



The greening of Europe's sheds

Europe's leading logistics developers are pulling out all the stops to meet ever tougher environmental, biodiversity and social requirements

BY MARIANNE KORTEWEG

Take a new logistics development anywhere in Europe, and it is likely to feature solar panels on the roof, LED lighting and heat pumps, in addition to electric vehicle charging points, rainwater harvesting systems, beehives, bird nesting boxes and wildflower areas. These elements are all part of what has become a standard list of ESG specifications for modern industrial buildings – and many are going beyond that.

Whether in response to increasingly stringent sustainability requirements from local authorities, investor pressure or end-user demands, Europe's warehouses are undergoing a green revolution.

As in other sectors, the intense focus on reducing carbon has got developers examining every aspect of a warehouse building and its operation to see where energy savings can be made. And it is not just the building itself that is under scrutiny: a growing focus on biodiversity and 'nature positivity' has also turned the spotlight on its immediate surroundings.

Details submitted to PropertyEU by the 18 developers which took part in our annual pan-European survey testify to this trend: the list of sustainability features on completed and planned projects is getting longer, while the certification levels achieved or targeted are getting higher (see list of top developments on p30).

From this year's submissions, it is clear that the lead-

'A holistic strategy to protect the climate, environment and biodiversity is now the necessary entry ticket for many cities and municipalities'

ers in the sector are continuing to push the boundaries. Some have already achieved carbon neutrality on certain projects, and are pursuing embodied carbon net zero accreditation for future developments. Others have delivered projects that are energy-positive, producing more (green) energy than they consume and giving back to the grid, or which incorporate cradle-to-cradle building principles to achieve full circularity.

In terms of environmental certification, a few have achieved BREEAM Outstanding or LEED Platinum, the highest levels possible, while many have attained BREEAM Excellent, LEED Gold or DGNB Gold, and a large number are pursuing BREEAM Very Good or higher as standard on future developments.

LONGER PROCEDURES

Asked whether the stricter sustainability requirements are affecting permitting procedures for projects, a num-

ber of developers indicate that lead times are taking longer. Prologis, for example, remarks that ‘the potential environmental impacts of industrial developments are weighted heavily during the entitlement cycle and is a much more complex and lengthy process versus what it was 3-5 years ago’.

Trammell Crow Company (TCC), a newcomer to the ranking this year, notes: ‘As planning and building regulations become more stringent in relation to minimum environmental/sustainability criteria, the time required to satisfy the planning conditions is getting longer. For example, it is now common for authorities to stipulate a minimum Biodiversity Net Gain percentage, or a minimum renewable energy percentage, or to impose a carbon offset levy based on operational energy use.’

Consequently, the firm says, ‘the studies and calculations needed can take a long time to produce, thus extending the consultation and determination period’.

Another example relates to the control of noise, air, light or below-ground pollution, where, according to TCC, ‘extremely detailed studies and mitigation measures have to be undertaken over extensive periods of time’.

‘As planning and building regulations become more stringent in relation to environmental criteria, the time required to satisfy the planning conditions is getting longer’

Says LCP: ‘All projects in Europe are subject to more stringent environmental assessments than before and more stringent building criteria, such as mandatory PV installations.’

Operating across several countries – as most players in our ranking do – brings with it different sets of challenges for different markets. Hines’ head of European logistics, Logan Smith, lists a number of ESG factors to consider when developing new logistics assets. In France, he says, ‘there are environmental assessment rules for flora and wildlife with more stringent expectations for preservation and displacement, causing a lengthened permitting process’.

In Ireland, mass timber buildings are limited to a maximum height of 11 metres, while in the Netherlands, there are increased fire safety requirements around solar panels on roofs. In Spain, all private non-residential buildings that have parking lots with more than 20 spaces must make one electric charger available for every 40 spaces. And in the UK, Smith points out, ‘there is a requirement

for a minimum of 10% biodiversity net gain on new developments, and increased ventilation of internal spaces’. In Germany, Verdion says it is seeing increasing and changing requirements related to ESG from municipalities that are leading to longer application periods and longer timescales before receiving permits. ‘We are engaging with municipalities at an early stage in order to mitigate this as much as possible,’ comments Simon Walter, executive director – investment management.

