

Investing in Kent for future generations



Foreword

The strategic role of Kent is as important to Britain today as it was recognised to be by our ancestors. When Julius Caesar came to Britain in 54BC, he judged the people of Kent to be the most prosperous in Britain due to the region's ability to produce and trade.

The Jutes from northern Germany were the first settlers after the Romans to claim England and recognise this South East corner closest to the continent for its strategic importance. They also gave the region its white horse symbol that still stands for liberty and trade today. William the Conqueror of Normandy granted Kent the freedom to operate as it always had before 1066 – earning Kent the Latin motto of 'Invicta' or unconquered, as it translates to today.

Successive administrations and monarchs have afforded Kent privileges not given to other regions to make sure, that when the need arose, the sympathies of its people would be with them, not the next invader.

“Kent is the UK's South East Gateway. Expansion here means greater prosperity for the whole country.”

Today's Government can continue to leverage the region's strategic location, diverse economy and potential for growth to boost GDP and deliver its levelling up agenda – creating jobs, improving infrastructure and enhancing the region's economic competitiveness.

Over the next 25 years, the Kent and Medway region can deliver some 250,000 new jobs and over 230,000 new homes – a quantum of economic growth that represents 0.91 percent of England's Gross Value Added (GVA)* adding £23 billion, which is an increase of nearly one percent, to the nation's total GVA.

The University of Kent compared the above analysis with the rest of England excluding London. In Kent, they concluded, a similar investment in housing and infrastructure yields a larger increase in economic activity (as measured by GVA) than investments in other English counties outside of London.

Kent is the UK's South East Gateway. Expansion here means greater prosperity for the whole country. An investment in Kent yields a 13.8 percent larger contribution in GVA than a similar magnitude investment elsewhere.

Locate in Kent has set out the phenomenal opportunities for sustainable growth in the Kent and Medway region in this document. Opportunities that include an expansion in production and distribution, to investment that will provide the next generation of green jobs. Opportunities that come with a growing population, supported by the delivery of new homes and all the new community facilities that accompany it – from education to health and social care.

Simply put, this document sets out the bright prospects for Kent's future generations if we enable the investment that's needed today. Our aim here is to show how the future history of Kent can continue to underpin Britain's ability to thrive.

**GVA(Gross Value Added) measures the income generated by economic activity within a region and is a measure of a region's contribution to UK GDP (Gross Domestic Product).*

Contents

1	Introduction.....	06
2	Tomorrow’s World.....	08
3	Today’s Pipeline.....	16
4	Conclusions	28
5	Background information.....	30
6	References and further reading.....	34
7	About Locate in Kent.....	38





Over the next 25 years Kent and Medway can deliver...

Introduction

This document sets out the sum of our knowledge on investment opportunities for Kent and Medway over the next 25 years. We have considered employment and housing opportunities already identified in the most recent adopted local plans or those nearing the final stage of approval. We also list some of the most important projects that are helping to deliver regional economic growth and further build momentum.

As the region works towards achieving net zero, Kent and Medway's future jobs prospects will come from sectors including new methods of food production, evolving communication technologies, life science R&D, advanced manufacturing and green energy.

In these areas and many others, the region has the potential to lead the nation's economy through the skills being built, the investment being made and the innovation taking place right now.

Based on research carried out on behalf of Locate in Kent by the University of Kent's School of Economics, Kent and Medway can deliver an **additional Gross Value Added (GVA) of £23 billion (US\$ 29.21 billion)** over the next 25 years as investment is made and projects are delivered. That is a **GDP uplift of 0.9 percent** in England's economy.

Kent and Medway can deliver an additional Gross Value Added (GVA) of £23 billion (US\$ 29.21 billion) over the next 25 years, adding a 0.9 percent uplift to England's economy.

Using their methodology – based on predicted population growth as well as jobs opportunities for Kent and Medway residents, locally and including London – the region can deliver a further 249,430 new jobs. Their estimates are based on the current population and business demographics in Kent and surrounding areas. The data used in this analysis is sourced from the Office for National Statistics and Census data.

The University of Kent found investments in housing and infrastructure yield a larger increase in economic activity (as measured by Gross Value Added) in Kent than investments in other English counties outside of London.

Specifically, an investment in **Kent yields a 13.8 percent larger increase in GVA** than a similar magnitude investment elsewhere (or 0.11 percentage points of England GVA). The difference is generated from a higher GVA contribution from the average Kent job than in the rest of England (excl. London), and the average household in Kent has a larger number of people in work than average in the rest of England (excl. London).



As part of its work, the University of Kent considered the number of jobs forecast for the period 2021 to 2030 and 2031 to 2050 using publicly available information, including economic data from Kent County Council.¹

Investments in housing and infrastructure yield a larger increase in economic activity in Kent than investments in other English counties outside of London.

Forecasting is primarily to identify a range of possibilities, not a limited illusory certainty. The data is subject to critique and change over time but remains useful in illustrating the scale of what Kent and Medway can contribute.

The values and forecasts will evolve as we face new economic challenges and projects become more certain. Local planning authorities are constantly looking ahead and assessing their approach to new homes, jobs and more for generations of people who will be calling Kent and Medway home in the future.

What is clear from the data we have available right now, and the continued positive direction of travel we are seeing at Locate in Kent, is that the region is successfully attracting business investment as it always has done.

Kent and Medway has always been a key engine for growth. This document shows there is much more to come, confirming investment here has the potential to benefit the whole country.

**than comparable areas in England outside London. Source: University of Kent*

2

Tomorrow's world

Largely automated vertical farms where salads and other produce are grown in vertically stacked layers in a carefully controlled environment that doesn't depend on the weather – and uses a fraction of the water.

Acres of arable land harvested with the help of drones and robotic tractors providing a more sustainable, efficient method of land production. Strawberries that are grown all year around with advanced storage facilities that enable fruit growers to keep the supermarket shelves full. New crops honed for resilience that in a time of climate change and economic uncertainty give hope against global hunger.

Steaks made from plants, animal food made from seaweed, autonomous vehicles letting technology take the strain. Medicines made from cannabis and drugs that will defeat the next pandemic; hydrogen fuel plants fuelling buses and systems that halve the amount of household water that goes down the drain.

This is a taste of tomorrow's world and it's already happening here in Kent and Medway, supported by world-leading research and clusters of innovators across science, engineering and technology more generally, who have chosen to build their success in the region.

In this chapter, we will bring together the science led innovation that is being developed here in Kent and Medway, highlighting the trends and markets where the foundations for future success are being laid. This is a region that is already leading the way in many areas key to the future economy with a pipeline of highly skilled jobs and the potential for so much more – given the right investment and support.

2.1

Health and life sciences

The latest available figures produced by Kent County Council (KCC – July 2023) indicate some 59,500 jobs are supported by the life science sector in the region, accounting for 9.3 percent of all jobs in the county. While these jobs are shared across the area the statistics show that the Dover and Sevenoaks districts of Kent have a much higher proportion of life science jobs involved in research and experimental developments than the national average.¹

Health and life sciences is a sector that continues to deliver for Kent and Medway with the number of jobs increasing by 16.7 percent over the last five years. The region's existing science parks at Discovery Park in Sandwich and Kent Science Park in Sittingbourne are key focal points for this important ecosystem of innovation, plugged into a well-established local and global supply network.

Add in the Innovation Centre and emerging facilities with planning consent at Maidstone's Kent Medical Campus, it's clear that Kent and Medway are not just knocking on the door of the traditional Golden Triangle of London, Oxford and Cambridge but are already on the inside: working and collaborating, exchanging and inspiring; a region making a significant contribution to UK science's global appeal.

Discovery Park has recently opened a new flexible lab complex designed for start-ups and growing companies, part of a mission to become a world leading science park over the next five years, "driving improvements in healthcare through innovation and collaboration."² It has been designated as a Life Sciences Opportunity Zone by the UK Office for Life Sciences. In the past it was Pfizer that led the conversation. Today they are one part of a cluster of life science success that is building here.³

"The success of Discovery Park is the result of a strategic long-term public and private partnership between Government in London and Kent. It demonstrates the power of the UK's £94 billion life sciences sector in driving economic regeneration in clusters all around the U.K."



George Freeman MP

Minister of State for Department for Science, Innovation and Technology

In April 2023, Pioneer Group the owner of Kent Science Park announced the launch of 14,000 Sq. Ft. (1,300 sqm) of new start up and scale up labs. This followed a £2.5 million (US\$ 3.175 million) building refurbishment project.⁴

It will add to 565,000 Sq. Ft. (52,490 sqm) of existing research and development space with a tenant base that spans life sciences, virology, Food Tech, environmental technology and drug R&D.

