# Be Good And Dare...

**ESG report 2023 | Business park** Blue Gate Antwerp Development nv



#### Be Good and Dare... | volume 2

ESG report 2023 | Business park Blue Gate Antwerp Development nv



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### 1. Be Good And Dare...

#### 1.1. Chairman's introduction

We are proud to present this second sustainability report for Blue Gate Antwerp Development (BGAD). In recent years, we have worked hard – together with our partners and stakeholders – to transform a former contaminated petroleum site into today's clean and liveable environment where people enjoy spending time and businesses find inspiration. The completion of remediation and infrastructure works marks a tipping point. It is a milestone that signals the beginning of a new phase in the development of Blue Gate Antwerp. The focus is shifting from site remediation to welcoming and assisting new businesses and constructing their future-proof business premises. This CSR report gives a clear account of the results achieved in this pivotal phase.

This triannual report gives an insight into the achievements of recent years, and offers an immediate glimpse into the future.

Now that the remediation of the contaminated soil is complete, the green corridor welcomes fauna and flora, and a number of companies and organisations are now operational in the first state-of-the-art business buildings; Flanders' first eco-effective business park with circular-built infrastructure is taking concrete shape.

#### It doesn't stop there.

This report features our double materiality matrix for the first time. An evolution grafted onto Europe's changing regulatory landscape. Today, we are gearing up, as best we can, for the rapidly evolving Corporate Sustainability Reporting Directive (CSRD) based on the EU Taxonomy. Within this promising transition, we want to take the lead and provide the necessary support to our establishments. 'Be Good and Dare' is and remains the key theme in BGAD's underlying framework of values.

We think realistically, dare to innovate and attach great importance to collaboration, because only then can we make an impact on a large scale. By sharing inspiring examples and practical insights, we hope to inspire potential establishments and offer other business parks a blueprint for transforming a sustainable future into reality for future generations. The resulting vibrant community around circularity will be a consequence of the way we develop.

We are happy to guide you through the progress of this unique development. The five strategic pillars that underpin our sustainable strategy have remained unchanged. So too has the connection to the Sustainable Development Goals (SDGs), which remains clear.

- To match and engage
- To build it
- To make it circular and CO<sub>2</sub>-neutral
- To live together
- To make it last

These pillars highlight both existing and new issues, focusing on the constantly changing playing field.

As you read this report, you will discover our impressive achievements in the field of sustainability. We hope it will be a source of inspiration, whatever the field in which you are active.



. از مار معمول

#### Johan Maes

Chairman of the Board of Directors of BGAD nv

#### 1.2. Back in time



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#### Welcome to **BlueChem**!

Incubator BlueChem officially opened its doors in early 2020. BlueChem provides an environment where sustainable chemistry start-ups can flourish.

#### Welcome to **DHL Express**

At the start of 2021, DHL Express launched its Cityhub. This is the operating base for deliveries to the Antwerp region and surrounding municipalities using electric vehicles and cargo bikes. No fewer than 50,000 parcels pass through the distribution centre every week.

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#### **Publication** of 'Blue Gate, bridge to a circular future'

In mid-2021, the first 'Blue Gate' book rolled off the press. This book explains what the Blue Gate concept entails and what added value this approach can bring to people and society.



### Delivery of remediation phases 1 & 2a

In mid-November, remediation phases 1 and 2a were both delivered at last. Phase 1 represents the remediation of the least contaminated areas of the site, while phase 2a entailed more intensive remediation works.

#### Welcome to **BMB** Bouwmaterialen!

In October, we welcomed BMB Bouwmaterialen with a branch in the logistics zone of Blue Gate Antwerp. BMB is a partner in sustainable building materials with a focus on urban distribution.

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#### Award of BREEAM Communities 'Excellent' certificate

At the end of June, we were proud to be the first business park in Belgium to receive the BRE Communities 'Excellent' final certificate for the entire site. BREEAM, an international standard for sustainable business parks. Thus, we are setting the tone and leading by example in terms of sustainable business parks.

#### Welcome to **BlueApp**!

Pre-incubator BlueApp also opened its doors in late September. With support from Antwerp University, BlueApp provides an environment for researchers working on sustainable solutions within the chemicals sector.

#### First Easter egg hunt

On 16 April the first-ever Easter egg hunt was held on the BGA site. We welcomed 140 children and 131 parents to a hunt for sustainably produced Easter eggs.

#### Welcome to Amazon!

At the end of September, we welcomed distribution giant Amazon. A first, because this was also Amazon's very first establishment in Belgium. Thanks to real estate investor Montea, the logistics project area is being developed sustainably in compliance with the establishment conditions.



#### First Halloween event

October 28 saw the kick-off of our first Halloween event, a nocturnal walk organised for local residents. With 226 participants, this was an immediate success.

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#### First World Clean-up Day

In early September, we organised an event to mark 'World Clean-up Day' for the first time. In collaboration with the non-profit organisation Mooimakers, a major clean-up operation was launched on the site. Along with some 120 local residents and volunteers we set to work to remove litter and fly-tipped waste from the site.



In September, artist and local resident Mieke Smet of Studio Orimi exhibited her art installation 'Dark Clouds, Bright Clouds', featuring cloud sculptures made of recycled polypropylene suspended from oil pipelines.

#### Delivery of Phase 2 remediation

The end of December marked a key moment, with the completion of the latest phase of remediation. As a result, with a view to maximum biological remediation and minimum soil movement, the Blue Gate Antwerp project site is now fully remediated.

#### Award of first two BREEAM New Construction 'Excellent' certificates

At the start of May, DHL Express was the first establishment to be awarded the BREEAM certificate. BlueChem followed less than a month later. Both establishments achieved the 'Excellent' level with flying colours. A result to be proud of!

#### Second stakeholder dialogue

In September, we organised our second stakeholder dialogue in line with our double materiality matrix. Some 20 participants were involved. The balanced mix of internal and external stakeholders was of paramount importance. The result can be found in this report.

#### Delivery of Leigracht remediation

Mid-November saw the completion of the remediation of the Leigracht. The Leigracht is a two-kilometre long canal that runs between the Hoboken Polder and the BGA site and drains surface water from the watercourse at a controlled flow rate.

# Award of **SDG Champion** certificate

CIFAL Flanders has already validated BGAD's efforts in the six areas identified in the PCA2030 Trajectory and following approval by an external panel the UNITAR Training Certificate of Completion was awarded at SDG Champion level in early 2024.







#### 1.4. The Blue Gate story

If we want to dig deeper into the story of Blue Gate Antwerp, 'Blue Gate', the concept behind the BGA site, is a good place to start.

The urgent challenge of climate change and scarcity of resources makes sustainable change imperative. Time is pressing and we need scalable answers.



 This refers to the gateway towards a sustainable or 'blue' economy with a blueprint for scalable impact.

A Blue Gate is preferably located on the city outskirts and can thus be deployed in a variety of metropolitan areas. Not just in Belgium, but elsewhere in Europe and the world.

Within the 'Blue Gate' narrative, we view space as an essential seedbed to accelerate the transition to a sustainable economy. The use of that space will help determine how we shape society for the generations to come. Businesses with a sustainable and circular impetus that develop within this space are together seeking answers to relevant aspects of transition. Sustainable chemistry (e.g. the BlueChem incubator), research into sustainable use of materials (e.g. the UA's BlueApp pre-incubator), sustainable logistics and urban distribution, and the circular building economy are just some of the solutions. A Blue Gate here acts as the flywheel harnessing this circular dynamic to benefit tomorrow's circular city.

#### 1.4.1. The Blue Triangle, a mission & vision

Blue Gate Antwerp is sharply differentiated from other business parks. Thanks to the holistic 'Blue Triangle' approach, the model is built around three unique axes: the site, the buildings and the business activity.

> These aspects are inextricably linked, and are comprehensively overseen from within BGAD. This means that the challenge of sustainability does not end when all the plots are built on; instead, a long-term sustainable transition is secured.

#### Site

Our approach does not start from pristine green fields, but from zoning areas with outdated or neglected infrastructure. We are restoring these areas to valuable land in a sustainable way with a special focus on infrastructure, biodiversity, water adaptation and installing renewable energy facilities. All these factors contribute to the development of an eco-effective site, the solid foundation for what follows.

BGAD's cross-plot infrastructure concept is unique. Biodiversity and water management are combined in an innovative way. The centralised parking infrastructure (passenger and goods vehicles) is also innovative.

#### Buildings

Establishments only occupy our eco-effective site via future-proof buildings. This is safeguarded by establishment conditions that impose various threshold values. These conditions include high renewable energy capacity, a sustainable and circular choice of materials and rainwater recovery.

#### **Business activity**

The business activity conducted in these future-proof buildings also plays an integral part. A business park becomes truly sustainable only when eco-effective activities develop on the site. The establishment conditions serve as a springboard to prepare business activities for the future, with an eye on sustainable and circular transformation.



This **unique three-pronged approach** forms our blueprint for the business park of the future. We are talking about a site with commercial buildings that are designed, developed and built to be future-proof, and business activities that – challenged by the framework for establishment – gradually fit into a circular economy. This comes about in part by relieving establishments of the burden of building future-proof accommodation, and in part by allowing establishments to follow their own path in making the business processes set out in their development plan more sustainable.

#### Furthermore, Blue Gate Antwerp plays a catalytic role for the City of Antwerp.

We provide a stimulus to work with other stakeholders to accelerate sustainability in the city. When cities and businesses reach out to each other, they create an interaction to bring about change on a large scale, with a sustainable and circular economy as the outcome.

#### 1.4.2. The Be Good and Dare framework of values

Our framework of values consists of **four core values** which hinge upon the 'Be Good and Dare' theme, a subtle reference to the acronym of the PPP company name 'BGAD'.



#### Realistic

At BGAD, our ambitions are far-reaching, but are always achievable, with our feet firmly on the ground. We don't want to get stuck in a mere abstract mindset. We focus on the practical execution. To this end, we set realistic goals for ambitious organisations and companies that are motivating and measurable.



#### **Eco-Effective**

By building an eco-effective business park with multimodal connectivity, water management aimed at buffering, sustainable energy supplies, and flexible zoning that is also climate proof, flood-safe and biodiverse, we are contributing to a positive impact. Companies setting up on the site, where continuous improvement and sustainability take precedence, make a constructive contribution to this eco-effective theme.

# AND

#### Collaboration

We make an impact together. We embrace an economically circular and sustainable ecosystem that actively involves various partners, establishments and even end-users. The more parties engaged in this ecosystem, the better the continuity will be ensured.



#### Innovative

We challenge ourselves to think out-of-the-box and creatively about tomorrow's challenges. To do so, we draw limitless inspiration from new construction techniques, system innovations and innovative cooperation models. Encouraging open innovation is central to shaping the business park of the future.



#### CSRD and EU taxonomy deciphered

The CSRD and EU taxonomy have their origins in the Paris climate agreement and the subsequent European Green Deal. The Green Deal aims to make Europe climate-neutral by 2050. To achieve this, the action plan for sustainable financing was drawn up, of which the CSRD and EU Taxonomy are an integral part. In practical terms, this action plan focuses on redirecting capital flows towards sustainable business activities. It also seeks to enhance the transparency and comparability of sustainability or ESG information.

BGAD does not formally fall in scope of this regulatory framework (it does not meet the thresholds for turnover, employees or balance sheet total), but we nevertheless use these European sustainability frameworks as guidance. By issuing its own site report, BGAD contributes to the reporting requirements imposed on establishments under CSRD and EU taxonomy. As a result, BGAD gives the necessary tools to establishments and thus supports them in their transition.

#### Did you know?

This report extends beyond CSR to E<sup>2</sup>SG reporting. E<sup>2</sup>SG stands for Environmental, Social and Governance and offers an approach that brings together our sustainability goals. We also add the economic pillar (Economic), so we do not lose sight of the profitability of the whole. Moreover, the CSRD itself also reflects this E<sup>2</sup>SG framework, allowing us to maintain the desired uniformity.



# 1.5. The report: methodology and double materiality

Our sustainable future strategy is subject to advancing understanding, logically enough in a world where a host of transitions and innovations are under way. We review our projected sustainability strategy and associated reporting every three years, publishing our first sustainability report in 2020.