Gabriella Zepf, sustainability director at Segro, notes there are numerous examples of planning permission taking longer to obtain, but that there is no single reason for this. ‘It is largely a combination of new requirements or elevated importance on issues such as embodied carbon, social value, biodiversity etc, together with resourcing pressures in local authorities and local political decision-making.’

NITROGEN AND POWER ISSUES

Both Panattoni and Garbe report instances of grid capacity constraints when installing renewable energy sources on a development, which can lead to setbacks. Garbe says that in Germany, ‘it is possible that the photovoltaic (PV) plant cannot be connected to the grid after completion of the project, although the PV system is operational. This is due to the lack of capacity of the power grid’.

An issue peculiar to the Dutch market revolves around nitrogen emissions, which have become a politically hot topic affecting several sectors, including construction. Tougher norms mean all new development projects are subject to extra studies to determine the level of emissions being deposited on surrounding natural areas.

GLP, one of a number of developers active in the Netherlands, says nitrogen permitting has caused delays on at least one of its projects. ‘Due to conflicts in application between national and European legislation in this regard, there is a standstill in granting permits,’ the firm says. For its part, WDP says the extra assessments are having little impact on its Dutch activities, aside from a ‘minimal impact on timing’ for its ongoing pipeline in the Netherlands.

INCENTIVISING SUPPLIERS

NREP’s logistics real estate platform Logicens highlights as its biggest ESG challenge the ‘constant push’ to reduce CO₂ emissions across its supply chain and to verify its efforts through an Environmental Product Declaration (EPD) report. ‘The onus is on the investors and developers to incentivise and encourage suppliers to adopt more sustainable practices; we are gradually seeing more contractors ask for this, and hope to see a shift in focus from suppliers in time,’ says Erik Karlsson, business analyst at NREP Logicens.

A separate challenge, he says, is the higher cost of build-

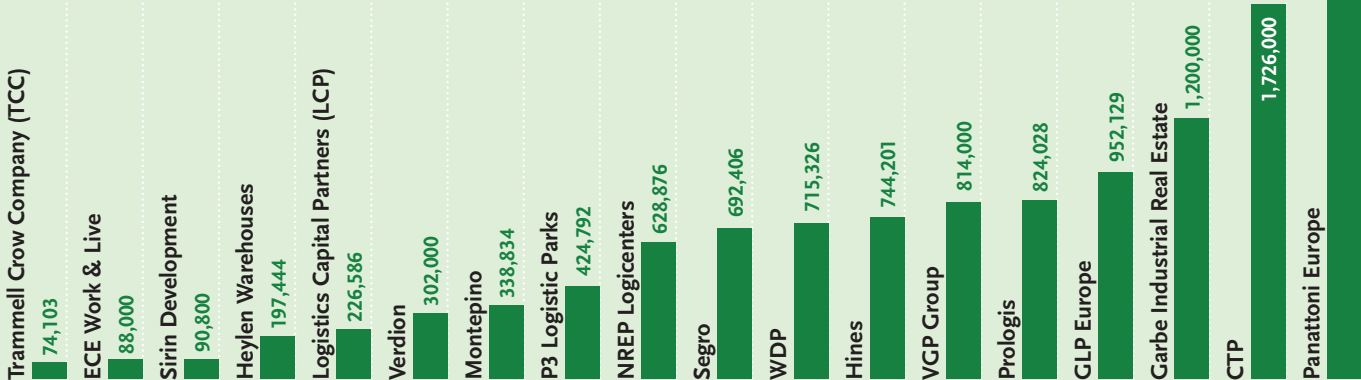
Top Logistics Developers

PROJECTS UNDER CONSTRUCTION*

More than 14 million m² of warehouse space is under construction across Europe, based on data provided by the 18 cross-border developers in our survey. Panattoni takes the lion's share at over 4 million m², followed by CTP (over 1.7 million m²) and Garbe Industrial Real Estate (1.2 million m²). In terms of investment value, Panattoni, CTP and Prologis lead the field. Together, the three developers have nearly €7.3 bn worth of projects under way, out of a total combined value of €12.6 bn. (Note: not all companies disclosed an investment value).