"Our new tenants at the Ventures Building will be plugged into an ecosystem that fosters innovation, supports growth and facilitates expansion. The South East of England is a globally renowned life science hub."

Tenants at Kent Science Park are pioneering research and development into some of humanity's most pressing issues – namely disease and food security – so it's great to be relaunching this asset to provide much needed start-up and scale up space."



Jeroen Houtzager

Director at Pioneer Group, owner Kent Science Park

2.1 CASE STUDY

Nutri-San, a bio-technology company based at Discovery Park has created safe and sustainable food products for the animal feed and livestock farming industries using the properties of seaweed.

The supplements are produced at a facility in Vietnam, where the company first launched in 2017, but their UK base in Kent is an important part of the global research and product testing operation for this exciting start-up.

They are not the only company at Discovery Park involved with research in this area with biotech Algaecytes seeking to unlock the potential use for micro-algae in pharmaceuticals, personal and health care from its R&D facility.

2.1 CASE STUDY

Sharing the Kent Science Park site are GW Pharmaceuticals, part of Jazz Pharmaceuticals since 2021 – and best known for medical cannabis-based treatments for people with multiple sclerosis and epilepsy – with licenses approved in the UK, Europe and the United States.

Work began last year on a £75 million (US\$ 95.25 million) new 60,000 Sq. Ft. (5,733 sqm) new facility in Sittingbourne that, once launched in 2024, will create 100 highly skilled jobs, increasing production of two regulatory approved medicines as well as supporting future development for future treatments.⁵

“This facility will not only significantly increase our ability to support the growing demand for our medicines but also help us maintain our position as a world leader in cannabinoid science.”



Chris Tovey

Former Executive Vice-President, COO and Managing Director, Europe & International, Jazz Pharmaceuticals quoted in Kent Online in March 2022.

2.2 Food innovation

Growing Kent and Medway is a world-class research, innovation and enterprise cluster supporting growth in technology-driven horticulture, fresh produce packaging, and food and drink processing and its supply chain. It is helping to support and scale up business growth.⁶

Investment has included a green tech hub for advanced horticulture at NIAB in East Malling; a Medway Food Innovation Centre at the University of Greenwich campus in Chatham Maritime; and a biotechnology hub for sustainable food and drink at the University of Kent. An accelerator programme offering support for businesses at all stages of development who have invested in plant-based food and drink launched in 2022 with a remit that includes skills development.

In February 2023 over £154,000 (US\$ 195,580) of funding was awarded by Growing Kent and Medway to 11 local businesses involved in a diverse range of projects aimed at making food production more sustainable – from reducing plastic in fruit punnets and cutting energy in food processing to extracting plant proteins from seaweed for meat-free diets.⁷

These joined an additional six grants awarded to research collaborations between business and universities in Kent. This has included increasing Vitamin C and iron levels in tomato crops to make them more nutritious and better able to cope with stress caused by heatwaves. Another project has explored how to grow the best cherries for longer storage and thereby reduce food waste.

These businesses include well-established growers and producers continuing to put Kent and Medway front and centre for the food and drink sector – but also some exciting start-ups that are beginning to leave their mark, thanks to the supportive business environment they find here in Kent and Medway.

Kent and Medway are embracing the future of farming from the work of Evogro at NIAB to a new £100 million (US\$ 127 million) vertical farm facility at Discovery Park, operated by salad producer GrowUp Farms, where year-round growing operations began in Spring 2023.⁸

2.2 CASE STUDY

Evogro is based on the campus of NIAB, one of the world's leading centres for agricultural research, in East Malling.

They make plant growing systems for hospitality operators and chefs, using the same technologies as industrial vertical farms, but scaled down to appliance size.

“We are proud to have as customers many leading professional chefs and bartenders working across the hospitality sector in restaurants, hotels, bars, clubs, contract caterers and colleges. Our customers demand the highest standards and we are delighted that they trust their Evogro Plant Growing Systems to deliver.”



Jason Hirst

Managing Director, Evogro

✓ Opportunity for Kent: Vertical farming

Vertical farming, using LEDs and hydroponics, is part of a technological driven overhaul to the farming industry. As well as using less water and space this approach reduces the reliance on finding enough seasonal farmworkers to support at harvesttime. Fewer staff are needed thanks to increased use of automation.

According to The Grocer, the market opportunity for vertical farming is huge. Statistics by Verified research analysts suggest the market for vertical farming globally could be £12.3 billion (US\$ 15.621 billion) by 2027. It stood at £2.29 billion (US\$ 2.90 billion) in 2019.⁹

Calyx Cotton is another, spearheading how sustainable cotton should be grown as part of a drive for greener fashion, an industry that is estimated to account for 4 percent of annual global carbon emissions with 921,000 tonnes of used textiles disposed of in household waste each year. Not every crop is likely to be cultivated this way, but vertical farming will be taking its place in the future of farming and Kent and Medway will be at the heart of it including supporting farmers and producers adapting to a changing world.¹⁰

Hadlow College, the UK's only land-based college, is part of North Kent College group. This year they launched a new sustainable horticulture centre to support land-based employers to adapt to new sustainable farming methods, drone and harvesting technology. It's another example of how Kent's status as the Garden of England continues to evolve for the 21st century, a place that sees the opportunities, overcomes the hurdles and makes things happen.

2.2.1 Alternative protein development

Sales of meat and dairy substitute products are estimated to grow by £6.8 billion (US\$ 8.6 billion) globally by 2025, with sales of vegan foods in the UK growing faster than any country in the world. Europe currently has a 37 percent share of the global market. In Kent, which already contributes some £2.6 billion (US\$ 3.30 billion) annually to the UK food and drink sector, a growing cluster is emerging to meet the increased appetite for healthier choices, plant-based products and more personalised nutrition.

Dr Parag Acharya, senior fellow in Food Innovation at the University of Greenwich is leading Growing Kent and Medway's work to develop a flagship centre of excellence for alternative protein development in the Kent and Medway region. This will link academia with industry across all stages of new product development from R&D to market launch. A network has been set up to support business growth supported by expertise from NIAB in East Malling, the University of Kent and the University of Greenwich.

Ahead of a webinar organised jointly by Locate in Kent and Growing Kent and Medway, in 2022, Dr Parag Acharya said: "Meat and dairy alternatives consist of more than a billion pounds in the UK with plant-based foods one of the country's fastest growing consumer trends."

"At Growing Kent & Medway we are establishing ourselves as the lead co-ordinator to develop the UK innovation ecosystem for alternative protein. That is a real opportunity for Kent."¹¹

2.2 CASE STUDY

Born Maverick is a pioneering food innovation start up based in Canterbury. Founded by biotech scientist Azhar Murtuza in 2019, the company was awarded the number 1 spot in the Top 50 BAME Entrepreneurs Under 50 of 2022 competition held by TechRound.

Azhar and his team have developed a series of products, ranging from seafood alternatives made from seaweed to plant-based milk. It is one of 17 businesses taking part in the first round of Growing Kent and Medway's Food Accelerator Programme. They are currently developing unique extraction techniques for seaweed proteins.

"Born Maverick's mission is to bring together taste, nutrition and sustainability," he said. "We aim to play a leading role in helping to shape the food industry of the future."

Born Maverick is also one of 12 UK start-ups taking part in Innovate UK KTN's Sustainable Impact Investment Programme and is open for investment.¹²

2.3 The low carbon economy

According to current projections from researchers at Climate Action Tracker, all the existing emissions-cutting policies by governments around the world would result in the global average temperature increasing about 2.7C by 2100. A separate team at the United Nations reached an end of century estimate of 2.8 C.¹³

The problem is clear. Existing weather patterns are visibly outrunning our combined efforts to stem global warming. “Climate change is not keeping pace,” says Ann Mettler, vice president for Europe at Breakthrough Energy, a consortium of non-profits and venture capital funds. Shifting to green energy, whatever that costs,” she says, “would pale in comparison to what these extreme weather events costs.”

Policy makers still have 2050 as the year to achieve net zero. A target that will require changes to the way we use energy to heating systems that produce next to no greenhouse emissions, skills gaps to fill and new technologies to support and invest in.