Now that remediation is complete, we are ushering in a new phase. Besides relieving establishments of the construction of their commercial buildings, we support them in achieving their sustainable goals within their business practices. Our support – both in terms of their business accommodation and the implementation of their development plans – takes account of the European regulatory landscape for the further development of the Green Deal. Thus, BGAD and our establishments are now getting ready for what will soon become the rule: the Corporate Sustainability Reporting Directive (CSRD) and the accompanying EU Taxonomy. In recent years, we have seized the opportunity to review and challenge our material impact, risks and opportunities.

Using an already sophisticated methodology, we have aligned this report with the CSRD and EU Taxonomy which are currently still under development. In 2026, when we issue our third ESG report, we will report in full compliance with the new EU sustainability regulations. This future report will also be able to reflect the aggregated ESG figures from our establishments. The approach to this aggregated method needs to be further developed; here we aim to porting and double counting.

#### 1.5.1. A clear roadmap

 A rigorous materiality analysis forms the basis of any sustainable future strategy. Accordingly, BGAD has again given the appropriate attention to setting up and evaluating this exercise.

The previous edition presented the 'single' materiality analysis, which highlighted 12 material topics. Based on the new European sustainability reporting guidelines, a double materiality matrix has now been prepared. A new strand within the CSRD legislation that prioritises the outside-in and inside-out approach.

Under the guidance of Bopro, the existing list of material topics has been reviewed and challenged. Emerging risks and opportunities with a potential impact on BGAD's operations (outside-in approach) have been identified. The potential impacts which BGAD may have on the environment and society (inside-out approach) have also been identified. To this end, a range of stakeholders have been consulted, new legislative frameworks reviewed and market trends and best practices within the sector analysed. Finally, the new list of material themes has been validated internally by BGAD's management committee.



#### 1.5.2. Stakeholder engagement

To actively involve stakeholders in evaluating and prioritising key materialities, an in-person stakeholder dialogue was organised. This involved the careful selection of a variety of relevant stakeholders across different fields. The methodology comprehensively described in the first report is still relevant. Stakeholders are all brought together as part of our sustainable strategy. Remarkably, the stakeholder survey shows that our stakeholders still mainly focus their attention on Blue Gate Antwerp as an infrastructure project. Here, we engage them in a narrative in which the site transforms into a vibrant urban environment and consequently creates an active and engaged community.





During the stakeholder dialogue, Bopro clarified the CSRD and EU Taxonomy, within the context of BGAD. This approach was complemented by CIFAL Flanders based on the SDG framework. There followed an interactive component, where material topics were explained in detail and then prioritised. Both internal and external stakeholders attended this session, always with a balanced mix across the different groups.

#### 1.5.3. Reporting frameworks

BGAD uses the United Nations (UN) global sustainability framework to bring its sustainability impact into focus. Acting in a future-proof way does not just mean reducing adverse impacts.

To achieve the sustainable development goals, the challenge is now one of resolutely pursuing a positive impact and thus outperforming expectations. BGAD has expressly chosen to exercise no adverse impact on any sub-target and wishes to have a positive impact on at least one sub-target per SDG. In doing so, BGAD respects an even balance between the 5 Ps (People, Planet, Prosperity, Peace and Partnership).

BGAD continues to report in accordance with Global Reporting Initiative (GRI Standards) Standards. For the third edition of our sustainability report, we will link to the European Sustainability Reporting Standards (ESRS), i.e. the reporting standards promoted by the CSRD directive. GRI Standards continue to apply at global level, while ESRSs are becoming the new norm at European level. The GRI Standards are a set of sustainability reporting standards that provide guidance to organisations when reporting on their impact on the economy, environment and society. We describe how we have applied them in practice to BGAD on p. 88.

#### 1.5.4. The double materiality matrix

The preceding methodological steps culminate in a double materiality matrix that has been checked both internally and externally. Under the CSRD, organisations should report on those materialities that score highly from either the outside-in or inside-out perspective or both, and are therefore considered material. We place the threshold exactly halfway, creating four equal quadrants.

The various material topics were all given a score on a scale from 0 to 10, where a low score suggests low financial or impact materiality and a high score the opposite. Building on our previous report, but also for the sake of read-ability, 12 material topics have again been retained:



As with the GRI, the CSRD also sets some reporting requirements for those themes that are advanced as material.

#### **Quadrant 1**

The material themes with significantly high scores in both approaches are located in the upper-right quadrant and are therefore covered extensively in this report. These themes have a significant impact on our business model, especially the site, and at the same time can realise a positive impact on both the environment and society. The guiding premise is a win-win situation, which consequently forms the intrinsic core of our sustainable strategy.

#### • 1. Infrastructure and mobility

Remediation and the construction of safe traffic infrastructure and associated state-of-the-art commercial buildings (in collaboration with BGAB) form the physical building blocks for creating an eco-effective business park. The emphasis on the modal shift is key.

#### • 2. Attractive public site

Creating an attractive public space where people can meet and work and where people, animals and nature live together in harmony.

#### • 3. Circularity and zero waste

Facilitating a fertile ground for the circular economy where companies can inspire each other and where waste is seen as a raw material to the maximum extent.

#### • 4. Well-being and engagement

Providing a healthy environment, where people can thrive within a vibrant community and where social engagement is at the forefront.



#### **Quadrant 2**

The upper-left quadrant highlights themes that are material from the inside-out or impact perspective. BGAD has a responsibility to include these in its strategic objectives, as we can still have a significant impact on them.

- **5. Innovation, R&D and digitisation** Offering the ideal environment for start-ups, researchers and companies to innovate in a limitless and open way to accelerate the development of new technologies and products.
- 6. Future-oriented growth

Maximising the extent to which establishments are relieved of their burdens by providing the right facilities and support throughout the development years. This leaves the focus on core business activity undisturbed, prioritising sustainable profitability and promoting the development of synergies and partnerships on the site.

- **7. Matchmaking with eco- effective businesses** Identifying, attracting, establishing and bringing together eco-effective businesses on the site where sustainable thinking takes precedence and which add unique value to the neighbouring city.
- **8. E<sup>2</sup>SG risk management (incl. climate risks)** Factoring in potential risks and opportunities with a particular focus on climate risks that addresses climate mitigation and adaptation.

#### **Quadrant 3**

The lower-right quadrant sets reporting requirements for topics that are material from the outsidein or financial perspective. These material aspects represent financial risks and opportunities that may externally influence BGAD's business model. Thanks to a rigorous analysis of risk scenarios during the preparation period before the start of work, no material items so far fall in this quadrant.

#### Did you know?

The report clearly identifies the material topics covered in each chapter. This clear structure enables readers to navigate the report smoothly, allowing them to find the information relevant to their field of expertise in a targeted manner.

#### **Quadrant 4**

The CSRD requires only that the less material themes located in the lower left quadrant be monitored. For the sake of completeness, these themes have nevertheless been included – albeit minimally – in this report. In the previous report, these issues were addressed in detail; they are now almost concluded.

- **9. Transparency and communication** To set an example for other business parks, proactively communicating with establishments and other stakeholders and adopting a transparent attitude at all times to reporting, progress and possible stumbling blocks.
- **10. Sustainable water management** Integrating a sustainable water system, including water buffering and providing a secondary storm drain network. The sustainable use of water on the site is encouraged as much as possible.
- **11. Biodiversity and environmental quality** Realising a positive impact on local biodiversity with a particular focus on integration with the Hoboken Polder, creating a green corridor and rehabilitating the adjacent Leigracht.
- **12. Net zero and renewable energy** Optimal integration and delivery of renewable energy on the site, meeting the sustainable energy needs of establishments and actively seeking energy synergies with the wider environment.





# The development plan was our starting point towards continuous improvement.

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The development plan helped us get our goals in focus. This prompted us to conduct the double materiality exercise and engage our external stakeholders in creating a sustainable strategy. Thanks to BGAD, we are closely supported in this journey.

Liesbeth Boogaerts, General Manager – BlueChem



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#### Case – BlueChem

#### BlueGate – BlueTriangle – BlueChem

The expansion of Blue Gate Antwerp into a future-proof and circular business park results from a unique interplay of the three areas of site design, construction, and established business activity. This integrated approach – the BlueTriangle – makes Blue Gate Antwerp and its establishments both future-proof and prepared for a climate-neutral and circular economy. BlueChem's story aptly demonstrates this Blue Triangle dynamic.

BlueChem is the first incubator in Flanders to focus expressly on innovation and entrepreneurship in sustainable chemistry. It deals with start-ups, each working towards sustainable chemistry and a circular economy in their own way.

So it makes sense that this sustainable incubator chose to base itself in a business park with circularity as its focal point.

Site development lies at the basis of the Blue Triangle. As a brownfield site, with contamination from previous petrochemical industries, Blue Gate Antwerp has undergone extensive remediation to create a climate-neutral and flood-proof business park. This metamorphosis has been completed with the supporting infrastructure of a  $CO_2$ -neutral heat grid, cycle paths and footpaths separated from the roadway, a green buffer zone and watercourses. A facility point for establishments is included in this vision of a sustainable seedbed where they can grow and prosper. A role that BlueChem is assuming today vis-a-vis its start-ups and first establishments. When the facility point is definitively incorporated into the site BlueChem will be involved, making the business park the perfect biotope for this incubator.

The construction of a future-proof commercial building forms the second pillar of the Blue Triangle. Establishments are relieved of any worries, as the building contract will be carried out by Blue Gate Antwerp Building (BGAB). This working method guarantees not only well thought-out architecture but also a smart concept for technical installations, resulting in a future-proof building. With a range of adaptable lab and office spaces for start-ups, flexibility is a crucial aspect of architectural and technical design. With this challenge in mind, a modular building was chosen in which each area was designed for potential use as a laboratory space. In combination with the site's supporting infrastructure, the constructed real estate earned a BREEAM-Excellent certificate.

Preparing business activities for a circular economy forms the third side of the Blue Triangle. As a sustainable chemistry incubator, BlueChem is naturally firmly committed to CO<sub>2</sub>-neutrality and to making its start-ups more sustainable under guiding policy frameworks such as the Green Deal, EU taxonomy and CSR Directive. The requirement to deliver a three-yearly CSR report makes establishments at Blue Gate Antwerp equally sensitive to this. BlueChem therefore chose to embark upon its own exercise around CSRD and double materiality, with support from Bopro. As a result of this approach and the identification of impactful materialities, BlueChem is not only now better able to manage and report its own sustainability results but has also acquired the tools to support its start-ups to do so.

#### 1.6. E<sup>2</sup>SG strategy

The **five strategic pillars** that translate the material themes into a sustainable future strategy had already been defined in 2019 and remained unchanged.

#### - To match and engage



#### - To build it



#### - To make it circular and CO<sub>2</sub>-neutral



#### - To live together



#### - To make it last



In what follows, we will look more closely at each of these strategic pillars. We discuss the impact on and the management mechanisms for the material themes. We explain the progress we have achieved in recent years and look ahead as we set new ambitions and targets.





## 2. To match and engage

The match between private and public players was accomplished from the start through the proposed PPP structure and lies at the heart of the BGAD narrative. Besides this structural cooperation, a sustainable business park only really takes shape when the match is made with ecoeffective establishments. These businesses are committed to an ecoeffective industry, still producing a quality end product, but reducing their raw material and energy consumption and prioritising sustainable and efficient business processes.

#### 2.1. The match between public and private

The form of cooperation that brought BGAD together had previously borne fruit. The members of the Public-Private Partnership (PPP) structure share an ambition to turn the heavily contaminated petroleum site into a liveable, economically viable part of the city. The combined efforts of public and private players have provided a solution to such a complex long-term project. The public players consistently monitor the relevance of the project. In addition to their specific expertise in sustainable site development, the private actors also introduced an entrepreneurial spirit. In combination, this integrated approach, the diversity of disciplines and the necessary political backing all lead to a successful conclusion.



On the public side stands Blue Gate-Antwerp Public Holding (BGAPH), whose partners have been working together on the project since 2006. The city of Antwerp is here represented by AG Vespa and the Flemish Government by Participatie Maatschappij Vlaanderen (PMV) and Vlaamse Waterweg. On the private side, the partners are organised in the BlueOpen consortium, represented by two DEME Group companies and Bopro.

Following consolidation of the private and public clusters, the PPP was established in 2017 under the legal form and name **BGAD nv**.

A year later in 2018, Blue Gate Antwerp Building (BGAB) was set up as the central developer for buildings on the site. **BGAB nv** is responsible for achieving the sustainability targets at building level and acts on behalf of the establishments in the construction of their future-proof commercial building as a quality working environment. Since the first report, the first buildings have been completed and certified.

