

Final Report

*Kent Science Park –  
Economic Impact  
Assessment*

May 2008



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# *Executive Summary*

## **1. Resume of Study Aims**

**1.1 The purpose of the research was to help inform decisions regarding the possible future expansion of Kent Science Park.** The specific research aims, as set out in the terms of reference, were to provide strategic partners with:

- A clear and independent understanding of the contribution made by Kent Science Park to the local, sub-regional, regional and national economies;
- An understanding of the competitive position of KSP in relation to other Science Parks and business parks locally, regionally and nationally;
- An understanding of the current and emerging strategic and policy context relating to KSP;
- An assessment of the economic impacts of the further development of KSP based on a range of long-term development scenarios.

**1.2 The research was commissioned by Swale Forward in partnership with Swale Borough Council KCC, SEEDA and the Thames Gateway Kent Partnership.** The assignment was carried out by the Centre for Strategy & Evaluation Services (CSES) during the period from September 2007 to May 2008. In assessing the economic effects of KSP's possible expansion, it was beyond the scope of our work to examine the feasibility of the various scenarios in detail. Similarly, there are many factors that could influence the economic effects arising from any expansion of KSP (e.g. improving road links to the site) which were not within the scope of this study to examine in detail. Estimates of economic impacts are developed for a number of 'given' scenarios at the time when the research was undertaken and changing circumstances during the period of the forecasts could also affect the nature and scale of actual effects.

## **2. Current Situation**

**2.1 Kent Science Park (KSP) is one of the largest in the South East region with the most significant cluster of technology-based businesses in the Kent and Medway area.** The science park currently consists of 47,100 sq m (507,000 sq ft) of office and laboratory space on a 22 ha site just outside Sittingbourne. The fact that KSP is the only establishment in Kent offering wet lab facilities and other specialized infrastructure needed by firms in the Life Sciences/Biotech sectors is a major attraction. According to the latest KSP tenant directory (December 2007), there are currently 71 tenants employing a total of 872 employees. Around a third of KSP's existing tenants are science-based. Using the Kent Structure Plan definition, approaching two-thirds of KSP's tenants can be classified as being in knowledge-

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intensive sectors (science-based, ICT-related, Business Services, etc). The average employee per tenant at KSP ranges from 6.1 in the science-based sector to 17.1 in ITC-related firms with other sectors (Business Services, etc) employing an average of 14.2 per firm.

**2.2 KSP's makes an important contribution in terms of job and wealth creation to the Swale and wider Kent economies.** Although the KSP tenants' 872 employees represent only a small proportion of the Swale Borough's 46,800 workforce, the science park accounts for almost a third of employment in knowledge-based sectors (again using the Kent Structure Plan definition). At a Kent level, the science park represents some 2% of employment in knowledge-based sectors. An analysis by postcode undertaken of the home location of KSP company employees indicates that half live in the Swale and Medway area. Of these, over a quarter live in Sittingbourne or surrounding localities.

**2.3 The science park is a significant part of the infrastructure needed in Kent to address structural weaknesses. It is a major asset to Kent but its potential is not currently being fully exploited.** As a county, Kent lags behind the South East as a whole in terms of key economic indicators. The main reason for this, which has been extensively researched in other studies, is that compared with the region as a whole, Kent has historically been under-represented in knowledge-intensive sectors with high growth potential and over-represented in sectors with relatively low growth potential. With its focus on science-based activities, KSP is therefore not only important to the local economy of Swale but also of strategic significance to Kent as a whole.

**2.4 At a national, regional and Kent level, there are generally supportive policies for the development of science parks.** At a national level, the UK Government has supported the development of science parks across the UK as part of the physical infrastructure needed to promote world-class research excellence since the mid-1980s. In the South East, the draft South East Plan supports the development of knowledge industries and R&D (these are specifically mentioned in the first part of Policy KTG4 and the science sectors in KTG4 v) and science parks such as KSP are seen as important in this respect. Likewise, SEEDA's Innovation Action Plan – 'Sustaining and Creating Prosperity' – provides a region-wide framework for supporting innovation and for the development of a favourable environment for knowledge-based activities. The Thames Gateway Economic Development Investment Plan is also highly supportive of such measures, as are KCC and its partners at a Kent level. The 2006 Kent & Medway Structure Plan supports expansion of technology and knowledge activity at KSP but does not specifically indicate the scale of possible expansion.