Investment value € mln	Number of projects
167	3
n/d	2
54	4
n/d	17
419	6
500	10
287	4
n/d	16
630	25
354	n/d
579	31
910	15
486	26
1,132	34
948	24
n/d	41
1,176	55
4,975	119
4,089,902	

INDUSTRIAL AND LOGISTICS SPACE UNDER CONSTRUCTION IN M²



*PROJECTS UNDER CONSTRUCTION ARE THOSE FOR WHICH ALL REQUISITE PERMITS HAVE BEEN OBTAINED AND ON WHICH CONSTRUCTION ACTIVITY HAS STARTED. INCLUDES GREENFIELD AND BROWNFIELD DEVELOPMENTS. THE MINIMUM TOTAL GLA FOR PROJECTS UNDER CONSTRUCTION IS 5,000 M².

ing with sustainable wood rather than steel, in addition to CO₂-reduced concrete which is also more expensive. 'Wider adoption will help drive down costs, and we also hope to see more occupiers show a greater interest in sustainability initiatives and place a higher value on net zero logistics assets,' Karlsson adds.

BIODIVERSITY TO THE FORE

Nearly all the developers in our survey agree that biodiversity is becoming increasingly important in new developments. Verdion's Walter remarks that 'municipalities want to see more information about biodiversity during the application process'.

In the UK, the Biodiversity Net Gain regulation, set to come into force in November this year, will be a key driver of momentum in this area. It will require a 10% net

'Developers recognise the importance of promoting community engagement as the right thing to do, as a nod to sustainability-focused tenants'

gain in biodiversity at development sites as a condition for gaining planning permission.

GLP says the regulation is 'a great example' of how planning procedures are responding to the increasing importance of nature protection and ecological diversity. 'Similar trends are now noticeable across Europe where

authorities are pushing the biodiversity agenda and incentivising developers to demonstrate positive impact on biodiversity and in some instances, alignment with EU Taxonomy,' the firm says.

On the Continent, biodiversity laws are based on EU directives such as the Habitat Directive and land use, land-use change and forestry (LULUCF) regulation. Biodiversity is another label being pursued by some developers, applicable to all urban projects.

Says Germany's ECE: 'A holistic strategy to protect the climate, environment and biodiversity is now the necessary entry ticket for many cities and municipalities.'

For its part, VGP states it has developed a strategy which prioritises parks in its portfolio with the highest biodiversity stake. This, it says, is because 'biodiversity is relevant not only for planning procedures but for stakeholders in general'.

'The onus is on investors and developers to incentivise and encourage suppliers to adopt more sustainable practices'

Many developers report using ecologists, landscape architects and biodiversity experts during the permitting, design and construction phases of a warehouse. These help with drawing up often elaborate 'greening concepts' to create diverse habitats for flora and fauna, such as flower meadows, native trees and shrubs, green facades or roofs, and green buffer zones.

Panattoni says its biodiversity 'universe' consists of around 150 species of trees, shrubs, and herbaceous plants. Its flower meadows are a mix of 50 plant species, while its landscaped lawns consist of seed mixtures of around 20 plant species. At GLP's Magnitude 314 development in Milton Keynes, UK, more than 27,000 trees were planted.

COMMUNITY ENGAGEMENT

Besides the 'E' of ESG, social value and community engagement are rising in prominence as the 'S' moves up the agenda for regulators, investors and occupiers alike. As Hines' Smith puts it: 'Developers recognise the importance of promoting community engagement as the right thing to do, as a nod to sustainability-focused tenants and to demonstrate corporate and fund-level commitments around the promotion of health and wellbeing for all stakeholders.'

In terms of health and wellbeing initiatives for ware-

house workers, a standard list appears to be emerging here too, with internal (technical) features including increased natural light, use of materials with low VOCs (Volatile Organic Compounds), CO₂ sensors and climate control systems. Outside amenities range from walkways and landscaped recreation areas to (electric) bicycle fleets and cycle paths.

