- trations for trucks) rees (e.g. e- ns for cars and e- fuels, use of rgy sources (PV, ergy, solar d power) t/window strips evices ndoor g and ventilation trilize day and es gement system, ding technology d data he technical ructure (e.g. ng)) graywater	 Partial use of reienergies (e.g. PN geothermal energies) Use of fossil fuesaving technologic condensing boil combination wite energy sources Partial natural light strips, possibly videvices Partially energy-climate/heating concept Limited room climation vides avoing technology (modata collection of building infrastristic smartMoni-torin) Partial use of raie water 	newable V, solar, wind, rgy, hydrogen Is with energy- gy (e.g. ers), possibly in th renewable ghting/window with shading -saving indoor and ventilation imate control management ed building nitoring and of the technical ucture (e.g. ng)) inwater and grey	 No use of rene (e.g. PV, solar, geothermal, hy Use of fossil furenewable ene Limited natural ribbon window No energy-saviclimate/heating concept No room clima No building massystem or digit technology (modata collection building infrast No rainwater a utilization 	wable energies wind, /drogen H2) els without rgy sources l lighting/no /s ng indoor g and ventilation te control anagement ized building onitoring and of the technical :ructure) nd gray water

Measurement standards for logistics real estate; criteria group 3: third-party usability

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Eco-friendly, resource-saving subsequent use or conversion		Limited eco-friendly, resource- saving subsequent use or conversion		Only very costly or not possible eco-friendly, resource-saving reuse or conversion	
 Flexibly usable, function plan concepts (multi-term usability, access etc.) Sufficient criteria for subsequent use (see the by the professional groon logistics "Type sheets with figures from 2022/2021 Low costs for conversion light industrial, cold and freeze logistics) Barrier-free access 	nal floor enant up for vith key 3") on (e.g. d deep-	 Limited flexibility functional floor partially suitable tenant use Partial criteria fuse given (see the professional group "Type sheets with from 2022/2022 Medium effort the conversion (e.g. cold and deep-file Partially barrier 	ty of use or plan, only e for multi- or subsequent the study by the oup for logistics ith key figures 3") required for . light industrial, freeze logistics) -free access	 Individual or rig concepts (mult not possible, de Criteria for sub given to a limite the study by th group for logist with key figures 2022/2023") High costs for a (e.g. light indus frozen food log No barrier-free 	gid floor plan i-tenant usability elivery etc.) sequent use ed extent (see e professional ics "Type sheets s from reuse option strial, cold and istics) access



Measurement standards for logistics properties; criteria group 4: energy

2 Depending on company's internal regulations or available data, primary energy can also be used instead of final

energy. According to the assessment by the professional group for logistics, primary energy is approx. 20% higher than the final energy values.

HypZert GmbH

Georgenstraße 22 10117 Berlin Germany hypzert.de