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**2.5** In the UK as a whole there are now more than 100 science parks accredited by UKSPA of which about eleven are located in the South East region (a further two are in London and 13 are in the East of England). According to UKSPA, UK science parks now provide some 1,000,000 sq m of accommodation and employ more than 41,000 people. Science park capacity has been well matched to demand with tenant occupancy rates maintained within the range expected for commercial property developments. According to research undertaken on behalf of UKSPA in 2003, in recent years average annual occupancy rates have typically ranged from 87% to 97% with mean annual new construction of 23,700 sq m per year. Most studies indicate that companies located at science parks grow more successfully than those at alternative locations.

**2.6** KSP is a member of UKSPA and the site manifests many but not all of the characteristics of a science park in the 'classic' sense of the term. The interaction with the region's universities is not as strong as with many 'classic' science parks (partly because of a lack of physical proximity. According to our survey, a third of KSP tenants (36%) have 'very important' or 'quite important' links with the universities and/or research centres in Kent); secondly, there is less emphasis on incubation, technology transfer and the process of developing spin-outs than in most science parks; and, thirdly, KSP and - more importantly the relationship with and between tenants - is not as proactively managed as in the classic science park model. The explanation for these factors is not, however, one-sided and the causes lie to some extent at least in the relatively under-developed entrepreneurial culture in Kent and Medway's further and higher education institutions.

## **3. Future Development Scenarios**

**3.1** There is a danger that the maintenance of the status quo with regard to KSP's development will result in a decline in occupancy rates leading to either eventual closure or to it no longer being recognizable as a science park. The potential for this is highlighted by the recent decision of Pfizer to relocate 100 R&D jobs. The exit of one or more anchor tenants is not only serious in its own right but could also have wider ramifications. In common with other science parks, an important feature of KSP is the development of clusters with firms growing more successfully through interaction with each other than would be possible elsewhere. Major companies such as Pfizer have a key role in cluster development but also as 'anchor' tenants in fostering an overall science park image. Experience elsewhere suggests that without prestigious and well-known tenants of this type, science parks struggle to survive. More generally, in our survey, whilst just over half (54%) of KSP companies stated that they had no plans to relocate, a significant proportion (19%) indicated that this has been or is being considered (the remainder said they didn't know).

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**3.3 Previous research has tended to be over-optimistic with regard to KSP's growth prospects.** Thus, the Amion Report argued that by 2007 the existing premises at KSP should be fully occupied whereas this has not proved to be the case. Looking further ahead, previous longer term forecasts (Amion Report, p.59) for potential demand for space over the next 20 years at KSP pointed to a need for 140-150,000 square meters. The methodology adopted for these earlier forecasts was 'top-down' (i.e. relying on industry trends at a national level) whereas we have adopted a 'bottom-up' approach using information gained from KSP tenants themselves and other local research. In our view, this approach is a better guide to demand for space at KSP, at least in the short and medium-term.

**3.4 Overall, our assessment suggests that there is a case for expanding Kent Science Park beyond the perimeter fence but on an incremental basis as and when demand for space exists or can be reasonably projected.** The analysis of various scenarios suggests that if KSP's existing tenants continue to perform well, this should be sufficient to support some demand-led expansion of the science park. Thus, we estimate that if KSP companies grow at a rate marginally above forecasts for the UK economy as a whole, this would lead to KSP's existing 46,000 sq m being 85% occupied by 2010 with full occupancy at some point between 2012 and 2015. Beyond 2015, KSP's tenants would have to look for space elsewhere to expand (we estimate that this 'growth from within' has the potential to create an additional 570 jobs directly between 2015 and 2025 which would be effectively lost if KSP is not expanded). This analysis makes no allowance for the potential inability of the site, or the buildings contained within it, to meet specific requirements of individual tenants. A number of other scenarios are examined in the report including: further expansion within the existing perimeter fence to provide a total of 51,000 sq m of space by 2015; incremental expansion to provide a total of 100,000 sq m of space by 2020 driven by combination of the growth of existing tenants and inward investors; and an ambitious development of KSP with 192,000 sq m of space becoming available by 2025. In each of these scenarios, differing assumptions are made regarding growth rates, the mix of science/non-science sectors, level of inward investment and other key factors, and these are varied to test the sensitivity of the projections.

