



The Amazon Effect

How the growth of warehousing and distribution centres is impacting local housing markets and economies





**A word from Paragon Bank
Managing Director of Mortgages
Richard Rowntree**

The transition in the way we buy goods from the high street to online is creating increasing demand for warehousing space across the UK

We now expect the everyday items we need – from food to clothes to books – to be delivered direct to our doors and this has accelerated throughout the pandemic.

This, in turn, is creating new markets for the private rented sector as these distribution centres proliferate, bringing new jobs and opportunities.

A report by Savills for the UK Warehouse Association showed that the number of warehouse units has increased by 32% since 2015 on the back of the ecommerce wave and currently stands at 566 million sq ft.

Separate analysis by property group Knight Frank revealed that approximately 1.36 million sq. ft of warehouse space is needed for every £ billion spent through ecommerce. If online retail in the UK grows in line with forecasts, during the next five years up to £67 billion of sales will place a demand for 92 million sq ft of warehousing.

We looked at one of the companies that has driven the growth of distribution centres – Amazon - examining how the opening of 10 of its Fulfilment Centres impacted the economy of the Local Authority in which each was based in the 12 months after launch.

The results showed a consistent story of growth in property prices, job creation, new businesses and house sales. Of course, there were anomalies and other factors within that authority area that can impact on these measures, but overall they tell a picture of growth, which in turn leads to increased demand for homes.

Looking at Amazon alone, it will open four new centres in the UK in 2021 alone, with each creating over 1,000 new direct jobs.

As distribution centres grow from their traditional Midlands heartland to other areas of the UK, landlords will be looking at the opportunities these centres can bring.

The growth of the warehouse and distribution network

The number of warehouses and distribution centres has proliferated in the UK in recent years, with more set to come

The number of warehouse and distribution units in the UK has grown significantly in recent years as our buying habits have pivoted online. Additionally, warehousing units are getting larger and are being constructed in new areas of the country, moving goods closer to their target markets.

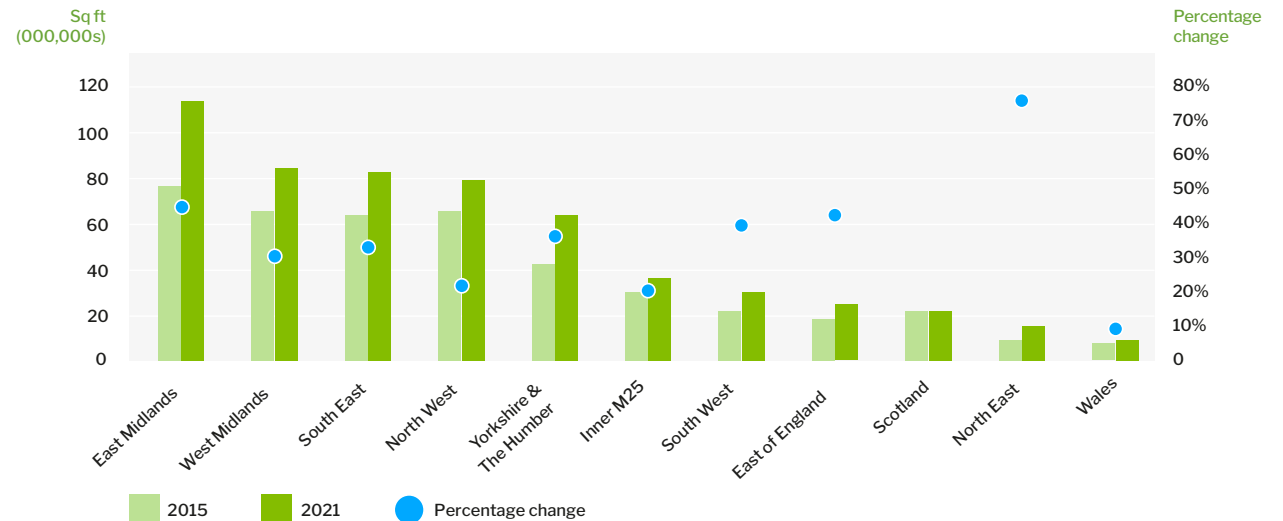
Warehouse space developments have boomed this year due to the rise of online shopping during the coronavirus pandemic, with the amount of sites set to complete in 2021 doubling compared to last year. The latest research showed that 40 million sq ft of warehouse space developments are scheduled for completion this year, compared to the 20 million sq ft that was built in 2020.

A 2021 report for the UK Warehouse Association by Savills showed that total square footage of warehouse space in the UK has risen by 32% since 2015 and now stands at 566 million sq ft, with the number of units growing 30% to just under 2,000. Looking at the data more closely, there have been distinct shifts in the location, size and occupiers of units.