In 2018 there were 185,000 full time workers in England’s low carbon and renewable energy economy. In 2030 there could be as many as 694.000 direct jobs employed in the low carbon and renewable energy economy rising to over 1.8 million by 2050.¹⁴

2.3.1

Hydrogen power plants

All new road-based public transport will be electric, or hydrogen fuelled by 2030 under new European Commission rules. As the capital cost of vehicles using alternative fuels falls, demand for green power will grow exponentially.¹⁵

The UK currently does not have sufficient people or a robust enough supply chain at present to produce hydrogen at scale – yet it is the only solution for large vehicles. Ryze Hydrogen is among the companies seizing the opportunity with the UK’s first green hydrogen manufacturing plant set to open in Herne Bay, employing some 30 jobs.¹⁶

Hypoint, a company with its headquarters in Silicon Valley, California, completed a £11 million (US\$ 13.97 million) investment in Kent in 2022 at its UK base at Discovery Park to support the development of hydrogen fuelled engines for aircraft. By creating a turbo air-cooled hydrogen fuel cell system, it hopes to become a global leader in a technology, which could transform the impact of air travel on

the environment. The company sees potential for existing fixed wing aeroplanes and drones but one day perhaps air taxis and eVTOL (electric vertical take-off and landing) vehicles too.¹⁷

“Our work is critical to unlocking further and faster decarbonisation of aviation and urban air mobility, whilst also creating economic activity and jobs across the country to support the sustainability of the UK’s aviation industry.”

With its massive technical and academic talent pool, a globally-recognised ecosystem of hydrogen manufacturers, and strong transport decarbonisation targets, the UK is well positioned to become a global leader in the hydrogen economy.”



Dr Alex Ivanenko

HyPoint founder and Chief Executive

2.3.2

Wind power

2023 marks 13 years since 100 wind turbines were constructed in the Thames Estuary by Swedish energy company Vattenfall. Back in 2010, it was the world’s largest offshore windfarm. Today, Thanet, Kentish Flats and Kentish Flats Extension together supply around 400,000 homes with green energy. While further expansion paused following the rejection of a DCO for a new cluster of wind turbines in 2020, it’s unlikely to be the end of the story.

Attention will turn over the next decade to what technology will replace them, when their estimated 20-25-year life expectancy expires and the prospect of high skilled jobs required to deliver the next generation of turbines offshore. Back on dry land, Kent company Alpha 311 is showing the potential of a wholly different approach.

→ See 2.3.2 p13 Alpha 311 case study.

2.3.3

Nuclear power

More than 700 people currently work at the Dungeness nuclear power station site near Folkestone. The legacy power stations are being de fuelled and decommissioned and the areas is taking steps towards realising the ambition to have small modular reactors at onsite to make use of the previous investment in power connectivity.

2.3.2 CASE STUDY

Alpha 311 is an ambitious Kent start-up which has developed a vertical axis wind turbine that harvests energy from passing vehicles. They believe every road, bridge, building or tower has the potential to become a wind farm.

The smaller size, lower weight and “unique shaftless designs” means the turbine can be installed almost anywhere, harvesting air flow and generating electricity even when the wind isn’t blowing. A sophisticated sensor array collects localised atmospheric data.

The company's vision goes beyond the highway too from manufacturing sites to sustainable new homes, a product they believe could help more than 1.2 billion people across the world who lack access to electricity, including an estimated five million UK households in fuel poverty.¹⁹

Up to 263 million kilowatts can be generated every year at the Allington Integrated Waste management facility, The equivalent amount of fuel required to generate this power is 200,000 tonnes of coal or a supertanker of oil. £150million (US\$ 190.5 million) has been invested in the facility since it opened in 2008. It can generate up to 43MW of power, 34MW goes into the local electricity supply network to reduce reliance on fossil fuels. Any surplus power generated goes back into the system to assist in powering the facility. Kemsley is a combined heat and power facility that generates up to 74MW of electricity and processes up to 657,000 tonnes of residual waste. This produces enough energy to power more than 160,000 UK homes and businesses. The facility also provides steam to a nearby paper mill operated by global sustainable packaging solutions company, DS Smith to support their renewable energy requirements.

2.3.4 Power connectors

NueConnect, a new power connection linking the UK with Germany builds on the legacy of power connections via the Channel Tunnel and the gas pipe at Grain that connects the UK to the European natural gas pipeline network.¹⁸

→ See 3.11 p19 for more detail.

2.3.5 Power from waste

Waste to power plants play a key part in sustainable management of waste and generating energy. There are two currently in Kent – at Allington near Maidstone and at Kemsley, Sittingbourne with planning consent for a third at the former Kingsnorth Power Station in Medway. This third waste to power plant forms part of the Medway One regeneration project set to transform this 10,846,440 Sq. Ft. (249 acre) site (including 6,621,120 Sq. Ft. (152 acres) of readily available brownfield land into a modern employment space. An energy hub is planned providing power, steam and heat for neighbouring businesses as well as a district heating scheme for proposed future housing development in the surrounding area.

2.3.6 CASE STUDY

House builder Berkeley Homes submitted a planning application in February 2023 to build a factory at Kingsnorth Industrial Estate on the Hoo Peninsula that could produce up to 1,000 modular homes a year, creating 250 jobs. Properties will be built in the new production facility before being transported to a permanent location.²¹

It will be Berkeley's second Kent factory. Their existing Northfleet facility manufactures new homes using automated production techniques from the aerospace and automotive sectors.

Modular start-up Top Hat secured planning consent to deliver almost 200 factory-built homes, including its first ever apartment blocks at the Kitchener Barracks development in Chatham.

2.3.6 Greener construction

In 2022, the gross added value (GVA) of the construction industry in the UK amounted to £128.9 billion (US \$ 163.7 billion).²⁰ It is a sector under increasing pressure to become more sustainable – while also dealing with supply chain resilience and attracting enough people into the industry to deliver housing targets.

The sector is driving the search for more efficient ways to build new homes, that not only speed up the process but are better for the environment too. With many developments coming on stream, including several schemes built to garden town principles, there is a real opportunity for innovation in Kent and Medway – including a major rethink in the way homes are delivered today.

The Green Skills Factory and Home Energy Centre launched by MidKent College in March 2023 is part of the solution to dealing with the skills gap providing building firms and trades with the training needed to ‘decarbonise’ and support new ways of working as older technologies – including gas boilers – are phased out and new regulations are brought in.²²

Companies like Cascade Water Products are embracing the opportunities that more sustainable construction will deliver – and it is hoped projects like those run by MidKent College will encourage more companies to seize the opportunity presented by Net Zero transition. Cascade’s micro-grey water re-use technology could reduce domestic water consumption by up to 45 percent.

2.3.7 Automation

East Kent Colleges (EKC) Group launched two green engineering centres in March 2023 to address a skills gap facing the manufacturing sector. This includes equipping engineers with the skills they will need to be able to run production lines, which in future will have a greater degree of automation than now. The aim: to support the UK’s drive to achieve net zero by 2050.²³

The centre in Canterbury has been equipped with the latest robotic technology and learning tools under the guidance of sustainable manufacturing consultancy, HSSMI and with suppliers such as Kuka Robotics, one of the world’s leading suppliers of intelligent robots.

These include training versions of production line robots that students can programme to pick up items as large as a car or as small as a lettuce; production rigs that can scan and track production; and a 3D virtual reality room that allows businesses to map and plan their factory floors. The aim is to

provide a long-term pipeline of talent for businesses looking for people with the right skills and knowledge to compete as increased automation is adopted, but that’s just half the story.

It will also provide businesses with a low-cost way to try out new technology, upskill existing staff and collaborate with the college to both solve production challenges they face and test new products and concepts.²⁴

According to Kuka, the future lies with a new generation of collaborative robots that will allow humans and machines to work safely side by side, envisaging the global market will grow from about 6 percent now to 30 percent by 2030. An education twin version of these machines has been installed at EKC’s Canterbury campus giving manufacturing businesses in Kent and Medway an opportunity now to see their potential.²⁵

“There are many applications for this new generation of robots and not just for production lines. Someone who is visually impaired or just out of hospital and requires care at home could have server robots that do some of the tasks.

That’s the future in the next 10 years or so. At the moment it’s at the start of the technology, but we expect things to develop in this area fast.”



Alan Oakley

*Business Development,
Education & Research, Kuka Robotics*

A glimpse of the future can be seen at the £205 million (US\$ 260.35 million), 2.3 million Sq. Ft (213,677 sqm) Amazon ‘Mega Box’ fulfilment centre in Dartford, which opened in 2021. Here automation has been vital – as it is across the logistics sector – in meeting customer demand, and where around 2,000 humans work in sync with robots every day powered by onsite green energy.²⁶

2.3.8 Circular Battery Economy, Northfleet

Britannia Refined Metals, owned by global minerals firm Glencore, is developing Britain’s largest battery recycling plant at Northfleet. Already using the neighbouring port for shipping raw materials and finished products, they are well placed to establish the European backbone of the next generation Electric Vehicle supply chain.