**3.5 The more ambitious expansion of Kent Science Park would need to be supported by a significant level of inward investment and in the short to medium term we do not foresee this being likely, at least if the focus is to remain on attracting science-based firms.** The Life Science sector has good growth prospects nationally and internationally but KSP is competing with other UK science parks that are better placed to attract such investment, at least for the foreseeable future. Although KSP is competitive in terms of cost, and also offers facilities to science-based firms not available elsewhere in Kent, these factors alone would not be sufficient to secure new projects in the sectors being targeted on the scale required to justify a major expansion of KSP in the short term. An alternative would be to seek

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inward investment/relocations from other sectors but here KSP is competing with existing and new business parks elsewhere in Kent. Moreover, expansion based on opening KSP up to a broader range of sectors could result in it losing key science park features.

**3.6 A further possible source of demand for space is from new start-ups.** Medway Innovation Centre demonstrates the feasibility of a model based on spin-offs from large companies (in this case BAE Systems) as do several science parks further afield. However, there is no comparable corporate entity in the Life Sciences/Biotech field that could perform a similar function as far as KSP is concerned (this is especially so following the departure of Pfizer). As far as the higher education sector is concerned, neither Greenwich University nor the University of Kent at Canterbury have a track-record of generating significant numbers of spin-outs and there is no indication that this is likely to change in the foreseeable future. Moreover, any start-ups from these sources could be catered for by incubation facilities (actual/planned) in the Canterbury and Medway areas. In the longer term, but still within the time period covered by this study, development of the Thames Gateway could change this situation. In particular, if the North Kent area becomes established as a location for knowledge-based activities across a range of sectors, KSP would be well-placed to attract start-ups, especially given its relative cost competitiveness.

**3.7 If KSP is fully developed in coming years to provide around 190,000 sq m of space (Scenario 3 in our report), we estimate that this could lead to up to 4,800 new jobs being created either directly or indirectly.** This scale of job creation would have significant benefits for the Swale and wider Kent economy. The report argues that if the current science park profile is maintained, KSP's expansion would consolidate the cluster of business activities that has been developing at KSP and put the Borough on the map as a location for knowledge-based activities. There are also likely to be considerable (unquantifiable) benefits associated with this including the prospect of being able to attract new inward investment to the area across a broad range of sectors as its image improves as a location for high quality businesses. The report contains a number of other scenarios ranging from a status quo situation to large-scale expansion of KSP with projections for employment and other economic impacts in each case.

## **4. Other Factors**

**3.8 To fully exploit KSP's potential for development, there is a need to support any expansion of the science park with a comprehensive strategy in Kent to promote innovation, technology transfer and the growth of knowledge-based activities.** Such a framework is not at present in place although some elements (incubation space, start-up support services) are better developed than others (e.g. risk capital financing). Similarly, although science parks are an important aspect of the

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supporting infrastructure required for a thriving knowledge economy, they cannot on their own stimulate innovation (e.g. R&D centres and universities need to promote entrepreneurship and the commercialization of projects). This limitation applies especially to commercially-owned science parks such as KSP where public intervention is necessary to support private sector initiatives and to address factors where market failure may apply.

**3.9 Given the current spatial constraints on KSP an alternative is a ‘dispersed’ or multi-site science park model, i.e. expansion of KSP accompanied by the development of science park facilities elsewhere through one or more satellite developments.** This ‘dispersed’ model could be networked and managed as a single entity with different parts of it being designed for different types of business/technologies. There are several precedents elsewhere in the UK (e.g. Manchester Science Park which is spread across several sites). However, this approach would only be possible if suitable sites could be identified elsewhere; commercial viability could be proven and the KSP owners/other investors persuaded of the feasibility and advantages of developing a multi-site science park model along these lines

**3.10 An important question relating to any expansion of KSP is the question of improved access to the M2 motorway.** Feedback from the survey work and interviews with KSP’s existing tenants is not clear-cut on the importance of doing this (whilst 20% of the sample argued that improved road access is ‘critical’, 61% said it was only of ‘some importance’ and the remainder (19%) argued that it was ‘irrelevant’). This suggests that if the expansion of KSP is driven, in part at least, by the growth of existing tenants, then the question of improved M2 access will not be critical for the time-being. The views of companies that could be targeted in the future s by KSP as inward investors may of course be different on the question of access to the M2 but it was not within the scope of the study to examine this question. Feedback from KSP tenants points to the need for improved access to the Sittingbourne area and in this respect a strategy of improving public transport links with the science park (perhaps through a bus services from Sittingbourne town centre) could reduce the need for new road infrastructure.

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This document contains the final report on the economic impact assessment of Kent Science Park. The assignment was commissioned by Swale Forward in partnership with Swale Borough Council KCC, SEEDA and the Thames Gateway Kent Partnership. It was carried out by the Centre for Strategy & Evaluation Services (CSES) in the second half of 2007 and early 2008.