# 2.2. Management and governance

BGAD is a compact organisation, with day-today management in the hands of a management committee. In recent years, the primary focus of the management committee has been on monitoring remediation and embankment and infrastructure works, alongside initial marketing efforts. In the coming years, the focus will remain on attracting establishments and activating the Facility Point. The management committee will translate these goals into concrete measures, in line with the output specifications set out by the PPP structure.

The **management committee** has four members, one representative of each overarching partner within the PPP structure: the City of Antwerp, the Flemish Government, DEME Group and Bopro.



Annemie Gommers City of Antwerp – AG VESPA



**Maarten Bettens** Flemish Government – PMV



Wolf Depraetere DEME Group – DEME-Dec



**Dimitri Torfs** BSI – Bopro

The overarching **board of directors** has five members and meets quarterly to discuss strategic issues and evaluate proposals from the management committee. With conclusive decision-making powers, this body is the governing force behind BGAD.



Johan Maes Chair of BlueOpen – DEME Environmental



**Myriam Heuvelman** Director of BGAPH – AG VESPA



**Elke Van de Walle** Director of BGAPH – PMV



**Dirk Poppe** Director of BlueO'pen – DEME-DI



**Peter Garré** Director of BlueO'pen – BSI



# 2.3. The perfect match between establishment and site

During the marketing phase BGAD is looking for companies that can identify with the sustainable philosophy of Blue Gate Antwerp. They are companies that want to move in the direction of the circular economy together. To simplify and objectify the 'match-making process', the **identification tool** developed by Bopro is used. This assesses whether businesses can create significant sustainable added value by locating on the site. It also evaluates the potential for synergies with other establishments or nearby businesses. Businesses are retained or not, based on the assessment achieved in the identification tool.

#### Did you know?

The questions addressed in the identification tool are based on the three key objectives of the Blue Triangle:

- Site Synergy on the spot: are there potential synergies with other businesses on and around the site?
- **Building Circular building:** to what extent will a sustainable building be erected?
- Business activity Circular business model: is there a commitment to a sustainable and circular economy?

#### **Front runners**

These businesses lead by example in terms of sustainability, innovation and circularity.

#### **Fast followers**

These businesses have a match with various common interests and set sustainable ambitions with accompanying roadmap.

#### 2.4. The path to eco-effectiveness

In practice, after application of the identification tool, the vast majority of companies identified are in the middle category – the 'fast follower' category. These companies are not quite front runners, but have a wide margin for potential improvement and a willingness to take steps towards a sustainable transformation. To chart improvement potential, including for the 'front runners', businesses commit to a multi-year development plan. In the development or circular improvement plan, sustainability targets are set for subsequent close monitoring.

The development plan not only provides insight into a company's willingness to make the leap towards circularity and sustainability, but at the same time brings it one step closer to taking ownership of its reporting obligations. It is this very approach that strengthens the interaction between site and business. A future-proof business park challenges establishments to make their business and processes more sustainable, which in turn benefits the eco-effectiveness of the site. Furthermore, meticulous implementation of the development plan results in site-level reporting that includes social objectives and corporate governance ambitions in addition to environmental parameters.

The format of the development plan is reviewed regularly. The criteria have recently been benchmarked against the EU Taxonomy. In the past, they were benchmarked to the GRI reporting standards; in the near future, they will be tested against the new ESRS standards. This will ensure that reporting always remains up to date and future-proof.  A future-proof business park challenges establishments to make their business and processes more sustainable, which in turn benefits the eco-effectiveness of the site.





#### **Case study – DHL Express**

#### The path to CO<sub>2</sub>-neutrality

Year after year since setting up on the Blue Gate Antwerp site, DHL Express has taken active steps towards a sustainable fleet. When DHL Express moved onto the site in 2021, there were 30 charging points at the time of the handover. In 2023, as many as 100 brand-new all-electric vans were added and some 80 charging stations installed. A clear ambition that can be traced back to the development plan. Consequently the DHL Express fleet on the BGA site is now fully  $CO_2$ -neutral. A reduction of 2,050 tonnes of  $CO_2$ . In total, one-third of the Belgian DHL Express fleet is now electrified. In 2025 we hope to see this rise to two-thirds.

On to the climate-neutral future!

#### 2.5. A warm welcome to establishments

We have been proud to welcome several new establishments to the site in recent years. Alongside the investor establishments Van Moer and Montea and circular roof manufacturer IKO, familiar from the previous reporting period, five new establishments have opened their doors at BGA in recent years.

#### BlueChem

Incubator BlueChem has been present on the site since early 2020 and was described in detail in our previous report. The incubator community now counts as many as 22 establishments.

#### Amazon (Montea phase 1)

The e-commerce firm Amazon has opened a  $CO_2$ -neutral urban delivery hub in the BGA site logistics zone. This is Amazon's first site in Belgium. Both the city centre and the wider Antwerp area will be served from this depot using an all-electric fleet. Amazon's commitment to 'The Climate Pledge', which targets  $CO_2$ -neutrality by 2040, fits within its 'Blue Gate' philosophy.

#### BlueApp

The pre-incubator for start-ups in sustainable chemistry was set up from the University of Antwerp. The open innovation hub connects academia with the sustainable part of the chemical industry. Two external businesses as well as Antwerp University research groups are operational within BlueApp.

#### **BMB Bouwmaterialen**

Working within the Belgian branch of the BME group, BMB Bouwmaterialen is a partner for sustainable building materials that enables their sustainable urban distribution. Due to its unique waterfront location, building materials can be brought in via inland waterway. One way of achieving this is by using the terminal operated by logistics partner Van Moer. A fine example of multi-modality.

#### DHL Express (Montea)

Deutsche Post DHL Group's international express delivery service has opened a CityHub at the BGA site to offer sustainable urban deliveries. The establishment on the site fits seamlessly into the ambitious Go Green programme, which aims to make the entire express service  $CO_2$ -neutral by 2050. Some +/- 50,000 parcels pass through the site every week. Around 125 jobs have been created and deliveries to the city are carried out exclusively using zero-emission modes of transport.
The investing establishment Montea also plays a crucial role in developing the logistics zone on the BGA site. Currently, Montea is actively developing the second phase which will soon welcome new tenants.

## We look forward to the new arrivals!

Pidpa-Waterlink will also join the Blue Gate site shortly. The two water companies Pidpa and Water-Link joined forces just recently. As water suppliers to the Port of Antwerp-Bruges and the province of Antwerp, they plan to set up a lab at the BGA site in the near future to conduct water analyses, rapid appraisals and applied research.

Finally, mobility company Indigo and the multi-tenant 'Terminal' building will make their appearance on the site.

More information can be found on p. 56.





## 2.6. A growth environment focused on making life easier

Besides supporting monitoring in terms of reporting (see development plan p34), BGAD also offers a trouble-free environment aimed at future-oriented growth. An environment that allows establishments to focus solely on what really matters:

## making a sustainable impact with their core business activity.

Taking account of the growth trend in our businesses, we always respond to their changing needs.

Besides providing an appropriate environment for growth, BGAD also offers numerous facilities at the site. These shared services ensure that establishments do not have to provide these peripheral activities themselves and can focus fully on their own business at all times:

#### The park management structure

has been set up with our partner Quares. Establishments make a financial contribution for this purpose and consequently also have a say in what exactly is provided. Park management services are diverse, ranging from the collective purchase of green energy, green maintenance and waste collection to individual support at the request of the businesses. Establishments can go straight to the central contact point for site management. The future Facility & Congress **Point** has also been designed and planned. It will soon find a home in the new Terminal building (see p. 59) This central point will offer a wide range of support services that businesses can rely on a daily basis. The Facility & Congress Point is the reception point for the site and offers meeting and seminar rooms, lunch room and catering, sanitary facility, post and parcel services and more. Besides these services, this location can also operate as a meeting place for establishments, visitors and passers-by in the business park.

## Always room for growth

## - Support for changing needs

From the very first conceptual idea, a start-up can turn to BGA. For this, the environment of preincubator BlueApp provides the necessary facilities.

If you have got off to a good start after a time, you can continue your start-up growth journey with the incubator BlueChem.

If you then evolve into a scale-up or grow into a mature company, there are several more location options to explore at BGA. You can move into the future Terminal building (see p. 59) or buy your own premises on the site.

In this way, BGA supports establishments during all stages of their growth.



## 2.7 Progress table - targets

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Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
As a result of the development plans, BGAD also supports establishments in preparing for the new CSRD legislation, including workshops on circularity and stakeholder engagement.	Current	Number of CSRD workshops	0	1
BGAD's marketing focuses on knowledge companies, innovative production, research & development,	Continuous	Average identifica- tion tool score	75%	71%
preferably in sustainable chemistry, clean tech and smart logistics, but business activities take precedence. An		Number of establishments	1	8
identification tool is used.		Number of estab- lishments in devel- opment phase	3	6
As per BGAD's establishment conditions, all establishments are required to produce a development plan and a CSR report in line with the GRI criteria.	Once every three years	Number of current development plans	1	8



**Future-oriented** 

Target	Progress	КРІ	<b>2020</b> (cum.)	<b>2023</b> (cum.)
BGAD supports establishments in their sustainable growth with a view to mak- ing life easier at every stage (BlueApp > BlueChem > Terminal).	At start-up	Number of growth paths (transition)		
BGAD takes care of the overall development of the site, focusing on synergies between the different establishments.	At start-up	Number of synergies		
BGAD is exploring the appropriateness of opening the Facility Point to local residents and external users. BGAD provides a Facility Point giving support services a place in the business centre.	Current	Binary	No	Νο
BGAD facilitates a park management organisation with establishments as members. The business park regula- tions require establishments to make a financial contribution to site mainte- nance, including the collective manage- ment of green spaces or the collective purchase of green energy.	Current	Binary	No	Νο
BGAD facilitates synergies with local suppliers.	Continuous	Proportion of expenditure with local suppliers (@> 30 and > 30 km)	70%	73%
BGAD is a public-private collaboration and has partnerships with Antwerp University (UA – BlueApp), BlueChem, CIFAL Flanders (support SDG's), VOKA, Natuurpunt and more.	Continuous	/	/	1
BGAD coordinates marketing with the Port of Antwerp (PoA) and Business & Innovation (B&I).	Continuous	/	/	/



# 3. **To build it**

Petroleum South was once the heart of Antwerp's petroleum industry. Today, the fully remediated project site (63 hectares) is ready for a new chapter. The sustainable business park is taking concrete form.

## 3.1. From design to completion

In recent years, the main focus has been on site development. The site has now been restored and is ready for the future. The remediation has been fully completed, the infrastructure for the public domain has been installed and the first sustainable buildings have been erected.

These concrete achievements have also been rewarded in practice, and in late June 2022, BGAD was the first business park in Belgium to receive the BREEAM Communities

certificate, the international standard for sustainable site development. With an 'Excellent' rating of 75.9%, BGAD achieved an outstanding score.

An achievement to be proud of, and one which BGAD wishes to recommend as a model to other business parks and site developments in Flanders.



At Natuurpunt, we remain a committed stakeholder in the BGA business park. Right from the start, we have been involved in the natural development of the green corridor on the site. In our view, the site has undergone a beneficial metamorphosis from contaminated industrial estate to an environmentally and climate-conscious business park. The green corridor with its watercourses is once again teeming with flora and fauna, with the little newt as the highlight.

Naturally, we can only welcome the environmental management of the fallow land with sheep and the plans for nature-inclusive building.

Danny Jonckheere, Natuurpunt – Hoboken Polder

## Did you know?

At Blue Gate Antwerp, we go all the way, even down to the level of signage. Several different initiatives are under consideration to develop uniform signage for establishments that is distinctive, unique and sustainable at the same time. Here, we are exploring a link to biodiversity, for example through the integration of bee or insect hotels, as well as the added features offered by the site such as an integrated bench or a bicycle charging point. The details are currently taking shape.





#### Foot paths, cycle paths and rest areas

Throughout the entire project site, pleasant and safe walking and cycling paths have been created, separated from the road and connecting to routes beyond the site.

## Creating a green corridor with watercourses

The completely new 14.5-hectare biodiversity route connecting the future parks along the R1 and the Hoboken Polder nature reserve has been completed, providing a haven of tranquillity among the activity. The bridge over the corridor features wooden cladding and foundation piles reminiscent of tree trunks so that the ecological landscape is not interrupted.