2.3.7 CASE STUDY

In 2018 pioneering work led by Highways England was showcased on the A2/M2 in Kent to an international audience from the automobile industry.

It aimed to show how innovative technology could be used to transform journeys on some of the UK's busiest routes in future.

A hi-tech 'corridor' was created with specially equipped vehicles able to interact with sensors installed in traffic infrastructure along the route, alerting them to traffic issues ahead.

It tested how information about road conditions, road works and time left for traffic lights to change to green could be transmitted to test vehicles via a wireless network.

The project was supported by Kent County Council, Transport for London and the Department for Transport with the aim of delivering safer, more reliable journeys, speedier maintenance and reduced delays.

New technologies around connected and autonomous vehicles could be worth tens of billions of pounds to the UK economy by 2035, according to the then Roads Minister Jess Norman MP.

Five years on and the development of self-driving technology is expected to remain a key driver of the growth in the Electric Vehicle market, alongside the development, manufacture and supply of battery technology. The Department for Transport has predicted connected and autonomous vehicles will make up half of all vehicles on roads in England and Wales by 2047.²⁷



3

Today's pipeline - Investment delivery to 2030

In the last section we looked at those areas of the economy where Kent and Medway are attracting investment and innovating for future generations. This section is a summary of the key projects already in the pipeline.

We will show where investment is being made in key areas fundamental to the success of the nation's economy. Momentum is building as clusters form and strengthen with the foundations being laid right now for Kent and Medway to reap the benefits and seize the opportunities to come.

Projects Progressing

3.1

Port of Dover

The Port of Dover, the UK's busiest international ferry port and second busiest cruise port, is working towards establishing the UK's first high-volume Green shipping corridor.¹ Challenging targets have been set to reduce carbon emissions to net zero over the next decade.²

It is the closest British port to mainland Europe and handles more lorries than all other UK ports put together, allowing for 120 ferry movements and 10,000 trucks per day. The port facilitates up to 11 million passengers, 2.1 million cars and 2.4 million trucks annually.

£144 billion (US\$ 182.88 billion) worth of UK trade and a third of all trade with the European Union is handled here.

It is working with Kent Business School and other academic and industrial partners on a project, funded by the Department for Transport and delivered in partnership with Innovate UK, to create a zero-carbon trade route between the UK and France, including zero emission vessels, leisure craft and workboats.

The Green Corridor Short Straits consortium, is a partnership that includes the French sister ports of Calais and Dunkirk. The Port of Dover is on course to reach Net Zero (including direct emissions and purchased energy) by 2025.

By 2030 it will have sourced alternative fuels, electrified the Port's landslide fleet and further reduced carbon-use in development projects. The Dover Western Dock Revival project, meanwhile, continues to regenerate the waterfront including a new cargo terminal opened in 2019. This is supporting the Port's growth as a major hub for imported construction materials to meet UK housing sector demand.

3.2

Brompton, Ashford

The globally successful British bicycle brand and largest bicycle manufacturer, has submitted plans to relocate its global headquarters from West London to Kent. Proposals include a new production facility for its e-bike models, supporting around 1,500 jobs initially and 4,000 jobs once fully operational. Planning approval in 2024 will see the first phase complete in 2028. An estimated 100,000 new bikes will be produced each year.³

Kent's location between the cycling cities of London and Paris was a key factor in locating here and equates to a £100 million (US\$ 127 million) investment into the local economy, adding £270 million (US\$ 342.9 million) per annum of GVA to the Kent economy. It will seek to set the standard for sustainable production, including solar and ground source energy to reduce energy demands, as well as partnering with Kent's schools, colleges and universities to boost skills development in the region.

3.3

Newtown Works, Ashford

This £190 million (US\$ 241.3 million) scheme is a mixed-use town centre regeneration project offering 200,000 Sq. Ft (18,580 sqm) of purpose-built world-class film studios, 302 apartments, 90,000 Sq. Ft. (8,361 sqm) of commercial space and a media village for supply chain and other media businesses at a former Victorian-era railway yard next to Ashford International railway station.⁴

It will provide additional UK film and TV space. Over 6,000 businesses connected to the TV and film sectors are within 90 minutes of Ashford including pre-production, production, post-production and distribution companies.

The area has the largest concentration of Film and TV businesses outside of London, including special effects company ER Productions and model manufacturing specialists, Total Machining Solutions. Maidstone TV Studios, the UK's largest high-definition TV broadcast facility, is 30-minutes by train from the Newtown Works site.

3.4
Medway One, Hoo Peninsula

Medway One is the redevelopment of the former Kingsnorth power station site, owned by leading international energy company, Uniper. Planning consent for a new manufacturing hub, waste-to-power plant and factory for a construction supply chain manufacturer, was granted in August 2023. It is expected to take a decade to complete including 3,552,087 Sq. Ft. (330,000 sqm) of employment space with the potential to create over 2,000 fulltime equivalent jobs. It is expected to generate in the region of £48 million (US\$ 60.96 million) in economic activity and output each year. Other elements of the scheme include a direct power connection to nuclear energy from France and a fibre connection to Belgium.⁵

3.5
Redevelopment of Chatham Docks

Similar in scale to the Media City development in Salford, Chatham Docks has the potential to deliver 1 million Sq. Ft. (92,903 sqm) of new employment space creating an additional 2,000 jobs focused on the digital, creative and health sectors.⁶

The developers, Peel L&P have already invested over £125 million (US\$ 158.75 million) into the first phases of development at the Chatham Waters scheme, including a University Technical College, with a further £350 million (US\$ 444.5 million) investment in the pipeline.

Currently undergoing examination through the Local Plan process, the proposal for the 90-acre site will also feature around 2,500 homes and a hotel and entertainment space that already has planning consent.

3.6
Chapel Down Winery, Canterbury

Award winning Kent wine producer Chapel Down, one of 50 wine producers in the county and Devine Wine, an Italian winemaker, secured planning consent in July 2023 for a £32 million (US\$ 40.64 million) new wine production and bottling facility at Canterbury Business Park.⁷

This will see a 128,090 Sq. Ft. (11,900 sqm) regional wine hub built with the capacity to produce at least six million bottles by 2032. The company's existing winery in Tenterden currently has a limit of around 2.5 million bottles. Defined Wine, the contract wine makers, which already operates at the site, will also benefit from the use of one of two warehouse spaces being constructed.

“Creating a wine region in the South East of England (covering Kent, Sussex and Surrey) is as big as it gets. In our respective lifetimes, we’ll have the best part of 100,000 acres of vineyards. We’ll be the next big global wine region.”



Andrew Carter
CEO Chapel Down

3.7
Ebbsfleet Central

Ebbsfleet Central will be a new dynamic commercial centre for a new commercial centre for the Thames Estuary anchored by its international railway station. It is a mixed use residential and commercial scheme spanning up to 120 acres (49 Ha) of previously developed land. Ebbsfleet Central is a rare investment opportunity, both in terms of scale and connectivity. Its proximity to London is already attracting international interest from developers.

The plan comprises over 2,000 new homes, up to 1.1 million Sq. Ft. (100,000 sqm) of office floorspace, and up to 107,000 Sq. Ft. (10,000 sqm) of retail floor space to include supermarkets, bars, restaurants, and cafés.

3.8

Riverside Regeneration, Gravesend

Northfleet Harbourside is a mixed use development of a 50-acre brownfield site on the River Thames. Featuring a new 8,000-capacity football stadium at its heart with 3,500 new homes, 225,000 Sq. Ft. (21,000 sqm) of new shops, restaurants, bars and cafés, a new hotel and offices. Led by Kuwait developers, KEH, it is a genuine locally led regeneration scheme for locals.

Riverside living is a feature of regeneration in Gravesend. The town is connected to Central London by fast, hybrid river buses and by High Speed trains in just 22 minutes. Two forthcoming residential schemes are Joseph Homes Albion Waterside and Clifton Slipways from Quinn Estates.

3.9

Cleve Hill Solar Farm, North Kent Coast

Cleve Hill Solar Park Ltd has begun construction on a major solar and energy storage park on the north Kent coast, with completion set for 2025. The project is classified as a Nationally Significant Infrastructure Project (NSIP) and was granted development consent in 2020.

Owner, Quinbrook is an ESG-focused global investment manager with a specialist focus on low carbon and renewable energy supply and storage related sector. Its £450 million (US\$ 571.5 million) Kent project, near Graveney, Swale will have a capacity in excess of 50 megawatts with the potential to power over 91,000 homes. It will also generate over £1 million (US\$ 1.27 million) of income per year towards improving local services through business rates.