## 1.1 Resume of Study Aims

The aims of this assignment, as set out in the terms of reference, are to provide strategic partners with:

- A clear and independent understanding of the contribution made by Kent Science Park to the local, sub-regional, regional and national economies;
- An understanding of the competitive position of KSP in relation to other Science Parks and business parks locally, regionally and nationally;
- An understanding of the current and emerging strategic and policy context relating to KSP;
- An assessment of the economic impacts of the further development of KSP based on a range of long-term development scenarios.

The purpose of the assignment is to help inform decisions regarding the possible future expansion of Kent Science Park.

## 1.2 Overview of Report

The draft report is structured as follows:

- **Section 2: Policy Context and Positioning of KSP** – examines central, regional and local government policies towards science parks/KSP and then positions KSP as a science park.
- **Section 3: Demand and Supply Perspectives** – reviews demand for space at KSP and then existing provision of science park and business park space in Kent and the South East/London together with relevant developments elsewhere.
- **Section 4: Scenarios and Impact Assessment** - develops scenarios for KSP and examines economic impacts associated with these.
- **Section 5: Conclusions** – summarizes key findings and overall conclusions.

The report is supported by several appendices including a list of interviews and the detailed workings for the scenarios and impact assessment.

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## 1.3 Background - Kent Science Park

**Kent Science Park (KSP) is one of the largest in the South East, has the most significant cluster of technology-based businesses in the Kent and Medway area.** The science park currently consists of 47,100 sq m (507,000 sq ft) of office and laboratory space on a 22 ha site just outside Sittingbourne. The site was established by Shell Research Ltd., and since 1996, has been developed as a multi-let facility, containing a range of accommodation, including an Innovation Centre and a SEEDA-funded Enterprise Hub. The facility, which was renamed ‘Kent Science Park’, in 2004, is currently managed by LaSalle Investment Management on behalf of clients.

Kent Science Park aspires to be the premier location for science and technology companies in the South-East of England with a mission which is described as follows:

‘Through significant investment in specialist facilities, tailored lease agreements and the creation of a strong community of like minded companies, we will assist occupiers at Kent Science Park to be amongst the most successful businesses in the country.’

**A variety of laboratory, manufacturing and office accommodation, suitable for conversion to bespoke use and leased on competitive and flexible terms, is provided to companies.** An analysis of the available space undertaken in 2004 (and which has remained unchanged) indicated the following uses:

**Table 1.1: Kent Science Park Facilities**

Facilities	Sq m
Laboratories	15,971
Glass houses	3,279
Growing shed	1,115
Innovation buildings (offices)	1,418
Innovation buildings (labs)	3,361
Offices	11,113
Storage and other	8,859
<b>Total</b>	<b>45,116</b>

*Source: Amion report (2004)*

In addition to physical space, the science park also offers clients a range of facilities and services including introductions to potential customers and sources of finance, advice on Intellectual Property rights (IPR) and the commercialization of R&D, and

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networking.<sup>1</sup> The Sittingbourne Enterprise Hub, which is located at KSP, is the main provider of services to tenant companies.

**According to the latest version of the KSP tenant directory (December 2007), there are currently 71 tenants employing a total of 872 employees.** As the following analysis shows, around a third of KSP's existing tenants are science-based with a high proportion of the others being in knowledge-intensive sectors.<sup>2</sup>

**Table 1.2: Summary Position – December 2007**

Sectors	No firms	%	Jobs	%
Science based	23	32.4	167	19.2
ITC related	11	15.5	135	15.5
Business services	12	16.9	416	47.7
Other sectors	25	35.2	154	17.7
<b>Total</b>	<b>71</b>	<b>100.0</b>	<b>872</b>	<b>100.0</b>

*Source: analysis of KSP tenant directory, December 2007. Note: the above tenant total does not include clients of KSP that are off-site (we understand that there are nine of these). Taking these and other factors into account (including the fact that the KSP Directory is not always up-to-date) the scenarios examined in Section 5 of this report are based on an assumed total of 80 KSP tenants.*

The 'science' component of KSP's tenant population has a particular focus on Biotechnology and Life Sciences. KSP also includes a significant number of tenants engaged in ICT-related activities and Business Services. Businesses that are currently located at the science park range from subsidiaries of multinationals to start-ups and small firms engaged in a range of activities such as Manufacturing, Industrial Technology and Environment-Related consultancy.