Warehouse stock by region

Source: UKWA





Since 2015,
online retailers
have increased
their warehouse
footprint by
614%

Location

Savills' report showed much of this growth has been concentrated in the Midlands, with the East Midlands experiencing a 45% increase in the six-year period to 114 million sq ft as companies locate around the M1 corridor. Combined, the East and West Midlands account for 35% of the total warehouse stock in the country, benefitting from its 'golden triangle' location.

Combined, the East and West Midlands account for 35% of the total warehouse stock in the country

Although coming from a lower base, in terms of percentage growth, the North East, South West and East of England have recorded strong increases. The North East, for example, has recorded a 75% increase in space since 2015 to 17 million sq ft, with the South West and East Midlands both recording growth above 40%. With more centres planned for areas across the UK, it is expected growth will be experienced by most regions in the coming years.

Size

There is a clear trend showing that warehouses are getting larger in size and scale. While warehouses under 500,000 sq ft still account for the majority of units, making up 66% of the stock, units over 500,000 sq ft now make up 34% of the stock, up from 30% in 2015. Key to this has been the increase in units over 1 million sq ft. In 2015 units over 1 million sq ft accounted for just 14 million sq ft of the total stock. In the six years since, this has risen by 242% to 48 million sq ft and accounts for 9% of the total stock, up from 3% in 2015.

Occupier mix

The occupier mix has shifted over the past six years, changing from high street retailers being the dominant occupier to third party logistics (3PL) companies. Since 2015, 3PL companies have increased warehouse space by 42% and now account for 106 million sq ft. The largest jump, however, has been by online retailers, who increased their warehouse footprint from 8 million sq ft to 60 million sq ft, a rise of 614%. High street retailers still currently sit above their online counterparts at 89 million sq ft, but that is expected to shift in the coming years.

Analysis by property group Knight Frank shows that for every £ billion of online sales, approximately 1.36 million sq ft of warehouse space is required. With UK online sales forecast to rise by up to £67 billion over the next five years, we could see ecommerce drive additional requirements of 92 million sq ft.



The Amazon Effect

How Amazon Fulfilment Centres have impacted the local areas in which they are based

By exploring official statistics in 10 of Amazon's latest Fulfilment Centres, we have isolated the key factors in the 'Amazon effect' - how an area changes when the ecommerce giant opens in the area. Our findings show that the greatest impact a new Amazon Fulfilment Centre has on an area is on businesses and the workforce. In particular, it results in a boost of new businesses opening around the centre, and hence has a positive impact on bringing new jobs and reducing unemployment.

Other elements of the 'Amazon effect' suggest that these changes do then result in an increase in demand on housing, either from increased house prices or an increased provision of private rental houses in an area. The opening of Amazon distribution centres also appears to spur the sale of new build flats in the area.

Amazon has opened 17 Fulfilment Centres in the UK and is due to open four more - Hinckley, Dartford, Gateshead and Swindon - with each creating approximately 1,300 permanent roles and additional seasonal temporary roles. The company says it will create 10,000 new jobs by the end of 2021, bringing its workforce to 55,000 in the UK.



In general house prices across the locations increased between the year before and the year after the Amazon Fulfilment Centres opened, with an average increase of 11% (+£20,269). Locations in the Midlands experienced the highest increase at 12% (+£23,151), followed by London and Southern regions with an 11% increase (+£29,370), with the North seeing a 10% increase (+£16,664).

Prices in Dunstable experienced almost a quarter growth (23%) between the year before and the year after the distribution centre opened in 2016. Altrincham following closely behind at 17%, and Birmingham at 16%. In contrast, Fife experienced a -4% decrease in house prices and was the lowest overall of the locations.

Rental property provision

On average there was an increase of 1,613 private rental properties across the selected areas following

the site openings, an increase of 2% overall. London and the South had the largest increase of 3% (+2,077), while locations in the North increased 2% (+1,315) and those in the Midlands increased 1% (+1,448).

Looking at the different locations in more detail, Daventry, Leicestershire, Oxfordshire had the greatest increase in the amount of private rental properties, with a rise of 4% or all locations respectively. In Altrincham there was only a 2% increase in the amount of rental properties, rising from 42,803 in 2015 the year before opening to 43,622 the year after opening.

This could suggest that in areas where there are already a high number of private rental properties the trend is not as strong, but in areas with less there may be an increase as a result of the Amazon Fulfilment Centre opening.