There are already 41 solar farms operational across the region with a further 42 in the planning pipeline.⁸

3.10

Ryze Hydrogen, Herne Bay

Ryze supply hydrogen and hydrogen infrastructure for transport, industry and other applications – with a new production plant, said to be the first of its kind, on its way to Kent. The three-acre renewable energy facility is expected to create 20 jobs. Fuel made at the plant will first be trialled on 20 London buses with the capacity to increase to 300 over time.⁹

The company is also in discussions with Kent councils about launching zero-emission double decker buses in the county to meet a target of all new road-based public transport being hydrogen or electric fuelled by 2030.

3.11

First all-electric bus service for Kent

In June 2023, Go-Ahead London took over Fastrack services in North Kent with responsibility for creating Kent's first all-electric bus network, as part of a £110 million (US\$ 139.7 million) new contract, creating 100 jobs. This 15-year contract will include a purpose-built electric depot in Kent for Fastrack services linking Dartford, Gravesend, Bluewater, Darent Valley Hospital and Ebbsfleet International with plans to extend across the county.¹⁰

Separate plans for the Dartford area include the £900 million (US\$ 1.14 billion) KenEx Tram, a sustainable public transport proposal that will link residential developments on both side of the river Thames in Kent and Essex. The route, if approved and successful in securing funding, would connect Dartford, Swanscombe, Gravesend, Ebbsfleet International in Kent with Grays in Essex. This would be a dedicated system that would cross under the river Thames, powered by green energy, connecting people and jobs on either side.

3.12

Science park expansion

Expansion of lab space and new infrastructure like a new motorway junction at Kent Science Park could be enabled under proposals, subject to planning, for the Highsted Park garden community. Enabling the award-winning science campus to double in size from its existing 565,000 Sq. Ft. (52,490 sqm) of research and development space and have.¹¹

At Discovery Park in Sandwich progress is being made in attracting investment for 500,000 Sq. Ft. (46,451 sqm) of science related commercial space over the next five years. This would double the number of jobs from 3,500 to 7,000 by 2032. 2023 has seen the opening of 50,000 Sq. Ft. (4,654 sqm) of laboratory and office space for start-ups and early-stage companies, including biotech, med tech and digital health firms. This £6 million (US\$ 7.62 million) life sciences incubator, located in the iconic Building 500, will be followed over the next 10 years by the creation of a national centre for neuroscience, alongside life sciences, AgTech and renewable energy technologies. Plans for a manufacturing village also remains a key ambition.¹²

Pfizer's Research and Development Centre of Excellence remains the park's largest tenant and has continued to invest in its facilities, the largest R&D facility operated by the company in Europe, A fully automated pilot plant on site manufactures medicines for use in clinical trials worldwide.

Emerging facilities with planning consent at Kent Medical Campus, located off junction 7 of the M20 at Maidstone will add additional capacity to the region's health and science cluster with one million Sq. Ft. (92,903 sqm) of A1, B1, C2 and D1 flexible space for health, education and life science companies.

In July 2023, property advisers Knight Frank said 1.8 million Sq. Ft. (167,225 sqm) of lab space needed to be constructed in the Golden Triangle of London, Oxford and Cambridge to increase supply, meet the rapid growth in the UK life science sector and support the Government's push to make the UK a 'science and technology' superpower by 2030.¹³ There is a compelling argument - from university backed research in key areas, the depth of talent available and access to high quality lab space at all stages of R&D - to look to the Kent life sciences cluster first.¹⁴

3.12 CASE STUDY

Michelson Diagnostics. World leading imaging technology experts who created VivoSight, the powerful and versatile skin imaging tool used in hospitals and labs for skin cancer diagnosis and research into many other skin disease treatments and cosmetics.

I am very pleased we have joined the vibrant community of medtech, healthcare and life sciences companies at Maidstone Innovation Centre. We are already benefiting from our move by working with some of them on new innovation, manufacture and infrastructure projects that will support our growth.



Jon Holmes

CEO of Michelson Diagnostics

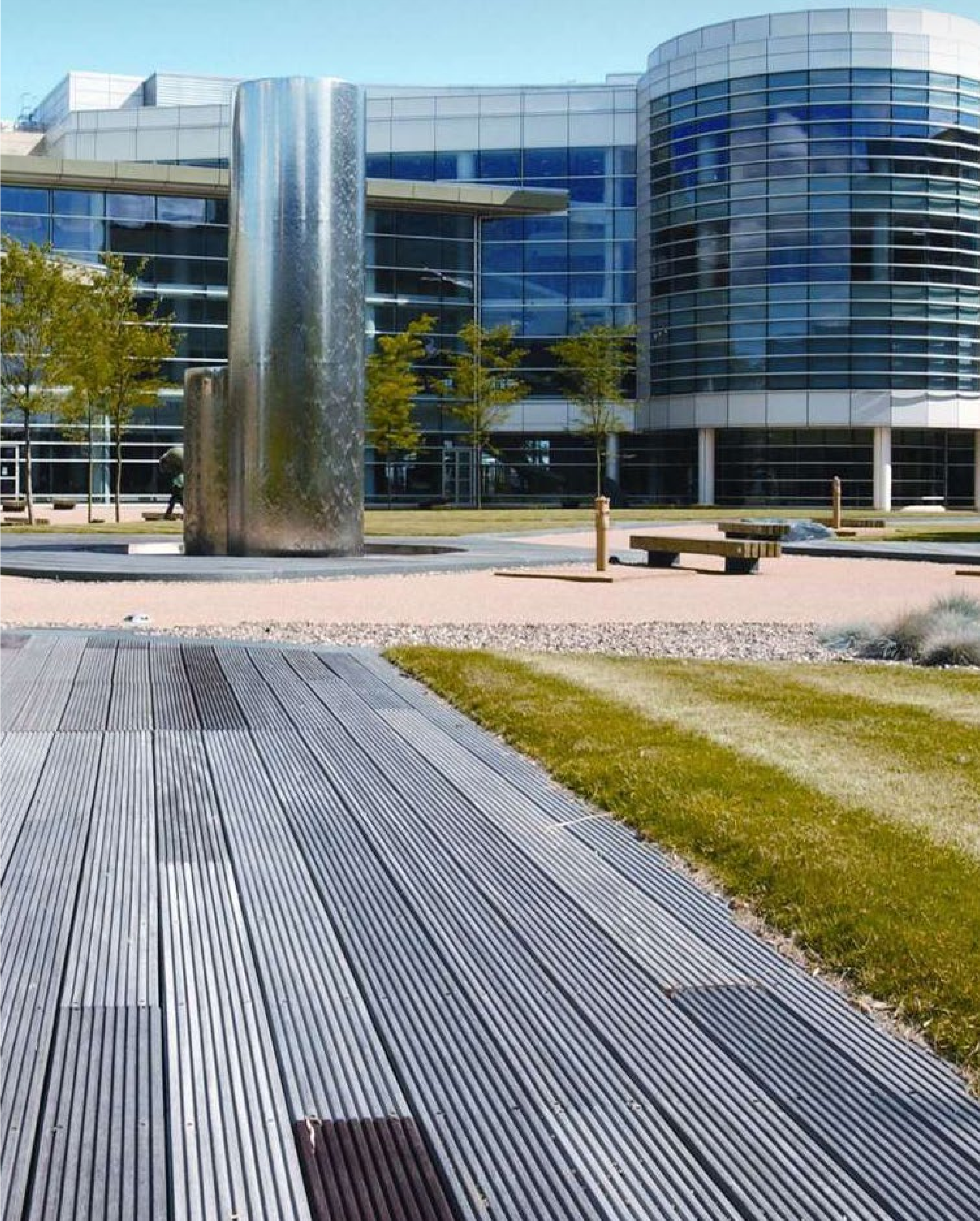
"The current critical shortage of R&D facilities is inflicting severe damage on the UK's hopes of being a life sciences superpower. Without lab space, start-ups and university spinouts are being denied any chance of developing their concepts beyond the early stages. If there is no pipeline of discovery, the science sector will stagnate and there will be no push towards manufacturing, which this country needs for future economic development.

The highly priced 'Golden Triangle' is over-congested and companies can find it difficult to locate. At Discovery Park, we are able to offer flexible and affordable space which allows companies to grow in line with their business needs. And we're already seeing a demand from interesting companies attracted by a viable alternative and our existing tenant base with ambitious growth aspirations."



Mayer Schreiber

CEO, Discovery Park



3.13

Grain Powerstation site, Medway

The former Isle of Grain Powerstation is 17,652,796 Sq. Ft. (164 hectares) of previously heavy industrial use in a high priority Levelling Up area. It has planning consent for over 5 million Sq. Ft. (465,000 sqm) of industrial buildings and capable of accommodating some 6,000 new jobs. The site has direct power sources offering triple resilience. It is adjacent to London Thamesport, the dry bulk and container deep sea port with daily sailings to Rotterdam and routes to France and Spain for unaccompanied cargo.