**Apart from the slight decline in the total number of tenants at KSP since the last study was undertaken in 2004, it is also pertinent to establish whether the nature of tenant activities has changed over time.** Of particular interest is the

<sup>1</sup> Other facilities include a high security fence, Ethernet Point of Presence and a range of communal facilities (conference centre, lecture theatre, café, social club and sports ground, indoor swimming pool, etc).

<sup>2</sup> An earlier study carried out in 2004, established that there were 77 KSP tenant companies employing 925 personnel. This estimate was based on an analysis of the tenant directory at that time and did not include several firms that were not listed. In total the authors of the 2004 report identified 83 businesses as KSP tenants employing an estimated 1,000 people.<sup>2</sup> Comparing the number of tenants listed in the 2004 tenant directory and those listed now indicates that there has been a marginal decline (from 77 to 71 firms) with a corresponding decrease in employment levels (from 925 to 872). Much of the employment change could be accounted for by the recent decision by Pfizer to vacate its premises at KSP. Occupancy, which was 77% when the 2004 report was undertaken, is now estimated to be 74%.

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proportion that can be described as ‘knowledge-based’.<sup>3</sup> The following table compares the position in 2004 with the position at the time when this study was undertaken:

**Table 1.3: KSP Knowledge Based Tenants – 2004 and 2006**

Sectors (SIC based)	2004		2007	
	No	%	No	%
Business Services	15	18.1	9	12.7
Engineering	15	18.1	8	11.3
ICT	10	12.0	11	15.5
Life sciences	8	9.6	14	19.7
Creative Industries	1	1.2	0	0.0
Financial services	2	2.4	2	2.8
Printing, paper and publishing	1	1.2	1	1.4
<b>Subtotal – knowledge based</b>	<b>52</b>	<b>62.7</b>	<b>45</b>	<b>63.4</b>
Total	83	100.0	71	100.0

*Source: LiK (quoted in Amion Report, 2004) and CSES analysis of 2007 KSP tenant directory. Note: December 2007 directory of KSP tenants lists a total of 71 firms but as indicated earlier, this figure has been increased to 80 for the purposes of the scenarios in Section 5.*

This analysis suggests that overall the proportion of knowledge-based firms at KSP has not changed significantly since 2004, remaining at around 63% of the total number of tenants.

In addition to the availability of premises and physical infrastructure, **Sittingbourne Enterprise Hub** (SEHL), which is based at Kent Science Park, provides specialized business support services to KSP’s tenants. This includes technology assessments, help with business planning, mentoring, marketing, investment readiness support and assistance identifying finance, advice on intellectual property rights, etc. SEHL defines its target market as being ‘entrepreneurial individuals or organisations with original, distinctive and pioneering ideas with the potential for high yield and scaleable growth, nationally and internationally’.<sup>4</sup>

<sup>3</sup> There is no precise and commonly agreed definition of knowledge based industries but the following definition (used by KCC for the Structure Plan) has been adopted in this study i.e.: ICT goods production (SIC 30, 32, 72); Publishing/media production (221, 223); Telecoms (642); Financial Services (65, 66, 67); Knowledge based business services (741,742,743,744,748); Higher education/ R&D (73, 803); and Libraries, museums and scientific interest (925).

<sup>4</sup> SEHL is one of three Enterprise Hubs in the area, the others being Canterbury Enterprise Hub at the University of Kent and Medway Enterprise Hub at the University of Greenwich, which form part of a SEEDA-supported network of 20 hubs across the South East region.

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In addition to entrepreneur support, SEHL manages the **Kent Science Resource Centre (KSRC)**. This was launch in September 2007 and provides training towards foundation degree for Laboratory Technologists. It forms part of a pilot regional network of new SEEDA-supported technical resource centres. The KSRC, which is supported by the **International Institute of Biotechnology** (also managed by SEHL), has an initial focus on technician and technologist Biotech and Pharmaceutical skills, and is the first of its kind in the UK. Its academic stakeholders are Mid Kent College and the Gateway Knowledge Alliance and other collaboration to deliver industry led vocational led courses.<sup>5</sup> A further initiative managed by SEHL is the **Kent Bioscience Network (KBN)** which is a forum for like-minded businesses, research organisations, advisors and financiers based in Kent.

