

BayWa

Building a sustainable future

BayWa is an international trading company operating in the fields of energy, agriculture and building materials. In this thematic report, which is the fifth in a sequence of short notes and interviews about BayWa, we explore how the company's building materials segment is responding to the need for the construction sector to adopt more environmentally responsible practices.

Construction industry needs to decarbonise

According to the International Energy Agency (IEA), around 37% of global energy- and process-related CO₂ emissions are attributable to the construction sector if the entire life cycle of buildings is taken into consideration, not just the energy used in heating, lighting and other operational activities. This means that there need to be radical changes in construction practices if the world is to meet the goal of achieving net zero carbon emissions by 2050, which was agreed at the COP 21 summit in Paris in 2015. Most attention has been focused on reducing operational carbon emissions in existing buildings through the installation of more efficient lighting and improving insulation. However, achieving a net zero built environment will necessitate designing with less material, selecting materials with a lower carbon impact such as wood, reusing materials and designing buildings to be reused or deconstructed.

BayWa is promoting more sustainable construction practices

BayWa is one of the largest building materials traders in Germany, with €1.9bn sales in FY20, so it is well placed to promote the adoption of more sustainable construction practices. It is doing this through involvement in construction projects with development partners that implement novel urban planning concepts such as inter-generational living and demonstrate the use of renewable energy and more efficient insulation. BayWa is also active in the development and launch of innovative, environmentally responsible products such as prefabricated bathrooms made predominantly out of wood, which is classed as a renewable material.

Consumer staples

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Share details

Code	BYW6
Listings	Frankfurt, Munich, Xetra
Market capitalisation	€1.4bn

Company description

BayWa has an international renewable energy business focused on solar and wind farms, and trades oil and lubricants in Germany and Austria. It also trades agricultural produce and equipment within Europe and globally and is a retailer of building materials in Germany.

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Building Materials segment business overview

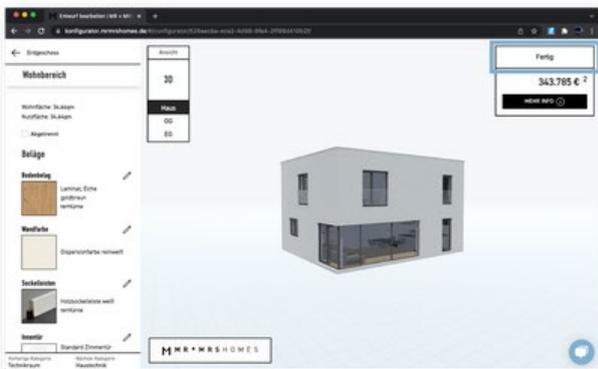
The BayWa group operates through three core segments: Energy, Agriculture and Building Materials, together with a smaller Innovation & Digitalisation segment. The Building Materials segment, which is the subject of this report, supplies building materials products and solutions for commercial and retail customers in southern Germany and Austria. In FY20, the segment generated sales of €1,899m, representing 11% of the group total and €46.9m EBIT, representing 16% of EBIT from operating segments.

Embracing more environmentally sensitive construction practices and increasing digitalisation

BayWa's Building Materials segment covers the entire range of products and solutions for building materials, from civil and structural engineering, construction, renovations and modernisation, gardening and landscaping, to software packages for energy efficiency and healthy living. The segment serves construction companies, municipalities, tradespeople and commercial enterprises, as well as individuals seeking to build or refurbish their homes. The product portfolio is complemented with a variety of services, as well as expertise and support on innovative topics such as healthy construction, energy efficiency and building information modelling (BIM).

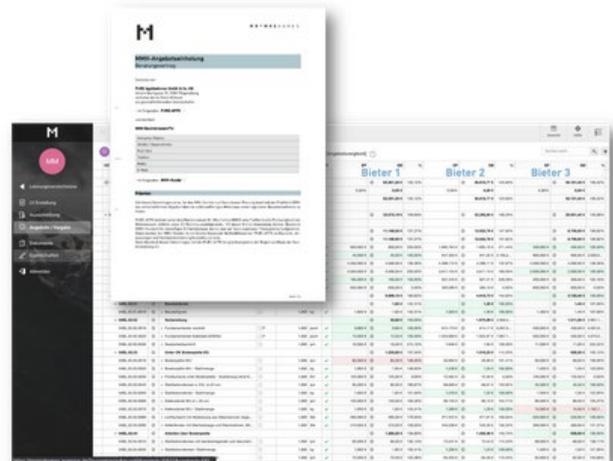
BayWa is the second-largest building materials trader in Germany, behind Raab Karcher with €2.5bn revenues and ahead of Bauking with €1.1bn revenues (2019). It has over 120 retail locations in southern and eastern Germany, as well as around 30 sites in Austria. It also serves a number of franchise partners in the building materials and retail business in Austria, which collectively operate around 1,000 sites. Management has decided not to grow the segment through geographical expansion – in fact, it undertook a restructuring programme, which completed in FY17, to reduce the number of sites it operated to improve efficiency. It has elected instead to enhance the product portfolio, strengthen online activity and to move up the value chain by combining products and services to create packaged solutions. For example, since 2018, the business unit has been working with construction companies in Germany on projects on a joint venture basis. As discussed below, these projects showcase energy-efficient building design, helping drive demand for innovative materials. In addition, profits from the sale of projects form an additional income stream.