Coming ashore adjacent to the Grain site is the NeuConnect Interconnector, a direct connection to green energy via undersea cable to Germany.

The £2.4 billion (US \$ 3.04 billion) privately funded NeuConnect Interconnector creates the first power link between Germany and the UK, two of Europe's largest energy markets. Around 1,166 miles (725km) of land and sea cables will form an invisible energy highway linked to the National Grid. It will be one of the world's largest interconnectors, allowing up to 1.4GW of electricity to move in either direction. This is enough to power up to 1.5 million homes over the life of the project, with a completion target date of 2028.¹⁵

The project will allow energy markets in both the UK and Germany to build resilience and allow greater flexibility for the changing demands of business, industry and consumers. It will promote the integration of renewable energy sources with a pledged net reduction in carbon emissions of 13 MT CO₂ over 25 years.

3.14

Otterpool Park

Otterpool Park is a new garden town being created in the Kent countryside; it will be a place to lead a healthy, active, sustainable lifestyle in a creative, inclusive and vibrant community. Outline planning consent for the first 8,500 homes was granted in April 2023. The approved plans also include up to 87,500 sqm of employment floor space, including commercial business hubs, a commercial business park, and a light industrial park for growing businesses. It is estimated that the 9,000 jobs supported by the garden town will provide £345million (US\$ 438.15 million) in GVA.

Designed around the core principles of Countryside, Connected, Creative, Otterpool Park is in a prime location for the new community due to excellent transport links by road (junction 11 of the M20) and rail (London is reachable by train within an hour by high-speed train). It is further boosted by plans for

the creation of an integrated transport network to connect the new garden town and reduce car use centred around Westenhanger train station. Proposals also include the provision of a fibre-to-home broadband network to support digital connectivity

3.15

The Lower Thames Crossing

The Lower Thames Crossing located east of Gravesend and connecting Kent with Thurrock in Essex would be the biggest investment in the UK's road network for a generation. The project currently has an estimated cost of between £6.4 billion and £8.2 billion (US\$ 8.12 billion and US\$ 10.41 billion).

The proposals include the country's longest road tunnel stretching 2.5 miles (4.5 km), including 14 miles (22 km) of new road connecting the M2/A2 in Kent and the A13/M25 in Essex with around 50 new bridges and viaducts. A final decision on a Development Consent Order is expected to be taken by the Government in 2024. If approved, 2030 is the current target date for opening.

The new crossing is predicted to double road capacity across the Thames east of London and ease congestion on the existing Dartford crossing. An estimated 22,000 people will work on the project during construction with the project team calculating an additional 400,000 jobs will be available within an hour's commute of local communities, once open.

3.16

Modular construction factory proposals, Medway

A new modular homes factory that will be the UK headquarters for a world leader in manufacturing innovation is on its way to Medway. Subject to planning approval in 2024 the new manufacturing and distribution hub for modular homebuilder Berkeley Group will deliver around 300 new jobs and produce 5,000 new houses a year.

Over 900,000 new homes need to be built in London and the South East by 2033, leading to ongoing loss of land for employment use. The UK does not have sufficient people or a sufficiently robust supply chain to build 300,000 new homes every year. Kent's industrial heritage is based on being the source for construction materials for the UK. There is, however, a real opportunity for modern methods of construction moving from site to factory. Modular construction factory projects provide a future delivery model.¹⁶

3.17

Satellite technology businesses

Two US based satellite companies have chosen East Kent for their UK base. One to have a global Network Operating Centre (NOC) and the other a manufacturing centre for low orbit satellites, creating 200 new high-tech roles. Both new facilities are due to open in 2024, subject to planning approval.

3.18

Innovation Park, Medway

Medway's economy is a key growth area in the South East worth £5.2 billion (\$6.6 billion) and represents one of the biggest regeneration zones within the Thames Estuary.

Innovation Park, Medway located at Rochester Airport will support the development of up to 645,834 Sq. Ft. (60,000 sqm) of high value technology, advanced manufacturing and knowledge-intensive businesses, including R&D. Around £3.7 million (\$4.7 million) has been invested through the South East Local Enterprise Partnership to develop all the on-site infrastructure required for the northern site, which includes a 28 plot new 'Runway Park'. Once complete the whole scheme will help to create around 3,000 jobs for the area.

3.19

Kingstanding, Tunbridge Wells

A scheme that unlocks unused greenbelt land on the edge of Tunbridge Wells town centre on the A21 with planning consent. The new flexible space will address demand for office and industrial space and improve infrastructure in the immediate area. Featuring community space, with nature and wellbeing at its heart, this is a business destination fit for the modern era. Alongside the benefits of. Kingstanding is designed to attract businesses from a wide range of backgrounds, creating office and warehousing 20 minutes from the M25

Major Schemes Pending Decision

3.20 Manston Airport, Thanet

Designated by the Government as a nationally significant transport infrastructure asset, owners RiverOak Strategic Partners have their sights on transforming Manston Airport into the UK's only dedicated multi-modal freight distribution hub for time critical freight including medicines, food and flowers.

The £500 million (US\$ 635 million) proposals, currently subject to a judicial review following an appeal against the Government's consent for the scheme, includes 19 stands capable of handling widebody freighters as well as a 705,035 Sq. Ft. (65,500 sqm) cargo facility.

While these plans are delayed other projects in the area are coming to fruition including the opening of neighbouring Thanet Parkway station which opened in July 2023. This provides improved connections for the airport. It is already benefiting surrounding employment sites connecting Manston Business Park and nearby Discovery Park to Kent's high speed rail network. London St Pancras is now 70 minutes away via Ashford.¹⁷

Thanet District Council approved the phase 1 plans for the 72ha development land adjacent to Manston Airport for a warehouse and distribution centre with 7,750,008 Sq. Ft (720,000 sqm). New plans are coming forward to complement the new vision for the airport and changes to sustainability requirements.¹⁸

3.21 Improved rail connections

Kent's 2021 Rail Strategy produced by Kent County Council set out to influence decision on the level of domestic and international services serving Kent's rail passenger network for the next decade and beyond to support economic growth, predicted increases in population and the climate change agenda.

Proposed enhancements to rail services up to 2031 and beyond include the proposed Thameslink service from Maidstone to Cambridge via the City of London.

It calls for a replacement for the Metro fleet and for an increase in the capacity of the High Speed 1 fleet for North and East Kent to meet demand, including an upgraded Westenhanger railway station to serve the new Otterpool Park garden town.

Connecting Abbey Wood in the London Borough of Bexley to Ebbsfleet Garden City has been focused on physically extending the Elizabeth Line. Other transport options aimed at improving connectivity for the area's future residents, now also include new Metro services, Fastrack bus services or connecting coach services. Any final proposal, based on best value for money, is not expected to be delivered until at least the mid-2030s.

Longer term options on the drawing board include Kent Sussex Connect; upgrading the Marshlink line and Lydd Rail Spur from Ashford International to Ore in East Sussex would allow HSI services to access Hastings, Bexhill and Eastbourne. The plan is also intended to deliver better connectivity by developing a freight and passenger corridor along the South Coast connecting Manston to Crawley and Southampton.⁷

3.22 Operation Brock

The Operation Brock contraflow system is designed to keep traffic on the M20 and other roads in Kent moving when there is disruption to travel across the Channel. A quick moveable barrier system deployed on the M20 allows port bound traffic to be held on the coast bound carriageway, when necessary, with other traffic using a contraflow on the London bound carriageway. As population increases. border requirements change and more capacity is required, new solutions will need to be found. Several options are already under consideration, including:

- Innovative digital borders (in line with the Government's 2025 UK Borders Strategy).
- Investment in a permanent solution possibly using a Traffic Arrival System to virtually queue freight traffic heading for Kent.
- Sites for holding HGVs when required.

Any sites could be dual purpose – offering capacity for traffic management when needed and used year-round to provide high quality overnight HGV parking facilities.



2020s - A decade for opportunity

Hydrogen Fuel Production

As the capital cost of vehicles using alternative fuels falls, demand for green power will grow exponentially. The UK does not currently have sufficient people or robust supply chains in place to produce hydrogen at scale. Through companies such as Ryze Hydrogen, Kent can meet that challenge over the next seven years.