## 1.4 Local and Regional Context

Key indicators for Swale have improved in recent years although the Borough still lags behind Kent as a whole on a number of key measures. Table 1.4 provides a summary of recent trends:

**Table 1.4: Key Indicators for Swale 2001 and 2007**

Key indicators	2001	2007
Unemployment rate (%)*	2.7	2.0
Median full-time earnings	£335	£436
Total employees	41,368	46,846
Stock of VAT registered businesses	3,200	3,615
GVA per head	£9,311	£12,506
Percentage of employees in knowledge economy	6.6	10.4
Percentage of working age population with NVQ4+	16.9	19.2

*Source: KCC 'Economic Profile of Swale', 2007. \*Note: unemployment figure for 2007 is the rate for December 2007 as given on Swale Borough Council's website.*

The Borough has a relatively narrow economic base. Traditionally, Swale has had a higher dependence on manufacturing than other parts of Kent. Agriculture and related industries are also traditional elements of the local economy. Other than in retailing, Swale has a poorly developed service sector. Incomes in Swale are broadly

<sup>5</sup> The Gateway Knowledge Alliance is supported by the major education providers in North Kent – colleges, schools and universities including Canterbury Christ Church University, Canterbury College, Kent County Council, University College for the Creative Arts, the Learning and Skills Council Kent and Medway, Medway Council, North West Kent College, the University of Greenwich and the University of Kent.

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the same as for the North Kent area as a whole but they are lower than the Kent, regional and national averages. There are also pockets of quite severe deprivation that have led to the Borough being ranked in second position amongst Kent Districts on the Index of Multiple Deprivation. Swale's unemployment rate of 2.0% (December 2007) is higher than Kent's (1.7%) but marginally below the overall UK rate (2.2%). There is a similar positioning with many other indicators (employment, skills, etc) although on one particular measure (VAT registrations and de-registrations) Swale performs more strongly than Kent and the South East as a whole.

**Kent Science Park makes an important contribution to the Swale economy.** As the last 'State of the Borough' assessment (and Table 1.4 above) points out: 'With only 19% of Swale's working age population holding a degree or equivalent, the Borough is not well equipped to compete in the knowledge economy era.' It goes on to argue that: 'The performance of the Swale economy is fundamentally influenced by its industrial structure. However, the Borough has a low proportion of its employment in knowledge-driven sectors, ranking in 296th place in Britain and lagging behind all of the comparators'<sup>6</sup>. Although KSP's 872 employees represent only a small proportion of the Borough's 46,800 workforce, the science park accounts for almost a third of employment in key knowledge-based sectors.<sup>7</sup> The following table summarises the position:

**Table 1.5: KSP Knowledge Based Employment in Swale, Kent and South East**

Sectors	KSP		Swale		Kent		South East	
	No.	KSP %	No	KSP %	No	KSP %	No	KSP %
Science-based	174	21.7	801	2.3	7,697	2.3	49,574	0.4
ICT related	135	42.1	321	2.1	6,569	2.1	135,107	0.1
Business services	409	37.1	1,102	1.9	21,174	1.9	22,5872	0.2
<b>Total</b>	<b>718</b>	<b>32.3</b>	<b>2,224</b>	<b>2.0</b>	<b>35,440</b>	<b>2.0</b>	<b>410,553</b>	<b>0.2</b>

Source: analysis of ABI data (December 2007)

**Kent Science Park is also promoting sectors that are key drivers of competitiveness and growth in the wider Kent economy.** In the Kent economy, science-based employment includes some 7,000 employees in Chemicals and Pharmaceuticals sectors where jobs have grown in the past decade at a faster rate in Kent than in the South East region as a whole; the Business Services sector has also expanded rapidly and the North Kent Thames Gateway area has the potential to perform an increasingly important role as a provider of back office and other

<sup>6</sup> See 'State of the Borough' report, 2004, published by Swale Borough Council.

<sup>7</sup> The categories 'science-based', 'ICT related', 'business services' are used from this point onwards in the report to describe 'knowledge-based' firms with a fourth category being 'other sectors'. If a wider definition is used, then KSP's 872 employees account for some 18% of Swale's knowledge economy.

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support services to the City of London; other parts of the North Kent and wider Thames Gateway economy that have strong growth potential include Environmental Services and Technologies, and Transport and Logistic. Advanced Manufacturing, Construction, Retail, Creative Industries and Tourism are also sectors with growth potential in the North Kent area and in the County economy as a whole.