## Leigracht remediation

The Leigracht, which winds its way between the Hoboken Polder and the Blue Gate Antwerp business park, has undergone complete remediation as a secondary project. As a result, the canal has retained its important hydrological and ecological function. The remediation of the canal has now been completed; we are talking about a remediation of 600 tonnes of oil, which is equivalent to about 3,000 barrels.



## Project site remediation

After many efforts, the time came to complete the remediation works to the project site. Phase 1 was completed in late 2021, phase 2a in the first half of 2022, and phase 2b in the second half of 2023. 78,000 m<sup>3</sup> have now been remediated. During phase 1 remediation was carried out in collaboration with a local partner. In phases 2a and 2b BGAD decided to apply a fully biological remediation method to the site.

## Flood-safe buffer system

The purpose of the corridor is twofold: it functions not only as a migration route for wildlife, but also serves a water buffering function with its watercourses. A total of 14,774 m<sup>3</sup> of stormwater can be buffered today and then slowly discharged to the Leigracht, making the site flood-safe against a 100-year storm. We are considering how to increase this buffer volume.

#### Irrigation of Hoboken Polder with water from watercourses

The watercourses or water buffers also simultaneously act as a strategic water reserve to provide water to the adjacent nature reserve at times of drought.

# 3.2. Sustainable and diverse mobility solutions

The site is located on the outskirts of the city of Antwerp, thus underpinning the city's ambitions to achieve a 50/50 modal shift by 2030. To enable a seamless connection between establishments and the city, a variety of mobility options have been explored. It is against this background that the necessary road and cycling infrastructure was built and the necessary mobility solutions were put in place. A wide range of mobility services and zones have been extensively tested, including the familiar shared cars (Poppy), shared bicycles (Donkey Republic and INDIGO weel), 100% electric shared mopeds (INDIGO weel) and electric scooters (Lime) that now reach the site. The City of Antwerp is currently considering whether to connect the Velo bicycle-sharing network between Hoboken and Nieuw Zuid via the Blue Gate Antwerp site.

At the request of establishments, BGAD is also exploring the possibility of integrating a public transport hub. Discussions with De Lijn are ongoing. The opening of the Kruger bridge provides soft road users with a connection between the adjacent neighbourhoods and the city centre. By 2025, thanks to our partner Indigo, the site will provide a diverse mobility offer, including parking facilities, in line with modal shift ambitions. 20% of the 1,050 spaces in the car park building will be equipped with electric charging infrastructure. In a second phase, this percentage will rise to as much as 40%, with the required energy being supplied by own installed solar panels on the site. So far, Indigo is already managing two ground-level car parks pending the completion of this mobility building.



With Blue Gate, we did not enter into a conventional parking deal, but rather a mobility deal.

Working with BGAD, we can realise our ambitions to green the Belgian parking landscape to the maximum extent by offering forward-looking infrastructure and mobility. By finding synergies and setting a common goal, we arrived at an optimal mobility solution for the site.

> Philippe Marchal Indigo Park Belgium

# 3.3. State of the art business premises

In recent years, there has also been considerable focus on constructing the first commercial buildings for our establishments. In line with the site establishment conditions, it aims as a minimum to achieve BREEAM New Construction 'Excellent' building certification, corresponding to the top 10% most sustainable buildings.

Again, our efforts have paid off, and two certificates have already been obtained.

In May 2023, BlueChem achieved BREEAM New Construction 'Excellent' certification with an impressive score of 76.1%, followed by DHL Express with a score of 74.5%.

Amazon, BlueApp and BMB are also currently in the process of achieving certification.



## Did you know?

By setting up your business on the BGA site, you automatically earn as much as 51% of the points in the BREEAM assessment. This is a significant advantage, given that obtaining this internationally recognised certificate is a requirement of the establishment conditions. Collective infrastructure for water management, the environment and land use helps companies to invest in the business-specific infrastructure that is their priority.

Why does BGAD attach so much importance to this international standard? The BREEAM tool provides targeted guidance enabling establishments to quantify overall sustainability within a building. It is essential to be able to rely on measurable and comparable criteria within the sector. BREEAM New Construction addresses no fewer than 57 sustainability topics spread over 10 categories. Thanks to our intensive cooperation with Bopro, we can provide establishments with the necessary guidance in this process.

## 3.4. Establishments

## Montea phase 1 Amazon o

What: Urban logistics Surface area: 8,438 m<sup>2</sup> Operational at: Sept 2022

Amazon's CityHub supporting its Climate Pledge equipped for CO<sub>2</sub>neutral last-mile distribution.

## DHL Express o

What: Urban logistics Surface area: 4,260 m<sup>2</sup> Operational at: Jan 2021

DHL Express 'last touch' CityHub for CO<sub>2</sub>-neutral deliveries to the city using electric vehicles and bicycles.



#### BlueApp o

What: Pre-incubator Surface area: 5,145 m<sup>2</sup> Operational at: Sept 2022

BlueApp is an open innovation hub and technology accelerator of the University of Antwerp for sustainable chemistry and materials.



#### ••• BMB

What: Building materials hub Surface area: 6.339 m<sup>2</sup> Operational at: Oct 2021

BMB Bouwmaterialen CityHub for local contractors and sites, with multimodal infrastructure including wharf.

## • Plein Publiek

What: Circular event location Surface area: 1,500 m<sup>2</sup> Operational at: Jan 2021

Plein Publiek temporary circular event location with space for events, catering and start-ups.

#### • BlueChem

What: Incubator Surface area: 3.375 m<sup>2</sup> Operational at: Oct 2020

BlueChem is Belgium's first incubator for sustainable chemistry and the ideal location for start-ups and scale-ups to grow and innovate.







## Case study – Amazon

## A top-notch building

Amazon is also making progress in achieving BREEAM certification for new buildings.

But what exactly does this mean in practice?

For construction of the Amazon building, energy efficiency and the sustainable use of materials were the absolute priorities. This is in line with the ambition, shared by Montea (logistics property investor) and Amazon, to make the site fully CO<sub>2</sub>-neutral by 2024. In line with the site conditions, the building is equipped with solar panels, LED lighting and rainwater harvesting. In addition, the project paid extra attention to the necessary digitalisation using Building Information Management (BIM). By using BIM models, 'clashes' or errors could be detected early, which facilitated efficient, fast and flawless execution.

The building is constructed with maximum attention to circularity. The façade and the roof are removable, so the façade elements can be dismantled. The facade cladding and roof structure can also be disassembled into their individual materials as bonded structures are avoided where possible. The building is insulated with mineral wool with calculated low embodied carbon. The structure is circularly designed, in the sense that it aims for maximum spans to allow for multiple functions and facilities. For example, the car park building, or rather the charging station for CO<sub>2</sub>-neutral delivery vehicles, is built without columns.



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## Case study – DHL Express

#### A top-notch contributor to sustainability

In January 2021 DHL Express opened its CityHub in Antwerp, its largest and greenest site in Belgium. The building is designed as one big last-mile machine with a smart flow of goods to and from the city. Particular attention was paid to making last-mile logistics more sustainable. In line with the DHL Express Go Green programme, all first and last miles will be covered by clean alternatives by 2025. DHL Express has already scored a 100% success in this at the Blue Gate Antwerp site by deploying its own DHL Cubicycle in combination with electric vehicles. The building has been equipped with the necessary loading facilities and with segregated and therefore safe routes for the cargo bikes. During construction, the structural elements were brought on site via the Scheldt instead of by road.

Like BGA, DHL Express uses BREEAM certification as a benchmark for the sustainability and quality of its sites, with a lower threshold of an Excellent score. The present building meets this requirement and goes a step further by providing the necessary flexibility with a column-free hall with 2 metres of additional free height for other future specifications. The logistics 'fingers' on the building are in a lightweight steel structure and can be removed or adapted. The roof is covered to the maximum with solar panels to generate as much of the energy needed for local charging as possible. The building is fossil-free and combines the heat grid with heat pumps.



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## Case study – BlueApp

#### A top-notch pre-incubator

Antwerp University took its state-of-the-art pre-incubator into use in September 2022. This high-tech building should enable start-ups and researchers – with the necessary academic support – to be the drivers of promising new technologies for sustainable chemistry and materials. It was therefore essential that the building could offer high-quality technological infrastructure to diverse and changing end users. Continuous operation and researcher safety is central to this.

The building was constructed around two central vertical cores connecting the lab floors to the technical floor. These technical shafts are oversized and easily accessible for later adaptation. The ground floor has a pilot hall for medium-sized test set-ups. The building is designed with two bays of labs on each floor, but these can be divided into three bays. To ensure safety, a fully redundant system is in place.

To safeguard the proper and efficient operation of the building, there was a firm commitment to digitalisation in design and execution through BIM (Building Information Management) whereby the designers and contractors had to deliver a fully developed digital twin before starting the works. This digital twin was tested using UA spinoff Hyspot that can detect any inefficiencies or faulty adjustments early. Finally, before taking the building into use, comprehensive commissioning procedure was organised.

## 3.5. Future establishments

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## • Montea phase 2

What: Urban logistics Surface area: 16,315 m<sup>2</sup>

Montea urban distribution hub for two logistics players.

## • Car park building

What: Mobility hub Surface area: 26,910 m<sup>2</sup>

Indigo multimodal hub for site users.

## • Terminal

What: Multi-tenant building Surface area: 80,200 m<sup>2</sup>

Multi-tenant building for research and development, sustainable production and city support services.

#### • BlueLAB

What: Environmental research Surface area: 3.508 m<sup>2</sup>

Leading laboratory for water analysis for the water companies Pidpa and Waterlink.



## **Car park building**

#### Mobility hub of the future

To achieve the Indigo and BGA mobility objectives of modal shift and sustainable mobility, the first phase of the mobility hub will be constructed on the site in 2024. The building will be compact with split levels to make the most economical use of the available space. Basically, up to 40 per cent of the parking spaces can be provided with charging infrastructure, with a canopy above the building with solar panels that will largely offset the energy consumption of the building and charging infrastructure on an annual basis. Since BREEAM certification does not apply to this typology, equivalent objectives have ben set. The embodied carbon in the building will be lower than 240 kg  $CO_2e/m^2$ . The flexibility and comfort of the building is assessed using an ESPA (European Standard Parking Award) score, with the target of scoring over 200/300. The ESPA was established by the European Parking Association to improve the quality of parking services. The ESPA is conferred on public car parks that meet a set of quality requirements to provide a convenient and safe service to customers.

## **BlueLAB**

## Water lab of the future

This high-tech water lab will become the new benchmark in Flanders in terms of (drinking) water analyses, rapid appraisals and applied research. It represents a first important link in the merger between the two water companies, where combined research will achieve the necessary synergy gains. The building is flexibly structured with the 2 lab floors centrally fitted with technologies supplied from above with logistical services below for optimal flow of samples into the lab.





## **Terminal**

Multi-tenant building of the future

The 'Blue Gate Terminal' project is collaboration between Bopro, The Nest & PMV. The circular economy and urban businesses support cities and should be given a place within the urban fabric. The Blue Gate Antwerp site offers the ideal location. To satisfy this need to the maximum for front runners and fast followers, the Terminal project was designed as a stacked multi-tenant building with a built surface area of 80,000 m<sup>2</sup> and two full floors of business premises. It is therefore unique in Belgium. Several communal areas will be set up where businesses can meet, (net) work and collaborate, as well as relax. The building is aiming for BREEAM Outstanding certification, becoming a prime example of sustainability. This building has been designed for maximum CO<sub>2</sub>-neutrality.

## **Montea Phase 2**

Distribution hub of the future

Alongside the Amazon site, BGAB will construct a second urban distribution hub on behalf of investor Montea for two tenants active in Antwerp and the port. A major effort is being made to reduce embodied carbon. The offices will be built with a wooden structure. Where possible, low-carbon emissions steel will be used in place of traditional types. The building is flexibly designed to allow repurposing for subsequent tenants. The impact of the building is further reduced by maximum use of solar panels on the roof. Logistics handling is organised on one side to ensure safe separation of people and goods. The three sides with less traffic will be softened and landscaped with vegetation similar to that in the adjacent green corridor, thereby creating an ecological win-win.



## 3.6. The potential of the Blue Triangle

The Blue Triangle focuses on the relationship between site, building and business activity with the aim of creating mutual sustainable synergies. This is also reflected in the efficient sustainable construction of the buildings on the site. When the existing collective infrastructure, the location and the development approach of BGAD and BGAB are all taken into account, a BREEAM score of 51% percent is already achieved for buildings through sustainable interventions on the site.