The impact of Amazon Fulfilment Centres on house prices

Location	Year before	Year of	Year after	Change	% change
Daventry	£248,136	£262,951	£276,022	+£27886	11%
Ellistown	£171,905	£181,382	£189,719	+£17814	10%
Birmingham	£148,998	£161,019	£172,751	+£23753	16%
New Rossington	£120,313	£123,153	£124,216	+£3903	3%
Runcorn	£130,082	£134,666	£137,758	+£7676	6%
Altrincham	£225,962	£246,652	£264,375	+£38413	17%
Dunfermline	£113,485	£112,831	£108,624	-£4861	-4%
Tilbury	£258,627	£268,354	£266,935	+£8308	3%
Dunstable	£245,085	£279,813	£300,926	+£55842	23%
Banbury	£266,023	£285,760	£289,982	+£23959	9%

Housing

Overview

Average increase



House prices rose by

£20,269

Percentage impact



Average house prices increased by

11%

Biggest change

Dunstable and Altrincham recorded a 23% and 17% increase in house prices respectively





New build sales

Average impact



Increase of new builds sold

84

🏠 = 10

Percentage impact



Average increase across locations

16%

Biggest change



Increase in the number of new build sales in *Ellistown*

41%



When looking at the total number of new builds sold around the time Fulfilment Centres opened, we see an average increase of 16% (+84) from the year before opening to the year after, on average going from 516.4 sold the year before opening to 600.4 the year after. This was most pronounced at locations in the North where there was an average increase of 30%, going from an average of 330.3 new builds sold the year before opening to 428 sold the year after opening.

The opening of the Amazon distribution centres appears to lead to a surge in sale of new build flats rather than houses

For locations in London and the South there was only a 7% increase in the number of new builds sold, however the number sold was very high to begin with, going from an average of 657 sold the year before, to 701 the year after opening.

When looking at this by individual locations, Ellistown had the largest increase in the number of new build sales with a 41% increase from 2015-2017. This is followed by New Rossington, recording a 38% increase in new builds sold.

The North saw the biggest increase of new build sales

Looking at the types of new builds sold during these time frames, the opening of the Amazon distribution centres appears to lead to a surge in sale of new build flats rather than houses. On average across all locations, the number of new build flats sold increased by 61%, going from an average of 72 sold the year before the distribution centre opened, to 116 the year after opening. In comparison the number of new build houses sold only increased by an average of 9%, going from an average of 445 sold the year before opening, to 485 the year after.



On average, the number of businesses increased from 10,821 the year before to 12,031 businesses the year after, an 11% increase in the number of businesses in the area.

Once again, locations in the Midlands and the South tended to do best (14% and 18% increase in the number of businesses respectively), but in the North the impact was slightly more muted at only a 3% increase in the number of businesses.

The area where the apparent impact of the introduction of an Amazon Centre to the area was the greatest was Dunstable. The huge increase in new start-ups saw the number of businesses in the area balloon from 12,440 to 16,300, up 31%.

One of the notable trends is that the total number of businesses increased most noticeably where the economy was already larger and there were already a sizeable number of businesses. Areas with a larger business community saw a 15% increase in the number of businesses after the opening of an Amazon centre, compared to only 3% in areas with a smaller business community.

Business growth in the year after Amazon Fulfilment Centre opens

Location	Year before	Year of	Year after	Change	% change
Daventry	4,455	4,535	4,600	+145	3%
Ellistown	4,275	4,445	4,500	+225	5%
Birmingham	37,200	42,645	43,470	+6270	17%
New Rossington	10,895	10,920	10,275	-620	-6%
Runcorn	4,005	4,060	3,990	-15	0%
Altrincham	12,410	13,220	13,780	+1370	11%
Dunfermline	8,755	8,605	8,700	-55	-1%
Tilbury	7,185	7,315	7,770	+585	8%
Dunstable	12,440	16,325	16,300	+3860	31%
Banbury	6,585	6,735	6,925	+340	5%

Economy

Overview

Average increase



Number of businesses increase by

1,121

Percentage impact



Number of businesses increase by

11%

Biggest change

Dunstable
Number of businesses up by

31% (12,440 to 16,300)



Jobs and employment

Average impact

Number of jobs available increases by



Percentage impact



After opening, jobs available increased by

3%

Biggest change



In Ellistown and Runcorn, job availability increases by

8%

Across almost all locations there was an increase in the total number of jobs available in each local authority area after the opening of the Amazon Centre. On average there was a 3% increase in the number of jobs available (average change= +4,222 jobs), rising to 4% in areas with larger job markets. Locations in the Midlands saw the biggest percentage change with an average increase of 5% (average change= +15,500 jobs).