## 1.5 Kent Science Park Expansion Plans

LaSalle Investment Management has put forward several proposals for an expansion of Kent Science Park. The most ambitious of these envisaged 145,000 sq m of commercial property together with a new access road connecting the science park directly to the M2 motorway and A2 on the outskirts of Sittingbourne, and 4,500 new houses and associated community infrastructure. A study undertaken for LaSalle in 2004 estimated that if approved, the development of KSP on this scale would generate some 5,000 gross new jobs and £250 million in the Swale economy (including jobs and added value generated through the process of expansion itself). At the time when this expansion was being planned, forecasts suggested that the current KSP accommodation would be fully occupied by 2007.<sup>8</sup>

The purpose of this report is to help inform decisions that need to be taken by Swale Borough Council and its partners with regard to KSP's future development.

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<sup>8</sup> See 'Kent Science Park Expansion: Economic Impact Assessment', August 2004. An estimate of 5,000 gross new jobs at KSP assuming expansion takes place is provided on page 77 of the report. Including indirect employment generated through multiplier effects this total is estimated to be 5,570 as far as Swale is concerned over a 20-year period. The report argues that net additional job creation is likely to be of the order of 2,114 at the Swale level, 2,376 for the travel-to-work area and 2,168 at the Kent level (see page 82).

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This section examines the broader context in which Kent Science Park operates. We begin by examining the development of science parks in the UK.

### 2.1 Development of Science Parks in the UK

The Science Park movement in the UK began in the early 1970s with the development of Herriot Watt and Cambridge Science Parks. However, it was not until the mid-1980s that the number of science parks began to increase significantly and come to be seen as an integral tool in promoting regional development. A second wave of Science Parks then emerged, many of which closely involved the active support and participation of universities. Examples include the Universities of Cambridge, Aston, Manchester, Warwick and Edinburgh. Today, there are more than 100 science parks accredited by UKSPA of which about eleven are located in the South East region, two are in London and 13 are in the East of England region.

The pace of development of science parks increased considerably in the late 1980s and early 1990s, according to statistics from the UK Science Park Association (UKSPA). While a number of high technology “hot-spots” have developed in the UK, such as in Cambridge, London and the M4 Corridor and Manchester, science parks right across the UK have become the focus for investment in R&D-intensive and innovative, technology-based companies.

There has been a continued growth in Science Park provision in the UK since the mid-1990s. According UKSPA, the UK science parks currently provide approximately 1,000,000 sq m of accommodation and employ more than 41,000 people. Science park capacity has been well matched to demand with tenant occupancy rates maintained within the range expected for commercial property developments. According to research undertaken on behalf of UKSPA in 2003, in recent years average annual vacancy rates have typically ranged from 3.5% to 13%; with mean annual new construction of 23,700m<sup>2</sup> per year.

In its most recent strategic plan for 2004-07, UKSPA noted the considerable further potential for UK science parks in developing the UK’s knowledge economy. The plan stresses the imperative of science parks providing tenants with high quality services (advice on start-up issues such as business planning, financial and marketing advice, etc) as well as the growing need to develop benchmarks and indicators to better measure and analyse the performance of science parks both in economic terms and with regard to innovation in the UK.

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**In parallel with this expansion in science parks, there has been a considerable growth in incubation provision.** According to the UK Business Incubation Association, there are now more than 270 incubators. This number is set to increase, partly because the effectiveness of business incubation is now more clearly apparent and partly because incubators have become a more attractive commercial proposition.

### 2.2 UK Policy on Science Parks

**Since the mid-1980s, the UK Government has supported the development of science parks as part of the infrastructure needed to promote world-class research excellence.** Policy towards the promotion of innovation and the development of science parks in the UK can also be seen within the overall framework of the EU's Lisbon Strategy which seeks to transform Europe into the world's most competitive, knowledge-driven economy by 2010, and as a result of which, various initiatives have been taken to promote knowledge-based activities.

**The Government's 10-year 'Science and Innovation Investment Framework 2004-2014' sets out a strategic framework for addressing some of the long-term challenges facing UK science and innovation.** Key priorities outlined in the strategy include maximising the impact of science on innovation, enhancing the economic impact of public investment in research, improving the effectiveness of the Research Councils and supporting excellence in university research. The strategy is also concerned with improving the capacity of the UK research base, and in better enabling universities and publicly funded research institutions to engage with industry. Science parks and incubators are widely viewed as key components in any technology transfer and commercialization process.

**More recently, in its White Paper 'Building an Innovation Nation' (March 2008), the Government sets out measures aimed at 'making the UK the best place in the world to run an innovative business'.** Key themes include further supporting innovative businesses and links with research; increasing exchanges of knowledge between universities and business; boosting the supply of skilled people; supporting innovative towns and regions and promoting innovation in the public sector. The White Paper calls on RDAs to, amongst other things, support the development of networks of businesses, universities, research organisations and local Government. Science parks have an important role in helping to do this.