 The approach to design and implementation ensures a high baseline score for BREAAM management credits, guaranteeing the safe, high-quality completion of the project.

The collective infrastructure for flood control, ecology and energy provides a solid foundation for further building without repeated individual infrastructure investments, for example for water buffering. Development on a remediated brownfield site is also a factor.

In consultation with BGAB, the establishment will then be able to select its own credits in order to achieve the targeted minimum score of Excellent (70%) by focusing – in line with the individual business strategy – on the themes of well-being and comfort, energy, water consumption, materials, environmental impact and/or innovation.

The summary table shows the baseline scenario alongside the eight projects designed and completed. Strikingly, all the projects are firmly committed to controlling and optimising water consumption. They are also working to promote well-being and comfort, and energy efficiency. The differences between the projects are due not so much to typology as to the focus of each customer. For example, the University of Antwerp's BlueApp is firmly committed to energy efficiency. Acoustic comfort is also important here but does not match one-to-one with the optimal energy solution, so the project scores better for energy than for well-being and comfort. The first assessments tell us that project monitoring is essential. The baseline case scores very high for management and these requirements are monitored pragmatically during implementation, but the necessary evidence base to support safe and sustainable site management, for example, is sometimes absent. An example is BMB Bouwmaterialen, which was too late in focusing on its sustainability targets, making monitoring impossible and thus presumably failing to achieve Excellent certification.

Further work can be done on project monitoring so that, for example, proper site management can be seamlessly assured.

Currently, the projects do not score well on transport because of the absence of public transport. The more recent Terminal and BlueLAB projects partly benefit in their design phase from Indigo's upcoming mobility hub, but the score needs further improvement.

It is clear that the baseline score – obtained through sustainable interventions and collective infrastructure on the site – inspires and motivates the construction projects, which thereby succeed in scoring well above the 70% threshold.























## 3.7. Progress table – targets



Infrastructure & mobility

Target	Progress	КРІ	2020 (cum.)	2023 (cum.)
BGAD encourages and facilitates establishments making the modal shift, switching to more sustainable forms of mobility and transport.	At start-up	Binary	No	Νο
BGAD aims to integrate sustainable and alternative modes of transport for users of the BGA site (shared bicycles, shared scooters, public transport, etc.).	Current	Binary	No	Νο
BGAD pays attention to road safety: collective car parks, segregated traffic, dedicated loading and unloading zones, truck service zone, etc.	Current	Binary	No	No
BGAD promotes and supports water- bound transport on the site at all times.	Continuous	Number of tonnes of precast con- crete and steel structures delivered by water to DHL Express and Amazon sites		726 tonnes 30%
BGAD's conditions of establishment require BREEAM certification to safeguard its ambitions and methodology for achieving sustainable premises for establishments. The	Continuous	Number of BRE New Construction Excellent certifi- cates	0	2
as the building developer assists establishments in their search for sustainable premises.		Number of m <sup>2</sup> certified by BRE Average BRE score	0 m² 0%	7,635 m <sup>2</sup> 75.2%
BGAD aspires to achieve 'BREEAM Communities Excellent' certification for the entire site.	Complete	Binary	Yes	Yes



## Biodiversity & environmental quality

Target	Progress	KPI	<b>2020</b> (cum.)	2023 (cum.)
BGAD facilitates a park management organisation with establishments as members. The business park regula- tions require establishments to make a financial contribution to site mainte- nance, including the collective manage- ment of green spaces, etc.	Current	Binary	No	No
BGAD is remediating contaminated soil in accordance with the BATNEEC principle and the soil remediation plan.	Almost com- plete	Binary	No	Νο
BGAD plans a green corridor and landscaping of the private plots, consistent with the Hoboken Polder. This involves using and replenishing the City of Antwerp seed bank. Poor soils are used wherever possible.	Complete	Number of hectares in bio- diversity corridor	10.9 ha 75%	14,5 ha 100%



Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD is creating sustainable infrastruc- ture to support business innovation The digital database of land and build- ings allows efficient infrastructure use.	Continuous	Number of buildings with BIM model	1 building	4 build- ings



# Sustainable water management

Target	Progress	KPI	<b>2020</b> (cum.)	<b>2023</b> (cum.)
BGAD promotes rainwater reuse and buffering at building level (by means of a secondary water network)	Current	Number of m <sup>3</sup> reused	No	Νο
BGAD provides a landscape design with only native plant species that do not require irrigation.	Complete	Binary	Yes	Yes
BGAD aims to practice sustainable water management and minimise water scarcity during remediation works.	Complete	Decontaminated ground and surface water	26,220 m <sup>3</sup>	256,243 m <sup>3</sup>
		Used main municipal water	153 m³	461 m³
		Ratio of used main water/reused drainage water	0.42%	0.18%





Blue Gate Antwerp is the location of choice for businesses working towards a future circular economy. The stated goal is to develop an ecosystem within which businesses support each other in this sustainable transition. Constructing a CO<sub>2</sub>-neutral business park is the starting point.

## 4.1. CO<sub>2</sub>-neutrality, a persisting challenge

The Blue Gate blueprint provides the ideal framework for businesses embarking on the circular transition. The Blue Gate approach is expressed in the unique interplay of the three areas of site design, built premises and established business activities. This integrated approach – the Blue Triangle – makes Blue Gate Antwerp and its establishments both future-proof and prepared for a climate-neutral and circular economy.

Developing the site into a future-proof business park lies at the heart of the Blue Triangle. This transformation is achieved through a supporting infrastructure including a heat network, bicycle and pedestrian paths separated from the roadway, and water buffering with watercourses in the green corridor. Establishments will then be relieved of the burden of construction by Blue Gate Antwerp Building (BGAB). This approach ensures CO<sub>2</sub>-neutral and circular business premises.

It also allows establishments to maintain a permanent focus on their business activity. To engage establishments in the shift to a  $CO_2$ -neutral economy, the development plan challenges them to make the shift to a circular business model. Building a community supports establishments in finding synergies from which new, disruptive ideas can emerge.

## Did you know?

As highlighted previously under the 'Blue Triangle' approach (see p. 14), a 'Blue Gate' is never detached from the adjacent city in practice. The vibrant, innovative environment enabled by incubators such as BlueApp and BlueChem are the local building blocks that can trigger a larger circular movement. For example, Blue Gate Antwerp is already developing into a valuable part of the urban circular chain with its first establishments. Because a circular city reveals itself not only by hosting sustainable buildings, but precisely by providing space for businesses inspired by circularity. Providing and connecting to CO<sub>2</sub>-reducing infrastructure is a crucial part of this. On the one hand, there is the on-site heat grid that can be connected to other parts of the city to create energy exchange and economies of scale. Meanwhile, BGA continues to advocate for public transport on the site to reduce the CO<sub>2</sub> impact of personal transport.

## Establishments too are encouraged and engaged in the journey towards CO<sub>2</sub>-neutrality. Through the establishment conditions, businesses undertake to achieve a minimum level of local renewable energy production. To do so, they must cover at least 40% of the roof with solar panels. In practice, we find that most establishments eventually opt to cover the entire roof with solar panels. If additional energy is needed, establishments may only use a green energy contract for this purpose.

## FoodHub in Antwerp: Tackling urban food chains and food waste

In addition to attracting circular establishments, other key stakeholders also involve Blue Gate Antwerp in their quest to resolve circular issues. In doing so, they each see the unique potential added value of the Blue Gate concept as a solution. The story of the Antwerp FoodHub illustrates this. As part of a sustainable food strategy, BGAD has been taking part in a working group since 2022, investigating whether and how a circular food hub could prove beneficial for a city like Antwerp. This involves looking at a physical central location, preferably on the outskirts of the city, where all kinds of food flows come together and food waste streams are put to new uses.

> A circular business park can become an attractive habitat for establishing a circular food system. This project is now taking further shape with the drafting of a business plan and the rollout of the first pilots.

# highlight

## Did you know?

All new business premises on the site have undergone an embodied carbon analysis. The aim is to paint the clearest possible picture of the actual  $CO_2$  emissions over the entire life cycle of the building. This gives establishments insight not only into their scope 1 and scope 2 emissions, but also into the related scope 3 emissions at establishment level. To achieve this, we carry out detailed measurements in accordance with the appropriate standards.

# 4.2. CO<sub>2</sub>-neutral business park as the starting point

A  $CO_2$ -neutral economy has its price. This is illustrated inter alia by the mounting regulatory frameworks and by extension in the price per tonne of  $CO_2$ , which has tended to rise in recent months and years. This highlights the importance of preparing to reduce and minimise our  $CO_2$  emissions in order to become climate-positive.

The provision of a fully underground heat grid system on the site anticipated this. To provide  $CO_2$ -neutral heat, BGAD is dependent on a number of parties. Although several possibilities have been explored in recent years, no sustainable residual heat from nearby incinerators is so far available. In collaboration with Fluvius and Aquafin, alternatives for tapping into waste heat, such as the potential of sewer heat, are being further explored.

highlight

## The potential of energy communities unravelled

A study was conducted in conjunction with park manager Quares on the opportunities and benefits of a local energy community. This included exploring how locally generated energy can not only be used for local establishments, but may also be shared with nearby businesses, residents or charging infrastructure. Conversely, it also explored how surplus solar energy from residents nearby could also be used on the site or for future electric mobility capacity. A regionally balanced energy ecosystem can be created in this way, contributing to the City of Antwerp's climate goals. The study has already established a sound basis on which to graft future actions. Despite the fact that  $CO_2$ -neutral heat has so far been delivered, BGA is still sticking to its target. In the buildings, work continues on  $CO_2$ -neutral heating and cooling by installing heat pumps. The opportunity to connect to the heat grid will be provided in each building. High-tech buildings with simultaneous cooling and heating demand benefit more from two energy sources and connect to the heat grid.

Special mention goes to the planned development of 'Blue Gate Terminal', the 80,000 m<sup>2</sup> stacked city-supporting business complex, with an environmental permit pending. This complex, unique in Belgium, will be a prime example of  $CO_2$ -neutrality and circularity. The building will have  $CO_2$ -neutral heating with cooling via heat pumps fed by the 5MW of solar panels on the roof. The building is targeting an Outstanding BREEAM score.





In 2023, UAntwerpen celebrated the opening of BlueApp, our innovation hub for sustainable chemistry and materials. We are already finding that at Blue Gate Antwerp we have found the perfect location and partners to allow our innovations to filter through to the business world and society. The close proximity of the City, the Port and initiatives such as BlueChem give our researchers huge motivation to realise the potential of research.

> Quinten Van Avondt, University of Antwerp – BlueApp

## 4.3. Actions on the site

A number of initiatives have been undertaken at site level in recent years to promote energy reduction and circularity and to minimise water wastage. These initiatives are not limited to the site development phase, but are also applied to the construction of buildings in collaboration with Blue Gate Antwerp Building (BGAB).

## Site development phase

- Remediation during the second and third phases was carried out 100% on-site (without earth movement) and using a biological method, saving a total of some 105,000 truck kilometres, or some 200,000 tonnes of CO<sub>2</sub>.
- New soil for the embankment works was partly delivered by water. The DHL Express and Amazon sites also relied on sustainable water transport. In the process, a total of 1,478 tonnes of precast concrete and steel structure were transported by water.
- The rubble from the demolished buildings on the site was reused almost in its entirety for sub-foundations in the construction of road infrastructure. In total 99.9% was re-employed. A neat example of circularity!
- Parts of the **historical heritage** were reclaimed and will be restored.

on-site remediation 5,000 truck journeys saved

> In practice, it remains a challenge to attract water-related businesses to establish on the site. To date, no ideal match has been achieved, so the potential of the water-bound part of the site has not yet been fully exploited.

> However, use has meanwhile been made of sustainable water-bound transport in the delivery of construction materials and in the embankment works for the current construction sites. The ambition remains unchanged, and the development plans drawn up with establishments will explore where opportunities arise to make better use of the waterfront quay.