Exhibit 1: Designing a house with 'Mr+Mrs Homes' software package



Source: BayWa

Exhibit 2: Choosing a building contractor with 'Mr+Mrs Homes' software package



Source: BayWa.

Digital services are becoming an increasingly important part of the portfolio, as the segment develops additional services and complementary sales channels. Examples include:

- **BayWa Building Materials Online portal:** an online shop for business and private customers, which is linked to BayWa's bricks-and-mortar sales network and its online platform to create a flexible omni-channel service. The online portal offers professional customers integrated support functions for their business processes such as receipt management.
- **BayWa room designer:** a virtual planning tool for houses.
- **'Mr+Mrs Homes' property configurator:** a BIM software package (www.mrmrshomes.de) based on a 3D house model developed by the BayWa Group company PURE Applikationen. The package enables private individuals, developers and construction firms to evaluate alternative configurations of homes, obtain estimates of costs and take projects through to completion through the use of a partner network of contractors. The package also helps with the planning applications process. BayWa intends to extend this partner network throughout Germany in the medium term.

Recent performance of Building Materials segment

Revenues attributable to the business unit rose by 11.8% year-on-year during the nine months ended September 2021 to €1,576.5m (11% of group total), while EBIT jumped by 56.6% to €61.4m (24% of EBIT from operating subsidiaries). There was sales growth across the entire product range, reflecting high-capacity utilisation in the German construction industry, where total order intake during the first eight months of 2021 was 6.4% higher than the previous year, 13.3% higher for the housing segment (source: Hauptverband der Deutschen Bauindustrie). Demand for building construction, civil engineering and roofing products was particularly strong. Building materials prices rose sharply as a result of sustained strong demand internationally and shortages. For example, according to Destatis, the price of concrete reinforcing bars jumped by 81.0% year-on-year in September 2021 and of timber by 136.6%. BayWa was able to deliver products with relatively little interruption because of its established supplier network and good inventory management, which helped it realise higher than usual margins. In addition, the projects activity benefited from the final sales of residential units on the Lanzenhaarer Nord site near to Munich. EBIT from construction projects during the period was €4.4m compared with €2.4m in the whole of FY20.

In November, management forecast a significant year-on-year improvement in segmental earnings for FY21. When advising on the preliminary figures for FY21 at the end of February, management noted that all three operating business units had contributed to the 26% year-on-year increase in group EBIT to €266.6m.

Decarbonisation of the construction sector

Buildings contribute a significant proportion of global carbon dioxide emissions, so changing the way in which buildings are constructed and used is critical if individual governments are to achieve their goals of reducing net emissions to zero. Estimates of the carbon emissions attributed to buildings vary, depending on what is included in the calculation. In November 2021, the IEA published a report, [Tracking Buildings 2021 – Not on track](#), which states that about 9% of global energy and process-related CO₂ emissions result from the use of fossil fuels in buildings, another 18% come from the generation of electricity and heat used in buildings, and an additional 10% is related to the manufacturing of construction materials. If the entire lifecycle of buildings is taken into consideration, this totals c 37% of global energy and process-related CO₂ emissions. The report notes that all new buildings and 20% of the existing building stock would need to be zero carbon ready as soon as 2030 if the sector is to achieve carbon neutrality by 2050.

Historically, most attention has been focused on reducing operational carbon emissions in existing buildings through the installation of more efficient lighting, such as LED lighting, and improving insulation. However, there needs to be a reduction in embodied emissions as well if a net zero built environment is to be achieved. [Reducing the whole life carbon impact of buildings](#), issued by the UK's Parliamentary Office of Science Technology in November 2021, advises that achieving a net zero built environment will necessitate changes in building design, including designing with less material to improve resource efficiency and reduce waste and selecting materials with a lower carbon impact such as wood. The report also recommended the adoption of circular economy strategies such as reusing materials and designing buildings to be reused or deconstructed.

In Germany, the new Buildings Energy Act ([Gebäude Energie Gesetz](#)) came into effect on 1 November 2020. Like the previous energy conservation legislation for buildings, the new act sets out requirements for the energy performance of buildings, the issuing and use of energy performance certificates, and the use of renewable energy in buildings. For example, in accordance with the EU Energy Performance of Buildings Directive, it requires all new buildings to meet the 'nearly zero energy' requirement, ie to have a very high energy performance, by 2021. It also requires at least 15% proportion of all the heating/cooling requirements for a new property to be generated from renewable energy. A funding pot of over € 8.5bn/year is available, primarily to encourage owners of existing buildings to increase the use of renewable energies and improve energy efficiency in buildings.