Prologis is an early mover in the area of worker wellbeing, having been the first to adapt and adopt WELL certification – a global rating system that recognises buildings which support the health and wellbeing of their occupants – for industrial real estate. In Europe, the global giant has achieved WELL Platinum, the highest level, on two developments in the Netherlands, and is pursuing the label for future projects.

Community engagement, meanwhile, can take various forms. When launching new developments, it is becoming 'standard process' during the entitlement phase, says Prologis. Segro's Zepf observes that approaches differ per market. 'For example, in England, for community consultation there is greater emphasis on using digital tools (websites, social media etc) to engage with members of the community, in addition to the more traditional methods of public meetings,' she says.

Many developers are also rolling out community initiatives with longer term benefits. These range from expanding the local road infrastructure to supporting diverse educational, sports and cultural projects.

Panattoni, for example, was one of the main sponsors of a sports complex which opened last year in southern Poland, and which is home to a leading national football academy. And at GLP's vast Magna Park site in Leicestershire, UK, a new college dedicated to training people in areas such as supply chain management and warehouse operations opened last September. The Centre for Logistics Education and Research – or CLEAR – is being run by a local college and will have up to 1,000 students when fully operational.

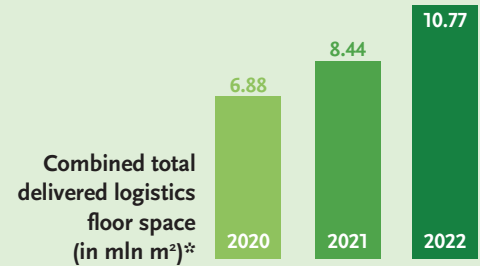
'The social aspects of ESG are essential for us,' says Gwyn Stubbings, senior planning director at GLP. 'We are constantly looking at ways to improve our social impact on local communities as well as promoting our social responsibility to our business partners. By engaging with local communities, we want to be an attentive citizen, respecting the voice of the local communities.'

CLEAR offers progression through different levels of qualification and learning, bringing career development opportunities to the local and wider community and helping GLP's customers grow their businesses, he adds. 'We have been delighted to help support the launch of this important new facility that will help train and develop the workforce needed for our UK logistics supply chain that underpins the UK economy.' ■

Top Logistics Developers

BASED ON COMPLETIONS 2020-2022

Panattoni leads our ranking of completed projects for the seventh year running, delivering more than 8 million m² of warehouse space over the last three years. CTP climbs to second place from fourth position in 2022, followed by VGP and Segro, with Prologis rounding out the top five. This year five developers completed more than 2 million m² each over the review period, two more than in 2022, while three players (GLP, WDP, P3) delivered in excess of 1 million m². Combined, the 17 companies which took part in this year's completed ranking delivered more than 26 million m² of industrial and logistics space across nearly 860 projects.



	Number of projects	Urban logistics** 2020-2022 m ²	Completed floor space 2020-2022 m ²
1 Panattoni Europe	302	1,297,904	8,043,495
2 CTP	143	2,231,000	2,524,000
3 VGP Group	97	187,895	2,324,000
4 Segro		484,854	2,314,284
5 Prologis	95	49,060	2,141,772
6 GLP Europe	70		1,848,614
7 WDP			1,394,263
8 P3 Logistic Parks	42	n/a	1,388,552
9 Garbe Industrial Real Estate			904,016
10 Logistics Capital Partners (LCP)	8	49,085	620,942
11 NREP Logicenters	22		610,878
12 Hines	12	52,583	499,905
13 Heylen Warehouses	41	187,180	451,172
14 Montepino		39,722	434,659
15 Verdion	17	152,977	347,503
16 ECE Work & Live	2		133,000
17 Sirin Development	6		110,200

* DELIVERED PROJECTS INCLUDE NEW SCHEMES, EXTENSIONS AND/OR REDEVELOPMENTS COMPLETED IN 2020-2022. THE MINIMUM TOTAL GLA FOR PROJECTS IS 5,000 M².

** URBAN LOGISTICS REFERS TO THE PHYSICAL PROPERTY ASSET NEEDED TO ENSURE THE LAST MILE LOGISTICS PROCESS CAN BE ACHIEVED (SOURCE: CBRE) SOURCE: PROPERTYEU RESEARCH

Projects on parade

We asked the participants in our ranking to select their standout developments in terms of ESG credentials. Here we present their top picks.