## **Construction of buildings**

- A life cycle analysis is prepared for each building to determine its embodied carbon in construction and use. Materials and construction methods are assessed for their embodied carbon, lifespan and potential for reuse or recycling. This methodology enables the right choice in terms of building materials. At Amazon and Terminal, for example, non-bonded facades were used so that not only are these facades reusable, but their individual elements can also be reused separately.
- In addition to the minimum 40% roof coverage with photovoltaic (PV) panelsas required by the establishment conditions, the potential for local renewable energy is maximised by covering the roofs as extensively as possible with PV panels. Where necessary, additional structures are provided to allow more generation. The yield from the PV panels offsets the additional CO<sub>2</sub> impact of the built structures. Currently, the completed buildings generate 47% more energy from PV panels than the 40% stipulated in the establishment conditions.
- During the **buildings study**, various simulations are conducted thermal dynamic studies, for example – in order to assess the distinct scenarios quantitatively. These scenario studies included the addition of limited cooling in Terminal's operating halls to significantly increase comfort. By using the heat pumps and convectors already provided, comfort could be enhanced in a cost-efficient and sustainable way.
- CO<sub>2</sub> impact is not only minimised on paper. A range of commissioning protocols compliant inter alia with BREEAM are applied to verify the actual performance of the building systems to ensure that the proposed efficiencies are achieved. BlueApp's installations, for example, were tested digitally through Hysopt and via a comprehensive commissioning protocol prior to provisional acceptance, and some shortcomings were identified and corrected early.

## 4.4. Progress table - targets



Circularity & zero-waste

Target	Progress	КРІ	<b>2020</b> (cum.)	<b>2023</b> (cum.)
BGAD advises and encourages establishments on the prevention, reduction, recycling and reuse of waste.	Current	Total recycling Total reuse		
BGAD inventories and monitors the materials used in remediation, embankment and infrastructure works.	Complete	TOTAL remediated ground	71.75 ha 90%	80 ha 100%
		On-site remediated ground	25,000 m <sup>3</sup>	78,000 m³
		Remediated sludge in the Leigracht	0 tonnes	20,000 tonnes
		Local rubble used for foundations	99.9%	99.9%
BGAD launches the 'Circular Construction Consolidation Centre' (C-CCC) where operations such as reverse logistics, collection and reuse of construction waste and materials take place.	Not continued*			

\*Our first CSR report referred to the potential of a circular construction consolidation centre. Such a centre can be understood as a hub where various operations such as collection, reuse and reverse-logistics of construction waste and materials take place under an open platform format. This avenue has been thoroughly investigated in recent years and a survey of various stakeholders was carried out. The research shows that there is currently insufficient momentum for change to put such a hub into practice now. For this reason, this evenue will not be further developed within Blue Gate Antwerp.


-@

Target	Progress	КРІ	2020 (cum.)	2023 (cum.)
BGAD conducts a Life Cycle Analysis (LCA) for each new commercial building on the site to identify embodied carbon during construction and use.	Current	Average embodied carbon per building		
BGAD's establishment conditions require establishments to use at least 40% of their roof area for solar panels, to purchase only green electricity and to comply with the REG quick scan (Rational Energy Use).	Current	Number of kWp from solar panels	69 kWp (min = 53 kWp under the establish- ment con- ditions, so 30% more)	1,763 kWp (min = 1,201 kWp under the establish- ment con- ditions, so 47% more)
BGAD minimises its CO <sub>2</sub> emissions during site remediation works.	Complete	Number of freight vehicle kilometres saved (@ two trips of 21 km)	59,500 km	185,640 km
		Number of freight vehicles saved (@30 ton)	1,417	4,420
		CO <sub>2</sub> emission savings in kg (@0.95 kg CO <sub>2</sub> /km)	56,525 kg	176,358 kg
BGAD installs heat grid on site connect- able to transport network	Complete	Binary	Yes	Yes
BGAD maps the infrastructure present on the site to facilitate energy sharing (energy communities) and consump- tion matching.	Not continued			

# 5. **To live** together





# 5.1. BGAD within a wider network

BGAD maintains valuable partnerships with various umbrella organisations and knowledge bodies.

These close collaborations include a strategic alliance with the University of Antwerp through BlueApp, a synergistic relationship with BlueChem, a partnership with Essencia and VOKA, and a partnership with Natuurpunt as the nature conservation organisation involved on the site. BGAD works with CIFAL Flanders (UNITAR) on the implementation of the United Nations Sustainable Development Goals (SDGs).



During Dimitri Torfs' business presentation, we were given an insight into the ambitions and impactful activities in terms of sustainability knowledge and implementation. This certainly contributes to the achievement of the SDGs, locally and globally. This case perfectly illustrates UNITAR's core mission: to strengthen and disseminate knowledge about the SDGs and translate these insights into concrete sustainability actions in both enterprise and society. Blue Gate Antwerp Development can rightly be called an SDG Champion!

> Nikhil Seth, UN Assistant Secretary General & Executive Director UNITAR

# 5.2. Engagement with the surrounding area

By proactively informing local residents and businesses about our plans and activities, we build trust. Interaction with the neighbourhood ensures that new establishments are also welcomed with open arms.

In 2022, a start was made to organise the very first community activities so that the local community got to know the site as a physical link, as a showcase of circular activity and as part of their own environment. Neighbourhood activities were offered free of charge and aimed at the widest possible public. The result is in. No fewer than 1,097 local residents taken part in a wide range of activities over the past two years activities at the initiative of Blue Gate Antwerp. These events have included two successful Easter egg hunts, where enthusiastic neighbourhood children searched the site among the budding trees. For these activities, we collaborated with Compaan, a bespoke company that offers circularly produced chocolate. In late 2022 we organised the first Halloween event, a walking trail with exciting themed street entertainment. The first World Cleanup Day event during which the entire Blue Gate Antwerp site was made litter and fly-tipping free, also hit the mark.

# Did you know?

Circular chocolate – does that really exist? Bespoke company Compaan joined forces with Cacaolab (a spin-off of UGent) and chef Olly Ceulenaere (from the Michelinstarred restaurant Publiek in Ghent) to give unsaleable chocolate, along with fruit and other food waste streams, a second life in the form of filled chocolates.

The result is more than worth a taste!



#### Woolly lawnmowers

Blue Gate Antwerp strives to blend every aspect of the site as harmoniously as possible with people, animals and nature. As an illustration of this commitment, the vacant public areas and the private spaces occupied by establishments alike are grazed by sheep. This practice helps reduce on-site CO<sub>2</sub> emissions while ensuring sustainable site maintenance. For this purpose, a partnership has been established with De Antwerpse Stadsherder, the city's shepherd organisation. This not only created an attractive landscape, but also contributed to reduced noise pollution by avoiding the use of conventional lawnmowers.



#### 5.3. Focus on temporary uses

Anyone who has already visited Blue Gate Antwerp cannot have failed to notice the 60 containers at Plein Publiek. Plein Publiek made its temporary appearance on the site in 2021 with a limited-term environmental permit. Just because of this short-term stay, Square Public is an atypical establishment, organising events and providing an attractive hotspot for creative entrepreneurs. BGAD has cooperated in various circular LOOP Impact events at this venue on a regular basis.



Studio Orimi provided a temporary artistic feature on the site in summer 2023. Mieke Smet, the face behind Studio Orimi and also a local resident, showed her latest art installation 'Dark Clouds, Bright Clouds' at Blue Gate Antwerp. The impressive cloud sculptures were suspended from the long row of rusty overhead oil pipelines, the impressive piece of industrial heritage that recalls the bygone heyday of Petroleum South. The sculptures, made of recycled polypropylene, symbolise the hoped-for transition to a cleaner world. Mieke was inspired by the story of the start-up Fairbrics, based at BlueChem. This company captures  $CO_2$  from the atmosphere to produce fibres for the clothing industry. A circular, synergistic story whose link with the BGA site and neighbouring residents is not far to seek.



# 5.4. Communication as the essential glue

A smooth flow of communication is crucial in developing a well-oiled and high-quality business park. To ensure this in the long term, several initiatives have been launched both to support communication to and between establishments and aimed at a wider stakeholder audience.

Once every three years a stakeholder dialogue takes place, sharing important developments and gathering feedback. Establishments, the partners to the PPP and external stakeholders all take part.

In addition, the general meetings of Parkmanagement VZW act as a channel of communication for and with the establishments. These meetings focus on progress and cooperation on the site.

A twice-yearly newsletter is sent out to support establishments and the wider stakeholder audience. Finally, we should mention the three-yearly sustainability report of which this is the second edition.

### Did you know?

Blue Gate Antwerp has its own web site. This contains information and updates on the progress of the development of the business park. At the end of 2023 we started the process of creating a new web architecture for the site. The result can be expected in first half of 2024. Recent developments can be closely followed via the Blue Gate Antwerp business park page on LinkedIn.

# 5.5. Progress table – targets



## Transparency & communication

Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD provides a sustainable signage plan on the site.	At start-up	Binary	Νο	No
BGAD envisages a makeover of the cur- rent website which will also incorporate a portal for establishments.	At start-up	Binary	No	Νο
BGAD organises stakeholder consultation through a management committee, stakeholder consultation,	Continuous	Management committee	Annually	Annually
etc.		Stakeholder event	Once ev- ery three years	Once ev- ery three years
BGAD issues a CSR report on its business activities, taking an exemplary role on transparent corporate policies.	Once every three years	Number of sus- tainability reports from the site	1	3



# Well-being & engagement

Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD facilitates social employment collaboration with the nearby detention centre.	At start-up	Number of hours achieved	0	0
BGAD aspires to build a vibrant community.	At start-up	Binary	No	Νο
BGAD promotes sustainable and safe employment on the site.	Continuous	Number of FTEs under permit	90 FTE	385 FTE
BGAD is involved in its surroundings and organises regular neighbourhood activities.	Continuous	Number of neigh- bourhood activities	0	5
BGAD sets a clear framework of values.	Complete	Binary	Yes	Yes



Target	Progress	КРІ	2020 (cum.)	2023 (cum.)
BGAD preserves the industrial heri- tage and ensures its maintenance and conservation.	Current	Binary	Νο	No
BGAD is exploring other ways to make further positive contributions to the community: e.g. incorporating art in the park, exhibition, temporary uses of APC warehouse, etc.	Current	Number of temporary uses	0	2
BGAD is developing the site according to the image quality plan, thus guaranteeing accessibility and destination value.	Continuous	Binary	Yes	Yes
BGAD promotes the use of infrastruc- ture for urban farming and aspires to optimise the image quality plan for rooftop greenhouses.	Not continued			



# 6. **To make** it last

A business park only becomes truly sustainable if it manages to secure this ambition in the long term. This involves preserving the value of the site for the longer term, where "value" has not only an economic but also a social and an environmental meaning. Sustainable profitability and forward-looking longterm thinking go hand in hand. The need for more circular dynamics in an urban setting ensures that the ground-breaking Blue Gate concept in Antwerp will serve as a model for development in other cities and even across national borders. The importance of knowledge-sharing, maximum transparency and openness plays a crucial role.

### 6.1. BGA: the vibrant campus

Because of the increasing presence and activity of establishments on the site, Blue Gate Antwerp will focus on the creation of its on-site facility point in the coming years. As more establishments move into the site, there will be a growing need for collective infrastructure and services, with the provision of a business centre and restaurant offering.

A start was made on the conceptual approach to these facilities in 2023. They contribute to the vision of a business campus as a place that is part of the city through its circular business activity, facilities, employment, knowledge potential and shared open space. By combining the business operations of the facility point with an open offer, this space can reach its full potential. Blue Gate Antwerp as gateway to the circular city of the future.

The first phase will involve work on the actual development of the facility centre, which will be housed in the new Terminal building (see p. 59). This spot will become the beating heart of the BGA site with the completion of a business centre, dining area and event space. The facility point will function as a central meeting place for establishments and visitors but will also serve local residents and passers-by. Consequently, it will act as a support hub where a variety of future activities will take place on the BGA campus.



# 6.1.1. Knowledge-sharing as a driving force

Besides facilitating various corporate visits at the site itself, BGAD strives to share its knowledge to the maximum through events and active participation in a range of learning networks. Through inspiring lectures, involvement in working groups and collaboration with leading knowledge institutions, BGAD offers insights into the complex multi-year journey involved in creating a Blue Gate.

At the request of Antwerp University, Blue Gate Antwerp was presented as a 'best practice' during the Business Model Conference held in Bologna. Presentations on the development of the BGA site were also given on several occasions during the annual SDG Forum Belgium event. Furthermore, BGA actively participated in the learning network concerning 'business parks in transformation' and took part in a speeddating event with Dutch entrepreneurs during the Climate Tech Forum. There has also been repeated participation in the Action Learning Day and CIFAL Flanders' Action Learning Platform. As the icing on the cake, BGAD was on stage at the General Assembly of the CIFAL Global Network (UNITAR) at the Palais des Nations in Geneva in late 2023 to share our insights into sustainable site development.