Food Production

The food and drink production industry is one of the UK's largest manufacturing sectors and features heavily in Kent's economy. The largest agricultural sector in Kent is largely soft and top fruit, salad and grapes for wine. Kent is famous for apples, strawberries and proudly boasts producer brands such as A C Goatham & Son, Chambers, Berry Gardens, Hugh Lowe, Thanet Earth and Linton Park.

However, as consumer tastes and nutritional needs evolve, the UK will require year-round production of seasonal foods. Protein alternative foods will need to be grown at scale will be an important part of our future diets.

Through the work of Growing Kent and Medway's world-leading research catalyst and accelerator programme, this region can meet the challenge. Growing in a controlled environment requires a constant supply of renewable energy to be viable that can be sourced locally. More engineers will be needed to manage the growing environment and produce green onsite energy.

Kent is also at the centre of the English wine industry, Kent is also home to award winning wine makers like Chapel Down, Hush Heath, Gusbourne, Kingscote, Biddenden and Taittinger.

Kent is also working to meet this challenge.

Logistics

Almost 15 million Sq. Ft (1.39 million SQM to add) of new 'supersheds' were built across the UK in 2020 – amounting to 49 brand new, large distribution warehousing.¹⁹

Logistics schemes in West Kent tend to let fully before practical completion. On the face of it due to the excellent motorway connectivity, but also because they built to the highest sustainability standards. Examples of such schemes adjacent to the M20 motorway include at junction 5 by Wrenbridge and Panattoni and at junction 8 by Clearbell.”

The UK has the highest penetration of its total retail sales coming through e-commerce. As of September 2021, the figure stood at 26.6 percent.²⁰ Logistics employers also hire over 40,000 new apprentices every year. However, the UK still does not have sufficient people to meet demand and needs more engineers to apply automation.

There is a real opportunity for agile firms that can automate. Those who do will excel in this sector. To achieve this goal will require more engineers that are commercially minded and can adapt. In Kent we are already building that environment. Supersheds like Amazon's 2.3 million Sq. Ft (213,677 sqm) fulfilment centre at Dartford employ 2,000+ people despite being largely automated. With the new green engineering centre launched by EKC Colleges Group in 2023 and the Christ Church Canterbury University's world-class engineering school both building automation skills, Kent is developing the skills that employers will need and showing the way for the UK.

With plans for decarbonising freight at the Port of Dover and other examples where Kent is championing the road to net zero, there is a growing opportunity now for decarbonising the logistics sector in the region - including harnessing new technology, fuel systems and methods of 'last mile' delivery.

Onshoring manufacturing

Events over recent years have shown that the balance of risk has shifted against long and complex supply chains. Making in Kent is a lot more attractive than sourcing from Asia and even the EU, for time critical projects. As with logistics, shortage of qualified engineers is an issue for the UK as well as a robust supply chain to produce all components. There is an opportunity for agile manufacturers that can increase automation with engineers that can adapt.²²

With new international legislation coming in, including assessing the carbon footprint of components, this is another sector with opportunities to be more sustainable. Reshoring will help local production to contribute to net zero targets.

It is easy to forget that one of the reasons the UK has the sixth largest economy in the world, is because it is the eighth largest manufacturing economy. It is also no coincidence that the UK is also the 10th highest exporting economy by value as well. Much of what we manufacture is based on importing raw materials and smaller parts to combine for higher value exports. Think automotive, pharmaceuticals, fashion and the machines used in factories to make other finished goods.

The South East of England has the UK's largest concentration of manufacturing facilities with some 290,000 people working in the sector. In Kent we are at the forefront of the construction supply chain, food processing and fast-moving consumer goods.

Kent has the largest concentration of ports in the Southeast. Complementing the Roll-on-Roll-off at Dover and the Channel Tunnel at Folkestone, international dry bulk docks are on the River Thames at Dartford and Northfleet. On the River Medway at ports at Grain, Sheerness, Chatham and Sittingbourne offer dry and liquid bulk, break bulk and a deep water container terminal.

The region is also benefitting from a loss of 5.7 million Sq. Ft (529,547 sqm) of industrial space in London to other uses, largely to residential use since 2011, according to research from Savills. Most of those manufacturers have moved east to the Thames Estuary.²¹



Conclusions

This document set out to show the extraordinary opportunities for new investment in Kent and Medway, and the phenomenal benefits that this will bring for future generations. The Kent and Medway region is already delivering, with a lot more to come.

This is a part of England that has been contributing to the country's success for centuries thanks to high levels of productivity, innovation and a unique location between Europe and London. A global facing South East gateway on the doorstep of the world's greatest city.

We have shown where innovation is happening for tomorrow's businesses across Kent and Medway with an unrivalled pipeline of projects coming through by 2031, bringing thousands of jobs and new opportunities to the region, plus the locations of the new homes our growing population will need.

While not detailed in this prospectus, new housing is also set to deliver much needed infrastructure. This will range from upgraded railway stations, leisure space and employment zones through to schools, health centres and other community facilities that will all add to the quality of life in the region and boost the level of opportunities for all.

This is a region that over the next 25 years can deliver a 0.91 percent uplift to England's economy, delivering some 249,430 jobs for existing and future residents – and adding £23 billion in GVA. By investing in Kent, that legacy can not only be secured for future generations but delivered.

- ▶ Kent has always been and continues to be strategically important to the nation's growth.
- ▶ Kent continues to be at the forefront of innovation on how we produce food, distribute and power our economy with green jobs.
- ▶ The region has a clear pipeline of projects that will deliver prosperity for the people of Kent and Medway.
- ▶ Kent's new garden communities will deliver much needed homes, community facilities, sustainable transport and green open spaces.

5

Background information

University of Kent's School of Economics Document research – August 2023

METHODOLOGY

Commentary

Locate in Kent asked the University of Kent to take the number of predicted new homes forecast for the period 2021 to 2050 and calculate what level of economic output (or gross value added) that would add to England's GVA, the region's contribution to the UK's economic performance (GDP).

The total GVA figure of £23 billion (US\$ 29.21 billion) by 2050, equivalent to 0.91 percent of England's GVA, combines total jobs forecast in the 2018 update of KCC's Growth and Infrastructure Framework (GIF) with data on household and business demographics and employment patterns in Kent and Medway. The GVA values are inflation adjusted and in terms of 2023 GBP.

The total number of new jobs is based on demographic patterns across Kent and the wider UK. With an increased population, the job opportunities for new residents will come from a range of sources, including the Kent 2018 GIF report, as well as broader market and entrepreneurial activity. It also considers opportunities for commuters in London and the broader area, to support evidence of GVA benefit for those living in Kent and Medway but working in the capital.

It should be noted that any projections of the net change in jobs in Kent and Medway by 2050 may differ due to demographic and structural economic changes both Kent and UK-wide. The economic activity or Gross Value Added (GVA) generated by each job is based on official estimates of GVA in Kent, and broader UK wide economic growth and population predictions. The sterling value is based on what the Pound is worth in 2023. Calculations for the period to 2031 and to 2050 have been adjusted for inflation. GVA is a measure of economic activity and is a useful measure of the contribution of economic activity in a region, sector or business to overall GDP or Gross Domestic Product.

The economic evaluation is based on the number of new homes built over the time period to 2050, along with data from the Office for National Statistics (ONS) and projections from the Office for Budget Responsibility (OBR). The below provides further detail on the valuation methodology followed by the University of Kent.

Calculating Kent's future contribution to England's economy

The proposals in Phase 1 (to 2030) and Phase 2 (from 2031) combined are expected to contribute the equivalent of 0.91 percent of England GVA across Kent and neighbouring areas.

The figure of £23 billion represents the contributions in real British pounds of Phases I and 2 at their respective times of completion. Phase I is estimated to contribute £9 billion by completion in 2030 and Phase 2 a further £14 billion by 2050. These values are reported in 2023 British pounds.

Valuation methodology

1. We started with the number of new homes built under the proposals (104,700 by 2030 and 127,100 between 2031 and 2050) .
2. We used employment data from the Annual Population Survey (2022), and household data from the most recent Census (2021), to compute the average number of employed persons per household in Kent (1.08 employed persons per household in Kent).
3. We used local level GVA data, and the ONS Business Register and Employment Survey, to compute the average GVA (Gross Value Added) per job in Kent in 2019 (£63,422 per job).
4. There are more Kent residents employed in the Annual Population Survey than there are jobs located in Kent in the Business Register and Employment Survey. This is due to Kent residents who are employed outside of the region, especially in London. We estimate the GVA per household, by assuming that the typical Kent resident working outside of Kent is in a job with GVA similar to the typical job located in Kent. This is a conservative assumption, as the typical job located in London has a higher GVA. Ultimately, this gives us an estimate of the GVA per household in Kent in 2019 GBP (£68,245 per household).
5. We then projected forward to 2023 GBP GVA per household values by scaling our 2019 values by the increase in nominal GVA per working age adult between 2019 and 2023 (£76,008 GBP per household).