(in alphabetical order of company name)

ECE Work & Live

Logistik-Center Hamburg-Billbrook

STATUS Under construction
LOCATION Hamburg-Billbrook, Germany
SIZE ca. 24,500 m²
CERTIFICATION Aiming for DGNB Gold

ESG HIGHLIGHTS

Brownfield redevelopment featuring green roof on the office building, German efficiency house standard 40, PV system on the hall roof and integration of renewable raw materials.

Garbe Industrial Real Estate

Werne, Germany

STATUS Completed
LOCATION Werne (Unna district, North Rhine-Westphalia)
SIZE 148,500 m²
CERTIFICATION DGNB Gold

ESG HIGHLIGHTS

Concrete and asphalt were recycled after partial demolition; PV systems on the roofs; automatic metering of consumption data; LED lighting; charging stations for e-mobility; planting of a variety of trees; beehives.

Heylen Warehouses

Agora 21A Logistic Campus

STATUS Completed
LOCATION Roosendaal, Netherlands
SIZE 28,883 m²
CERTIFICATION BREEM Very Good

ESG HIGHLIGHTS

This redevelopment + new-build has highly insulated outer walls and low lighting consumption, due partly to the use of sensors.

GLP Europe

Magnitude 314

STATUS Completed
LOCATION Magna Park, Milton Keynes, UK
SIZE 29,182 m²
CERTIFICATION BREEM Excellent

ESG HIGHLIGHTS

This development was the first building to be officially verified as Net Zero Carbon for construction globally (in accordance with the UKGBC Framework) and contributes over 20% of the contract value towards social value in the local area. More than 27,000 trees were planted as part of the scheme.

Hines

Madrid, Spain

STATUS Under construction
LOCATION Madrid, Spain
SIZE 31,000 m²
CERTIFICATION Targeting minimum BREEM Excellent

ESG HIGHLIGHTS

The development will have 341 PV panels generating 228,813.5 kWh of photovoltaic energy annually; automatic meter reading (AMR) devices; zero waste to landfill; Life Cycle Assessment to measure life cycle environmental impacts and inform building design/materials choices. It will target a minimum 10% net gain in biodiversity.

LCP

Trecate Buildings A & B

STATUS Completed
LOCATION Trecate, Italy
SIZE 162,235 m²

END-USER Kering / XPO
END-INVESTOR DWS
CERTIFICATION LEED Platinum

ESG HIGHLIGHTS

LCP won the Award for Best European Logistics Development at Mipim 2022 for the scheme, which produces more (green) energy than it consumes. It was also the first carbon-neutral accredited building to be traded in an open-market process, setting a record breaking price in Italy.

Montepino

Parla

STATUS Completed
LOCATION Parla, Madrid (Spain)
SIZE 25,893 m²
CERTIFICATION LEED Platinum

ESG HIGHLIGHTS

The project was developed on a previously built plot, where priority was given to the refurbishment of the buildings and preserving as many materials as possible. Maximum energy and water efficiency was achieved following a renovation of the lighting, sanitation and plumbing systems. Its location close to public transport encourages sustainable mobility, and bicycle racks have been installed for cyclists, in addition to EV facilities. Green areas were revived using plant species with low water requirements that make it possible to dispense with irrigation, thus reducing water consumption.

NREP Logcenters

Triple Zero

STATUS Under construction
LOCATION Stockholm Bålsta
SIZE 21,000 m²
CERTIFICATION Targeting BREEM Outstanding + Noll CO₂

ESG HIGHLIGHTS

Logcenters' Triple Zero project is a testbed for achieving total carbon neutrality through the use of innovative building materials and techniques. For example, the conventional steel frame, walls and roof are set to be replaced with wooden structures. Logcenters has also begun to look to outer space for inspiration to help it reduce its carbon footprint.