# Knowledge-sharing is where our strength lies in making the sustainable transition a reality.

Maximum knowledge-sharing and engagement in the broad sense of the word are an essential part of our mission not just to develop a physical location, but to serve as a source of inspiration and knowledge for the sustainable transition at regional and international level.

Dimitri Torfs, Business Development BSI – Bopro

# 6.1.2. Taught leadership as kick-start for system change

BGAD is committed to a supremely effective approach to promoting sustainable systems change.

 The process of systems change
 is complex and challenging, but success is essential to achieve our climate goals.

To accelerate in meeting this challenge, the various stakeholders within BGAD joined forces in a PPP structure. By also mutually investing in a variety of initiatives on the BGA site itself, they go one step further.

Striking examples include the involvement of PMV and Bopro in the development of the new Terminal building. The PPP structure behind the incubator BlueChem also involves the partners Bopro, DEME Group, PMV and AG Vespa.

These joint efforts serve as a powerful lever, aiming to create an effective springboard for the intended systems change.



#### Did you know?

BGAD was first recognised as an SDG Pioneer in 2018 and received the associated UNITAR Training Certificate of Completion. This certification rewarded the efforts made to achieve the Sustainable Development Goals (SDGs). Building on this, BGAD undertook to become an SDG Champion. CIFAL Flanders has validated BGAD's efforts in the six areas identified in the PCA2030 Trajectory and following approval by an external panel the UNITAR Training Certificate of Completion at SDG Champion level will be awarded early in 2024. BGAD is proud that its sustained long-term efforts towards sustainability will be recognised through this route, thus contributing to the success of establishments!





Blue Gate Antwerp's integrated approach demonstrates a cutting edge commitment to sustainability.

The site visit was a unique experience. It is remarkable to see how not only the site itself, but also the buildings and operations of the establishments are aligned with sustainable ambitions of the City of Antwerp. The commitment to circularity and the tangible steps taken in this direction make Blue Gate Antwerp an inspiring example not only for other business parks, but also for the wider community.

Jan Jambon, Flemish Minister-President

# 6.1.3. The site as an open testbed for visitors

In keeping with the front runner philosophy, Blue Gate Antwerp wants to open up the site and share knowledge as much as possible.

 As developers of this future-proof business park, BGAD believes that other European cities may also be interested in establishing and developing a Blue Gate.

This accumulated knowledge of the concept, the Blue Triangle and the various aspects of the development of the site will be shared during active site visits. This will allow visitors to experience at first hand how a Blue Gate is developed and built. In recent years, very many delegations, companies, educational institutions, policy bodies and local authorities have visited the Blue Gate Antwerp site. This did not stop at national bodies; several international groups also found their way to our site.

Some notable highlights. In June 2022 Blue Gate Antwerp had the special honour of welcoming Flemish Minister-President Jan Jambon to the site. Visitors have also been welcomed from neighbouring countries, including representatives from the Dutch embassy and consulate. In September 2022, a delegation of planners from South Korea visited the site. In late 2022, we had the pleasure of hosting environmental experts from North Kurdistan. Besides these official bodies, a number of educational institutions have also explored the 'Blue Gate Antwerp' site. This includes a delegation from Karel de Grote Hogeschool and representatives from Health Campus Diepenbeek. The diversity of the audience illustrates the broad professional and academic interest at different levels as well as the social relevance that Blue Gate Antwerp has since introduced.

## 6.2. BGAD prepares for the changing regulations

Managing climate risks is BGAD's top priority. Indeed, increasing global warming poses a variety of transition risks for sites and buildings alike. This is because of both physical risks such as extreme temperatures and rainfall, and more specific transition risks such as higher energy prices, changing legislation such as the EU taxonomy, stricter insulation standards and energy performance requirements or changing market demands. Economic risks should be carefully factored in, prioritising the steering of capital flows towards green, sustainable investments. By including the 'just transition' in the European Green Deal, the EU has drawn targeted attention to the importance of not leaving social risks unaddressed.

Future-oriented development and construction therefore means taking into account all the preceding risks at every stage of the development process. The holistic approach adopted, which fully integrates these risks into the development process from the start, is now paying off. On the BGA site, businesses are guaranteed that their premises are in a climate-resilient location with significantly less risk of flooding. Water buffers and watercourses also provide a strategic water reserve to irrigate the adjacent Hoboken Polder nature reserve during droughts or as additional security for the secondary fire-fighting water supply. A similar approach to risk management is applied to the development of business premises. Establishments are advised on how best to address climate issues and sustainability risks at the building level.



Water buffers & watercourses

### 6.3. Profitability as the key to growth

Future-oriented sustainable growth is inextricably linked to financial profitability, and an eco-effective business park is no exception. Accordingly BGAD seeks the ultimate balance between economic, social and environmental aspects. Generating impact simply requires profit. This profit is reinvested year after year, not so much to minimise its own negative impact, but especially to generate an even greater positive impact. Ultimately, this lies at the heart of the Blue Gate narrative.

When striving to achieve realistic sustainable growth, BGAD has set clear targets for itself, and for its establishments through their development plans. Focused on tomorrow's challenges, we use Blue Gate as a catalyst to help 'fast followers' to grow into 'front runners'. We refer again to the methodology behind the Blue Triangle (see p. 14) where site, building and sustainable business activity are fundamentally mutually reinforcing. Bringing together the right partners, encouraging synergies, facilitating sustainable progress and offering a seedbed geared towards sustainable growth creates an integrated approach. All with the aim of thriving economically while simultaneously achieving sustainable developments and a positive social impact.



Striving for a healthy balance between financial profitability and long-term sustainable impact is a must.

Businesses that set up at BGA are choosing a future with a positive and long-term impact. This can succeed only if a viable and economically profitable business case is developed. BGAD and BGAB, together with the establishments, keep a close eye on whether economic added value can be created alongside social and environmental objectives. This added value, in turn, ensures the sustainable growth of the establishments. Pursuing a feasible and economically profitable business case is crucial to ensuring a positive long-term impact. We believe that sustainability is based not only on environmental considerations, but also on creating economic added value that in turn enables sustainable growth.

> Peter Garré, Managing Director Bopro nv Director BGAD NV – BGAB NV

# 6.4. Progress table – targets



Transparency & communication

Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD aspires to SDG Champion certification.	Almost complete	Binary	No	Νο
BGAD promotes the Blue Gate (Antwerp) concept in Belgium and	Continuous	Talks in Belgium	5+	15+
abroad by giving talks, and actively participating in knowledge-sharing events and various working groups.		Talks abroad	0	5+
		Number of site visits by domestic organisations	5+	10+
		Number of site visits by foreign organisations	0	3
BGAD promotes knowledge exchange between education and the world of work.	Continuous	Number of visits by educational institutions		3
		Number of external talks for educational institutions		2



Target	Progress	KPI	<b>2020</b> (cum.)	2023 (cum.)
BGAD aims to file a fully CSRD- compliant third sustainability report.	At start-up	Binary	Νο	Νο
BGAD provides water buffering through the use of watercourses with delayed discharge into the Leigracht, thus	Complete	Water buffering provided	12,604 m <sup>3</sup>	14,774 m <sup>3</sup>
developing a flood-safe site up to level T100.		Water buffering provided	85%	100%
BGAD is constructing the future quay at SIGMA height as well as raising the site to future elevation levels.	Complete	Binary	Yes	Yes





# 7.1. Reporting in accordance with GRI Standards – with reference

The previous sustainability report was based on the GRI Universal Standards 2016 – Core. Since January 2023, the revised GRI Universal Standards 2021 have been in force, whereby 'GRI 1 - Foundation 2021' was prioritised. Blue Gate Antwerp Development reports on its activities every three years. The content of this ESG report was determined by BGAD's sustainability team, consisting of Bopro's sustainability directors and members of BGAD's management committee, and approved by BGAD's board of directors. The present report contains both quantitative and qualitative KPIs.

This second sustainability report covers the period 2020-2023.

# 7.2. GRI Standards content index

<b>GRI Standard</b>	Notes	Chapter
GRI2: General Disclo	osures 2021	
1. The organisation and its reporting practices	2-1 Organisational details	2.1. The match between public and private 3.1. From design to completion 10. Contact
	2-2 Entities included in the organisation's sustainability reporting	2.1. The match between public and private
	2-3 Reporting period, frequency and contact point	7.1. Reporting in accordance with GRI Standards – with reference 10. Contact
	2-4 Restatements of information	<ol> <li>2. To match and engage</li> <li>3. To build it</li> <li>4. To make it circular and CO<sub>2</sub>-neutral</li> <li>5. To live together</li> <li>6. To make it last</li> <li>Each chapter builds on the previous report</li> </ol>
	2-5 External assurance	no external guarantee
2. Activities and workers	2-6 Activities, value chain and other business relationships	<ul><li>1.4.1. The Blue Triangle, a mission and vision</li><li>2.1. The match between public and private</li><li>2.2. Management and governance</li><li>2.3. The perfect match between</li><li>establishment and site</li><li>5.2. Engagement with the surrounding area</li></ul>
	2-7 Employees	2.2. Management and governance
	2-8 Workers who are not employees	2.2. Management and governance
3. Governance.	2-9 Governance structure and composition	2.2. Management and governance
	2-12 Role of the highest governance body in overseeing the management of impacts	1.5.2. Stakeholder engagement 1.5. The report: methodology and double materiality
4. Strategy, policies and practices	2-22 Statement on sustainable development strategy	1.1. Chairman's introduction
	2-23 Policy commitments	<ul> <li>1.5.3. Reporting frameworks</li> <li>1.4.2. The Be Good and Dare framework of values</li> <li>RICS (Bopro)</li> <li>Code of ethics &amp; business integrity (DEME);</li> <li>City of Antwerp code of conduct (AG Vespa);</li> <li>Code of corporate governance (PMV);</li> <li>Vlaamse Waterweg code of conduct (De Vlaamse Waterweg)</li> </ul>
5. Stakeholder engagement	2-24 Embedding policy commitments	<ol> <li>2. To match and engage</li> <li>3. To build it</li> <li>4. To make it circular and CO<sub>2</sub>-neutral</li> <li>5. To live together</li> <li>6. To make it last</li> </ol>
	2-28 Membership associations	VOKA Antwerpen-Waasland CIFAL Flanders
	2-29 Approach to stakeholder engagement	1.5.2. Stakeholder engagement
	2-30 Collective bargaining agreements	Shareholder representatives only
	3-1 Process to determine material topics	

3-1 Process to determine material topics

GRI Standard	Notes	Chapter
GRI 3: Material Top	ics 2021	
2. Disclosures on material topics	3-1 Process to determine material topics	1.5. The report: methodology and double materiality
·	3-2 List of material topics	1.5.4. The double materiality matrix
	3-3 Management of material topics	<ul> <li>2. To match and engage</li> <li>3. To build it</li> <li>4. To make it circular and CO<sub>2</sub>-neutral</li> <li>5. To live together</li> <li>6. To make it last</li> <li>In each of these chapters, the material topics are discussed in detail (see progress tables for which materialities are discussed within which chapter)</li> </ul>
	3-3 Evaluation of the management approach	<ul><li>2.7. Progress table</li><li>3.7. Progress table</li><li>4.4 Progress table</li><li>5.5. Progress table</li><li>6.4. Progress table</li></ul>
GRI 204: Procureme	nt practices 2016	
	204-1 Proportion of spending on local supplier	2.7. Progress table – targets: future-oriented growth
GRI 301: Materials 20	016	
	301-1 Materials used by weight or volume	4.4. Progress table – targets: circularity and zero-waste
	301-2 Recycled input materials used	4.4. Progress table – targets: circularity and zero-waste
GRI 303: Water and e	effluents 2018	
	303-3 Water withdrawal	3.7. Progress table – targets: sustainable water management
	303-5 Water consumption	3.7. Progress table – targets: sustainable water management
GRI 304: Biodiversity	2016	
	304-3 Habitats protected or restored	3.7. Progress table – targets: Biodiversity and environmental quality
GRI 305: Emissions 2	016	
	305-1 Direct (Scope 1) GHG emissions	4.4. Progress table – targets: Net zero & renewable energy