Locate in Kent

Investing in Kent for future generations

6. We used the estimates obtained in Step 5 with the total projected new homes built under the proposals to estimate the GVA effect of the new homes as a share of England GVA (0.91 percent of England GVA).
7. We obtained GVA values in 2023 GBP at the time of completion of each stage of the proposals by projecting our 2021 values forward to 2030 and 2050 using the average real GVA growth rate projected by the OBR in their March 2023 Economic and Fiscal Update for the period 2023 to 2027, which is the end of their projection window, along with UK population projections from the ONS. The resulting projected real terms GVA growth rate per working age person is 1.4 percent per annum.

Benchmarking against other regions

The University of Kent also compared its results against the same calculations for the rest of England excluding London. In Kent, a similar investment in housing and infrastructure yields a larger increase in economic activity (as measured by Gross Value Added) than investments in other English counties outside of London.

Specifically, an investment in Kent yields a 13.8 percent larger contribution to GVA than a similar magnitude investment elsewhere (or 0.11 percentage points of England GVA). The reasons for this difference are as follows: the average job in Kent contributes a higher GVA than in the rest of England (excl. London), and the average household in Kent has a larger number of people in work than average in the rest of England (excl. London).

Numeric and size conversions

In this document we have shown costs in both UK sterling and US dollars using the conversion rate of \$1 = £1.27.

All area sizes have been measured and listed in square feet (Sq. Ft) with square metres (sqm) given in brackets, unless indicated. We have used a conversion rate of 1 sqm = 10.7639 Sq. Ft.



6

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17. Kent Online: Silicon Valley firm HyPoint invests £11 million in county.
→ <https://bit.ly/47IMTul>
18. NeuConnect project overview – Connecting two of Europe's largest energy markets for first time.
→ <https://bit.ly/3PebAYj>
19. Alpha 311: First test of full size turbine mounted lighting column
→ <https://bit.ly/3EcUkMB>
20. Statista: Construction Sector Gross-Value Added in the UK
→ <https://bit.ly/44sjtNW>
21. Medway Modular: Planning application submitted for Berkeley Modular plan
→ <https://bit.ly/45ndKun>
22. South East Business: Kent College launch sustainable skills revolution.
→ <https://bit.ly/3QW9xtg>
23. The Manufacturer: EKC group unveils green engineering centres to tackle skills gap.
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24. Food Manufacture: UK lags behind on robot adoption
→ <https://bit.ly/44lwNDS>
25. Food manufacture: Robotics in UK food manufacturing: what are the latest trends?
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26. Kent Online: First look inside Amazon's new £200 million warehouse.
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27. GOV.UK: Signs of the future: new technology testbed on the A2 and M2 in Kent
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Today's pipeline – Investment delivery to 2030

1. University of Kent: Establishing the UK's first high volume green shipping corridor
→ <https://bit.ly/3qM54hU>
2. Port of Dover and Sustainability
→ <https://bit.ly/3Ed84XJ>
3. The Guardian: Brompton Bikes plans £100m wetland factory on stilts
→ <https://bit.ly/3QVPH13>
4. Kent Online: Inside Ashford's Netflix, Amazon and HBO linked film studios at former Newtown railwayworks.
→ <https://bit.ly/3PbsuXw>
5. Kent Online: Uniper to build MedwayOne on Kingsnorth power station site creating 2,000 jobs
→ <https://bit.ly/3PnpaJ3>
6. Peel Land: Peel LP unveils mixed use development masterplan for Chatham docks industrial estate.
→ <https://bit.ly/3QVB1PF>
7. CityAm: Chapel Down - Meet the man bringing a bit of 'bazball' to English bubbles
→ <https://bit.ly/3R39qMa>
8. Solar Panel Portal: Cleve Hill Solar Park - UK's 'largest' solar and battery storage project begins construction
→ <https://bit.ly/45HOrmr>
9. ForecourtTrader: Hydrogen producer signs deal with transport company to supply London buses
→ <https://bit.ly/3EbpJyS>
10. IntelligentTransport: Go-Ahead wins contract to operate Kent's Fastrack bus system
→ <https://bit.ly/45hID4l>
11. Kent Online: Quinn Estates promise to build Sittingbourne's Northern Relief Road as part of Highsted Park plans.
→ <https://bit.ly/3OQFVe6>
12. Discovery Park celebrates 10 years and plans to double jobs over the next decade
→ <https://bit.ly/3sx9WYY>
13. Property Week: Knight Frank forecast - life science golden triangle in need of more than 18 million Sq. Ft. of new lab space.
→ <https://bit.ly/3EewoZk>
14. Aviva investment thinking - Life Sciences Real Estate
→ <https://bit.ly/3PaMcTd>
15. The Engineer: Work starts on £2.4 billion NeuConnect Interconnector project between UK and Germany
→ <https://bit.ly/3Pdi0XD>
16. GOV.UK: Planning for the future/Queen's Speech May 2021 and KCC: Housing Led Summary 2021
→ <https://bit.ly/3qMspjC>
→ <https://bit.ly/3PccRPn>
→ <https://bit.ly/3QRzNVx>
17. BBC: Thanet Parkway station opens to the public/Discovery Park on track for opening
→ <https://bit.ly/3QV6Vvm>
→ <https://bit.ly/3qDzh2Q>
18. Planning Resource: China Goods Park Agreed
→ <https://bit.ly/44mADwp>
19. Retail Week: Supershed numbers surge across UK as online boom sparks expansion
→ <https://bit.ly/3so5BXH>
20. GOV.UK: 09/2022 Assessment of current buyer behaviour in market
→ <https://bit.ly/3suLozJ>
21. Logistics: Decarbonising logistics report/UK GOV: Decarbonising transport – A Better Greener Britain
→ <https://bit.ly/47McjqR>
→ <https://bit.ly/3KV3Mb6>
22. Savills: The logistics market in London and the South East
→ <https://bit.ly/3OK3KEg>
23. Kent County Council: Kent Rail Strategy (2021)
→ <https://bit.ly/3qQsVgv>



7

About Locate in Kent



Locate in Kent is the Kent and Medway region's official investment promotion agency established in 1997. Since April 2019, Locate in Kent have supported more than 332 business investment projects in the Kent and Medway region.

Funded primarily by Kent County Council and Medway Council, Locate in Kent's mission has always been to create new jobs through supporting investment in economic growth, especially inward investment.

They have overseen some 9,427 jobs created. 4,139 jobs from 87 inward investment and major projects. 44 percent of those inward investment projects were Foreign Direct Investments (FDI).

Locate in Kent's consistent approach to delivering that mission is based on its extensive network of contacts, level of insight and pipeline, established and built in the region over decades.

Network

Locate in Kent's power is held in its regional relationships. Locate in Kent can open doors and start honest dialogue to move deals forward. They invest in relationships with important people in the region's target industrial sectors, active developers and local politicians and their officers.

Insight

Locate in Kent's local knowledge is its currency. They are seen as a primary source of property demand and availability by the growing and largest firms who are investing in the region. They understand the barriers to growth and the sources for success. They share their knowledge with stakeholders regularly through conversations and published content.

Pipeline

Locate in Kent actively maintains the region's pipeline of projects to ensure resilience and offset uncertainty on timescales. They take the lead through demonstrating the value of their network and relevance of their insight. They use a robust qualification process to ensure no lead is wasted. Locate in Kent ensures projects receive priority at appropriate stages in the decision making process.

The Kent Developers Group

Locate in Kent convenes the Kent Developers Group (KDG). The KDG is the collective voice of the region's major developers of employment use real estate.

KDG unites public, private and the relevant regulatory bodies to stimulate economic activity in Kent and Medway. Members collaborate to maximise investment in infrastructure, commercial development and job creation.

The Group acts as an advisory panel for policy makers and infrastructure providers, both physical and digital. They are joined by global professional advisers, Kent County Council, Medway Council and Government. Members share the vision to create employment space through the acquisition, development, regeneration and construction of industrial buildings and offices.

Kent Housing Development Group

High quality homes and commercial property play a huge role in attracting new businesses to the county. The Kent Housing and Development Group (KHDG) is a unique association that comprises land and property owners, developers of commercial spaces as well as residential and mixed-use schemes across the county.

Together they work alongside public sector partners, including planning authorities and agencies to discuss strategic issues affecting the region. Benefits of membership including being part of a partnership working to remove barriers to growth and deliver future economic prosperity for Kent.

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