The new act does not initially increase current energy performance requirements for new construction and renovation, although this will be reviewed in 2023. It is significant because it brings together three separate pieces of legislation in a single law, thus creating a uniform, coordinated body of legislation applying to new and existing buildings. Changes introduced in the new legislation means that the obligation to use renewable energy in new construction can be met by using electricity generated on site. Another change requires builders to obtain an 'Erfüllungserklärung', or compliance statement for new buildings and major renovations. The act includes a regulation which limits the installation of oil heating systems and new fossil fuel heating boilers as of 2026, in accordance with the Climate Action Programme 2030.

BayWa helps construction companies build more sustainable homes

As one of the largest building materials traders in Germany, BayWa is well placed to promote the adoption of more sustainable construction practices. It is doing this through involvement in construction projects that showcase the use of renewable energy and more efficient insulation and through the launch of innovative, environmentally responsible products.

Showcasing homes of the future

One of the construction projects in which BayWa is involved is a development of six buildings on a 10,000 square metre site in [Schrobenhausen](#), a town to the north of Munich. BayWa is working on the project with the local property developer Michael Plapperer. This 'Multi Park' project is unusual because it is based on the urban planning concept of co-locating residential and commercial property, thus reducing traffic. There are solar panels on the roofs to provide electricity for charging cars and for use within the properties and heating is provided by a system running on wood pellets. The parking spaces in the underground car park have been equipped with charging points for electric vehicles. There is an extensive network of green roofs, ie areas covered in vegetation, under the solar panels. These areas positively affect the microclimate by binding polluting particulates and converting carbon dioxide to plant mass while also lowering the temperature of

ambient air and the buildings themselves through evaporation. The first two buildings are scheduled for completion in 2021, the next two by spring 2023 and the final two by mid-2024.

Exhibit 3: BayWa's project with Michael Plapperer in Schrobenhausen


Source: BayWa

Exhibit 4: Tjiko modular bathroom on display at BayWa's retail site in Bad Tölz


Source: BayWa

BayWa is also involved in a project underway in Burgkirchen an der Alz, to the east of Munich. Like the Schrobenhausen project, the Burgkirchen development is an implementation of innovative concepts in urban design, in this case providing a showcase of intergenerational living in which age-appropriate senior housing together with associated services and care provision is co-located with conventional residential units. Like the Schrobenhausen project, the Burgkirchen development features many sustainability elements with solar panels to generate electricity for residents, green roofing, heating from wood pellets and climate ceilings. These have a network of water pipes above the ceiling plates which provide cooling in summer and heating in the winter. The development is designed to meet the KfW 55 energy efficiency standard, which means that a building requires only 55% of the primary energy compared to the reference building as defined in the German Buildings Energy Act (GEG).

Promoting environmentally responsible products

BayWa has a 29% stake in Tjiko, a start-up based in Rosenheim, Upper Bavaria, which manufactures prefabricated bathroom modules in which the shell is made from wood, which is classed as a climate-neutral building material. Since the modules are prefabricated, builders can install them in a single piece, so all they need to do is connect up the modules to plumbing and electrical wiring. This is very helpful in the current environment where there is a shortage of suitably skilled workers. Prefabricated solutions historically have resulted in a 'one-size-fits-all' solution, but in this case Tjiko provides property developers and contractors with a software package for designing individual bathrooms complete with interior fittings so they can create customised bathrooms varying in size from simple wet rooms to luxury bathrooms and large-scale modules for communal use in buildings such as schools and offices.

The segment has responded to consumer demand for more environmentally friendly construction by introducing building materials such as wood fibre insulation that minimise the emission of pollutants as well as improving energy efficiency. It currently offers around 9,500 products that meet its low emissions criteria.

Other notes and interviews in this series

[Sustainable solutions for life](#): a review of how the group can make a major contribution to limiting the effects of climate change by adapting both its strategy and internal operating processes, and how this helps the group secure green investment, creating a virtuous circle. (Published 2 February 2022.)

Investment from Energy Infrastructure Partners accelerates the growth of the renewable energy segment: an [interview with CFO Andreas Helber](#) on the group's strategy and how green financing is helping BayWa achieve its targets for 2025. (Published 9 February 2022.)

[Embracing renewable energy](#): a review of how BayWa's energy segment is evolving in response to society's shift away from fossil fuels. The review includes both BayWa's strategic investment in renewable energy-related activities and numerous environmentally friendly new products launched by the group's conventional energy business. (Published 16 February 2022)

[Adapting agricultural techniques in response to climate change](#): a review of some of BayWa's developments that help farmers mitigate the effect of climate change, together with a discussion of how BayWa's FarmFacts software supports farmers as they move to more sustainable production methodologies. (Published 9 March 2022.)

Strong financial foundation: an analysis of FY21 financial results. (Upcoming.)

Applying ESG principles delivers strong operational performance: an interview with CEO Professor Klaus Josef Lutz explaining how the group's environmental strategy underpins its operational performance plus a discussion of how he sees this commitment to the environment helping the group continue to grow and evolve in future. (Upcoming.)

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