Ellistown and Runcorn were the locations that saw the largest increases in the number of jobs available, both experiencing an increase of 8% (+5,000 jobs in both local authorities respectively) between the year before and the year after their respective Amazon distribution centres opened.

In 2015 before the distribution centre opened in Ellistown there were 61,000 jobs available and this remained constant in 2016 when the distribution centre opened, before jumping to 66,000 jobs available the year after in 2017. In Runcorn the data tells a slightly different story, in 2016 the year before the distribution

centre opened there were 65,000 jobs available, this then increased to 69,000 in 2017 during the year the distribution centre opened, and then increased again to 70,000 in 2018, a year after opening.

Across almost all locations there was an increase in the total number of jobs available in each local authority area after the opening of the Amazon Centre

Both locations saw an upward trend in the number of jobs available beyond these immediate time frames, with increases still seen two years after opening.

For the majority of the locations, unemployment rates decreased after the opening of the Amazon Fulfilment Centres. On average the unemployment rate dropped by 0.4 points across the all areas, increasing to a drop of 0.7 points in the Midlands



Environment

Traffic

The general trend across the majority of the warehouse locations shows an increase in road traffic following the initial development of the sites, with an average increase of 5%. Looking at this by region we see that locations in London, the South and the Midlands have an average increase in road traffic of 4%, while the North has an increase of 6%. Overall, the average road traffic increase across the locations was 4%, representing a change of +108.5.

London, the South and the Midlands experienced an average increase in road traffic of 4%

Looking at the locations in more detail, Runcorn had the greatest increase in road traffic at 9%, with vehicles in the area driving 681 million miles in 2016 the year before the distribution centre opened to 742 million miles in 2019 the year after it opened. This is closely followed by New Rossington, where there was a 6% increase in road traffic.

Air pollution

The correlation between air pollution and the opening of the warehouses is generally quite sporadic and does not show an adequate overall trend. London and Southern regions showed a 2% increase in air pollution, with the Midlands and North showing a -6% and -5% decrease respectively. Air pollution was measured through the annual mean PM2.5 concentrations, which equates to the overall amount of dangerous particles in the air. On average there was a decrease of -4% across the areas, representing a change of -0.35.

A majority of locations saw a decrease in air pollution, with New Rossington and Tilbury experiencing the lowest decrease of -3%, and Ellistown experiencing the greatest decrease of -14%. Halton and Dunfermline both saw a decrease of -8% respectively, while Daventry had a -6% and Altrincham -5%.

In contrast, Dunstable, air pollution levels increased the greatest by 8% in the year following the opening in 2016. Similarly, Birmingham and Banbury also saw a slight increase of 2% the following year.



The surveyor's view

Neil Smith, Paragon Bank Head of Surveyors, explains how we have seen the growth of distribution centres impact demand for rental property on the ground



Neil Smith
Paragon Bank

We have seen the growth of warehouses and distribution centres stimulate demand for private rented accommodation across the country, particularly from Amazon Fulfilment Centres. This is a common theme that my team of regional surveyors report to me and a trend that looks set to continue as new centres are opened up.

Generally, the opening of these centres tends to drive greater demand for smaller rental units or houses in multiple occupation (HMOs).

The workforces of the centres can be transient, where people who already work for the company move to an area to support the establishment of a new centre or a person moves specifically to an area for the job opportunity it has created, so they may only need a room during the working week or look to rent somewhere temporarily.

Also, they attract a lot of seasonal work and, again, that creates demand for HMO type accommodation, particularly if bills are included.

The higher up the management chain you go, the demand for larger rented accommodation grows. If management level employees are relocating to an area, they will typically rent before buying, and they are often looking for family homes.

The East Midlands has a mature distribution centre network and that has certainly driven the growth of the private rented sector in that region. I would expect other areas of the country to experience similar growth as new centres open up across the region.

Our regional surveyor in Yorkshire, for example, reports a growth in warehousing across that region, most notably from Amazon with new centres in Mansfield and Doncaster. Workers in those areas are looking for HMOs, particularly with en-suites.

Likewise, the North East has seen new centres in Durham and Darlington and our surveyor in that region has reported a boost to the private rented sector. With another due in Stockton, we'd expect buy-to-let investors to be looking at the area to cater for this new demand.

It's a story that has been repeated across the country, with new pockets of demand being created as a new distribution centre opens.

As our spending shifts towards online and away from the traditional high street, we can expect more warehouses and distribution centres to open across the UK, creating jobs and positively impacting local economies, including the private rented sector.



www.paragonbank.co.uk



michael.clarke@paragonbank.co.uk

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