# 8. Targets and KPIs





Matchmaking with eco-effective companies

Target	Progress	KPI	<b>2020</b> (cum.)	<b>2023</b> (cum.)
As a result of the development plans, BGAD also supports establishments in preparing for the new CSRD legislation, including workshops on circularity and stakeholder engagement.	Current	Number of CSRD workshops	0	1
BGAD's marketing focuses on knowledge companies, innovative production, research & development,	Continuous	Average identifica- tion tool score	75%	71%
preferably in sustainable chemistry, clean tech and smart logistics, but business activities take precedence. An		Number of establishments	1	8
identification tool is used.		Number of estab- lishments in devel- opment phase	3	6
As per BGAD's establishment conditions, all establishments are required to produce a development plan and a CSR report in line with the GRI criteria.	Once every three years	Number of current development plans	1	8

# Future-oriented growth

Target	Progress	КРІ	<b>2020</b> (cum.)	<b>2023</b> (cum.)
BGAD supports establishments in their sustainable growth with a view to mak- ing life easier at every stage (BlueApp > BlueChem > Terminal).	At start-up	Number of growth paths (transition)		
BGAD takes care of the overall development of the site, focusing on synergies between the different establishments.	At start-up	Number of synergies		
BGAD is exploring the appropriateness of opening the Facility Point to local residents and external users. BGAD provides a Facility Point giving support services a place in the business centre.	Current	Binary	No	No
BGAD facilitates a park management organisation with establishments as members. The business park regula- tions require establishments to make a financial contribution to site mainte- nance, including the collective manage- ment of green spaces or the collective purchase of green energy.	Current	Binary	No	No
BGAD facilitates synergies with local suppliers.	Continuous	Proportion of expenditure with local suppliers (@> 30 and > 30 km)	70%	73%
BGAD is a public-private collaboration and has partnerships with Antwerp University (UA – BlueApp), BlueChem, CIFAL Flanders (support SDG's), VOKA, Natuurpunt and more.	Continuous	/	/	/
BGAD coordinates marketing with the Port of Antwerp (PoA) and Business & Innovation (B&I).	Continuous	/	1	1

# 8.2. To build it



Infrastructure & mobility

Target	Progress	KPI	<b>2020</b> (cum.)	2023 (cum.)
BGAD encourages and facilitates establishments making the modal shift, switching to more sustainable forms of mobility and transport.	At start-up	Binary	No	Νο
BGAD aims to integrate sustainable and alternative modes of transport for users of the BGA site (shared bicycles, shared scooters, public transport, etc.).	Current	Binary	No	Νο
BGAD pays attention to road safety: collective car parks, segregated traffic, dedicated loading and unloading zones, truck service zone, etc.	Current	Binary	No	No
BGAD promotes and supports water- bound transport on the site at all times.	Continuous	Number of tonnes of precast con- crete and steel structures delivered by water to DHL Express and Amazon sites		726 tonnes 30%
BGAD's conditions of establishment require BREEAM certification to safeguard its ambitions and methodology for achieving sustainable premises for establishments. The	Continuous	Number of BRE New Construction Excellent certifi- cates	0	2
structure under which BGAB acts as the buiding developer assists establishments in their search for sustainable premises.		Number of m <sup>2</sup> certified by BRE Average BRE score	0 m² 0%	7,635 m <sup>2</sup> 75.2%
BGAD aspires to achieve 'BREEAM Communities Excellent' certification for the entire site.	Complete	Binary	Yes	Yes



## Biodiversity & environmental quality

Target	Progress	KPI	<b>2020</b> (cum.)	2023 (cum.)
BGAD facilitates a park management organisation with establishments as members. The business park regula- tions require establishments to make a financial contribution to site mainte- nance, including the collective manage- ment of green spaces, etc.	Current	Binary	No	No
BGAD is remediating contaminated soil in accordance with the BATNEEC principle and the soil remediation plan.	Almost c omplete	Binary	No	Νο
BGAD plans a green corridor and landscaping of the private plots, consistent with the Hoboken Polder. This involves using and replenishing the City of Antwerp seed bank. Poor soils are used wherever possible.	Complete	Number of hectares in bio- diversity corridor	10.9 ha 75%	14,5 ha 100%



Target	Progress	KPI	<b>2020</b> (cum.)	2023 (cum.)
BGAD is creating sustainable infrastruc- ture to support business innovation The digital database of land and build- ings allows efficient infrastructure use.	Continuous	Number of buildings with BIM model	1 building	4 build- ings



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Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD promotes rainwater reuse and buffering at building level (by means of a secondary water network)	Current	Number of m <sup>3</sup> reused	No	Νο
BGAD provides a landscape design with only native plant species that do not require irrigation.	Complete	Binary	Yes	Yes
BGAD aims to practice sustainable water management and minimise water scarcity during remediation works.	Complete	Decontaminated ground and sur- face water	26,220 m <sup>3</sup>	256,243 m <sup>3</sup>
		Used main municipal water	153 m³	461 m³
		Ratio of used main water/reused drainage water	0.42%	0.18%

# 8.3. To make it circular and CO<sub>2</sub>-neutral



Circularity & zero-waste

Target	Progress	КРІ	<b>2020</b> (cum.)	<b>2023</b> (cum.)
BGAD advises and encourages establishments on the prevention, reduction, recycling and reuse of waste.	Current	Total recycling Total reuse		
BGAD inventories and monitors the materials used in remediation, embankment and infrastructure works.	Complete	TOTAL remediated ground	71.75 ha 90%	80 ha 100%
		On-site remediated ground	25,000 m³	78,000 m³
		Remediated sludge in the Leigracht	0 tonnes	20,000 tonnes
		Local rubble used for foundations	99.9%	99.9%
BGAD launches the 'Circular Construction Consolidation Centre' (C-CCC) where operations such as reverse logistics, collection and reuse of construction waste and materials take place.	Not contin- ued*			

\*Our first CSR report referred to the potential of a circular construction consolidation centre. Such a centre can be understood as a hub where various operations such as collection, reuse and reverse-logistics of construction waste and materials take place under an open platform format. This avenue has been thoroughly investigated in recent years and a survey of various stakeholders was carried out. The research shows that there is currently insufficient momentum for change to put such a hub into practice now. For this reason, this avenue will not be further developed within Blue Gate Antwerp.



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Target	Progress	KPI	<b>2020</b> (cum.)	2023 (cum.)
BGAD conducts a Life Cycle Analysis (LCA) for each new commercial building on the site to identify embodied carbon during construction and use.	Current	Average embodied carbon per building		
BGAD's establishment conditions require establishments to use at least 40% of their roof area for solar panels, to purchase only green electricity and to comply with the REG quick scan (Rational Energy Use).	Current	Number of kWp from solar panels	69 kWp (min = 53 kWp under the establish- ment con- ditions, so 30% more)	1,763 kWp (min = 1,201 kWp under the establish- ment con- ditions, so 47% more)
BGAD minimises its CO <sub>2</sub> emissions during site remediation works.	Complete	Number of freight vehicle kilometres saved (@2 trips of 21 km)	59,500 km	185,640 km
		Number of freight vehicles saved (@30 ton)	1,417	4,420
		CO <sub>2</sub> emission savings in kg (@0.95 kg CO <sub>2</sub> /km)	56,525 kg	176,358 kg
BGAD installs heat grid on site connect- able to transport network	Complete	Binary	Yes	Yes
BGAD maps the infrastructure present on the site to facilitate energy sharing (energy communities) and consump- tion matching.	Not continued			

# 8.4. To live together



## Transparency & communication

Target	Progress	КРІ	2020 (cum.)	2023 (cum.)
BGAD provides a sustainable signage plan on the site.	At start-up	Binary	No	No
BGAD envisages a makeover of the cur- rent website which will also incorporate a portal for establishments.	At start-up	Binary	Νο	Νο
BGAD organises stakeholder consultation through a management committee, stakeholder consultation,	Continuous	Management committee	Annually	Annually
etc.		Stakeholder event	Once ev- ery three years	Once ev- ery three years
BGAD issues a CSR report on its business activities, taking an exemplary role on transparent corporate policies.	Once every three years	Number of sus- tainability reports from the site	1	3



# Well-being & engagement

Target	Progress	KPI	2020 (cum.)	2023 (cum.)
BGAD facilitates social employment collaboration with the nearby detention centre.	At start-up	Number of hours achieved	0	0
BGAD aspires to build a vibrant community.	At start-up	Binary	No	Νο
BGAD promotes sustainable and safe employment on the site.	Continuous	Number of FTEs under permit	90 FTE	385 FTE
BGAD is involved in its surroundings and organises regular neighbourhood activities.	Continuous	Number of neigh- bourhood activities	0	5
BGAD sets a clear framework of values.	Complete	Binary	Yes	Yes



Target	Progress	KPI	2020 (cum.)	2023 (cum.)
BGAD preserves the industrial heri- tage and ensures its maintenance and conservation.	Current	Binary	Νο	No
BGAD is exploring other ways to make further positive contributions to the community: e.g. incorporating art in the park, exhibition, temporary uses of APC warehouse, etc.	Current	Number of temporary uses	0	2
BGAD is developing the site according to the image quality plan, thus guaranteeing accessibility and destination value	Continuous	Binary	Yes	Yes
BGAD promotes the use of infrastruc- ture for urban farming and aspires to optimise the image quality plan for rooftop greenhouses.	Not continued			

# 8.5. To make it last



Transparency & communication

Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD aspires to SDG Champion certification.	Almost com- plete	Binary	No	Νο
BGAD promotes the Blue Gate (Antwerp) concept in Belgium and	Continuous	Talks in Belgium	5+	15+
abroad by giving talks, and actively participating in knowledge-sharing events and various working groups.		Talks abroad	0	5+
		Number of site visits by domestic organisations	5+	10+
		Number of site visits by foreign organisations	0	3
BGAD promotes knowledge exchange between education and the world of work.	Continuous	Number of visits by educational institutions		3
		Number of exter- nal talks for educational institutions		2



Target	Progress	КРІ	<b>2020</b> (cum.)	2023 (cum.)
BGAD aims to file a fully CSRD- compliant third sustainability report.	At start-up	Binary	Νο	No
BGAD provides water buffering through the use of watercourses with delayed discharge into the Leigracht, thus	Complete	Water buffering provided	12,604 m <sup>3</sup>	14,774 m <sup>3</sup>
developing a flood-safe site up to level T100.		Water buffering provided	85%	100%
BGAD is constructing the future quay at SIGMA height as well as raising the site to future elevation levels.	Complete	Binary	Yes	Yes



# 9. **Lexicon**

## AG Vespa

The City of Antwerp is a co-founder of this project via the autonomous municipal company for real estate and urban projects (AG Vespa).

### BGAB

Blue Gate Antwerp Building NV, the developer of the buildings on the BGA site.

# **Blue Gate Antwerp**

Blue Gate Antwerp, the business park developed by BGAD.

#### BGAD

Blue Gate Antwerp Development NV, the developer of the ground at the BGA site.

### BlueOpen

The consortium formed by DEME Group (DEME Environmental & Dredging International) and Bopro (BSI) acting as the private partner within BGAD.

#### BGAPH

Blue Gate Antwerp Public Holding NV, the public partner organisation within BGAD.

### Bopro

Bopro Sustainable Investments nv is co-founder and private shareholder in BlueOpen. Bopro Sustainable Investements nv also carried out the management of the development in BGAB. The subsidiary Bopro is responsible for sustainability oversight, marketing and safety coordination on the whole BGAD site.

### **DEME Environment**

DEME Environment NV is the cofounder and private shareholder in Blue Open. In addition to its management tasks within BGAD as a PPP development vehicle, DEME Environment is also the operational contractor for the remediation and infrastructure works.

#### Vlaamse Waterweg

Vlaamse Waterweg nv is a Flemish government agency which manages waterways in Flanders and is a shareholder in BGAPH.

### Park management

Park management is responsible for day-to-day management and for implementing BGAD's vision for the business park. This includes management and maintenance of the business park and operation of the Facility Point. Park management on the site has been outsourced by BGAD to Quares.

# Park management structure

The non-profit association which brings together all site users for consultation with each other, BGAD and the City of Antwerp (via AG Vespa). Its purpose is to foster the long-term relationships between public and private partners.

#### PMV

Through do-and-dare company PMV, the Flemish government is investing in the remediation and redevelopment of the former Petroleum South site.

#### PPP

Public-private partnership BGAD is the PPP. The public partner is BGAPH and the private partner BlueOpen.

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