P3 Logistic Parks

P3 Prague D11

STATUS Completed
LOCATION Prague, Czech Republic
SIZE 155,000 m² in 8 buildings
CERTIFICATION BREEAM Outstanding
ESG HIGHLIGHTS

P3 drew up a green concept to select the most suitable trees, shrubs and other flora for the development. The hall walls are fitted with green facades within which a butterfly meadow has been planted. Thermal self-sufficiency in one of the halls (through recycling heat from refrigerators and freezers) means it does not need to be connected to an external gas source. The park is served by several rainwater retention tanks.

Panattoni

Panattoni Park 's-Heerenberg

STATUS Completed
LOCATION 's-Heerenberg, Netherlands
SIZE 23,765 m²
END-USER Nunner Logistics
CERTIFICATION BREEAM Very Good
ESG HIGHLIGHTS

The distribution centre has been equipped with an innovative energy management system which combines solar energy and battery storage. This means it is not dependent on the electricity grid. The building features LED lighting, solar panels and presence detection sensors as well as water-saving sanitary systems. To encourage bicycle use, amenities include a safe and well-lit parking facility, and changing rooms with showers for staff who commute by bike.

Prologis

Park Moissy II DC1

STATUS Completed
LOCATION Paris, France
SIZE 100,751 m²
END-USER Monoprix
OWNER Prologis European Logistics Fund (PELF)
CERTIFICATION BREEAM Outstanding, WELL Silver, BiodiverCity approach
ESG HIGHLIGHTS

The project, which involved redeveloping a

brownfield site, was built with no gas connection and relies on design efficiencies, rooftop solar and borehole geothermal energy storage for heating, cooling and power. It was certified zero carbon by the International Living Future Institute (ILFI) on its construction and operation phases over a 50-year period and also achieved a 93.1% BREEAM score, the highest in France for the logistics sector.

Segro

Segro Park Tottenham

STATUS Completed
LOCATION Tottenham, London (UK)
SIZE 190,000 ft² (17,652 m²)
CERTIFICATION BREEAM Outstanding, EPC A+ and carbon-negative for the landlord's buildings in operation
ESG HIGHLIGHTS

Segro describes the park as the 'greenest urban industrial development in London'. It features expansive PV panels, EV charging points for cars and vans, and rainwater harvesting. The park has 2,000 sq ft (186 m²) of green walls and landscaped amenity spaces to create a stronger sense of wellbeing.

Trammell Crow Company

CORE Milton Keynes

STATUS Under construction
LOCATION Milton Keynes, UK
SIZE 337,976 ft² (31,399 m²)
CERTIFICATION Targeting BREEAM Excellent and EPC A rating

Verdion

Berlin, Germany

STATUS Under construction
LOCATION Ludwigsfelde, Berlin (Germany)
SIZE 62,000 m²
CERTIFICATION Targeting DGNB Platinum
ESG HIGHLIGHTS

Redevelopment of three units that form part of a five-asset complex acquired in 2022. The new buildings will incorporate renewable energy generation technology as part of reducing the site's overall energy consumption.

VGP

VGP Park Giessen am alten Flughafen

STATUS Under construction
LOCATION Giessen, Germany
SIZE ca. 250,000 m²
END-USER Zalando
CERTIFICATION Targeting DGNB Platinum
ESG HIGHLIGHTS

Green roof and facade; no gas connection; EU Taxonomy compliance; PV systems with own consumption, sustainable building operations; rainwater collection for sanitation and outdoor areas; e-mobility; heat pumps; CO₂ assessment.

WDP

Barry Callebaut Global Distribution Centre

STATUS Completed
LOCATION Lokeren, Belgium
SIZE 70,242 m²
END-USER Barry Callebaut
END-INVESTOR WDP
CERTIFICATION BREEAM Outstanding
ESG HIGHLIGHTS

Home to chocolate and cocoa products manufacturer Barry Callebaut's global distribution hub, the development is energy-positive thanks to the use of PV panels, a geothermic system for the offices, and heating pumps throughout the building. In addition to energy-efficient lighting, the elevators' brake energy is recovered and regenerated.

BREEAM rating system

		% score
Outstanding	★★★★★	≥85
Excellent	☆★★★★	≥70
Very good	☆☆★★★	≥55
Good	☆☆☆★★	≥45
Pass	☆☆☆☆★	≥30
Unclassified	☆☆☆☆☆	<30

SOURCE: BRE GROUP