**More generally, science parks are seen as a key instrument for the promotion of UK economic competitiveness.** A key policy document in this respect is the DTI white paper 'Our Competitive Future - Building the Knowledge Driven Economy' (2000) and subsequent updates, in which the role of innovation and the importance of

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developing closer links between higher education and industry in the context of strengthening UK performance in relation to the knowledge economy are emphasised. Science and technology parks, as well as incubation facilities, clearly have an important catalytic role to play in facilitating joint working between industry and higher education and publicly funded research as well as the outcomes of this collaboration in terms of technology transfer. Also relevant are the UK Competitiveness Indicators, which enable the UK's performance on innovation to be benchmarked. These indicators form part of the Department of Trade and Industry's (since 2007, the Department for Business, Enterprise and Regulatory Reform) Public Service Agreement (PSA) targets.<sup>9</sup> Another key policy document is the DTI Innovation Report: 'Competing in the Global Economy: the Innovation Challenge' (2003). This sets out an action plan to improve the UK's innovation performance. Amongst the priorities highlighted included a renewed focus on technology transfer between university research and industry, together with a strengthened regional focus on innovation supported by concrete initiatives:

**The commitment of UK government to the continuing development of UK science parks is reflected not only at policy level but also through funding support at regional level.** The English Regional Development Agencies (RDAs) have increasingly focused on strengthening innovation since the creation of the Regional Innovation Fund (RIF) in 2001 which can be used to fund new incubator space, to facilitate networks and to support the growth and development of sectoral clusters. RIF has also financed the creation of five University Innovation Centres across the UK. These seek to 'develop top class, long-term research partnerships between major business interests and the universities in industry sectors which are of strategic importance to the regions'. More than 90 projects have been supported and more than £250m of funding committed in the first two years since the establishment

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<sup>9</sup> The competitiveness indicators are grouped around four headings: *Business environment* – measures of macroeconomic stability, competition, business perceptions and the quality of life in the UK; *Resources* – measures of human and physical capital, finance, technology and R&D; *Innovation process* – measures of commercial exploitation of science and technology, entrepreneurship, diffusion of knowledge across borders and between firms; and *Results* – GDP per head, productivity, employment and trade, and the changing structure of output. These headline indicators are each underpinned by a further series of performance indicators, some with direct relevance to science parks and incubators. 'Innovation Process Indicators' include several indicators that could be monitored in a science park/ incubator environment – entry and exit rates, fast-growing firms, attitudes to entrepreneurship and university spin-outs. In parallel with national targets, RDAs have recently been required by the DTI / DBERR to adopt regional innovation indicators with quantified targets as part of their PSAs.

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of the fund alone (it is not known how much of this funding has benefited the South East region).

**Changes in financing arrangements for the RDAs from 2002 onwards have also lent support to the increasing prioritisation of funding towards innovation and supporting the research base (including support for science parks and incubators).** In particular, the introduction of the “single pot” of finance in 2002 gave the RDAs substantial funding flexibility to respond to regional priorities. Resources for the RDAs increased from £1.7 billion in 2003/04 to £2 billion in 2005/06. There is evidence to suggest that the RDAs are increasingly investing in innovation and science, engineering and technology-related projects.<sup>10</sup>

### 2.3 Regional and Kent Context

**In the South East, the draft SE Plan and SEEDA’s Innovation Action Plan – ‘Sustaining and Creating Prosperity’ – provide a region-wide framework for supporting innovation and for the development of a favourable environment for knowledge-based activities.** The draft South East Plan supports the development of knowledge industries and R&D (these are specifically mentioned in the first part of Policy KTG4 and the science sectors in KTG4 v). A number of programmes to promote innovation have been supported by SEEDA including an Emerging Technologies Programme, enabling consortia of companies and universities to bring new products and services to the market place, the establishment of a new Innovation Advisory Service targeted at medium-sized companies. The objective is to help businesses accelerate the innovation process so as to improve the competitiveness of businesses in the South East and the wider economy. SEEDA has also set up a ‘revolving loan fund’ to foster entrepreneurship within science and technology as part of a Great Ideas in Science and Technology (GRIST) pilot project. Regional innovation is also a cornerstone of the Regional Economic Strategy for the South East, (Objective 23 of which is ‘to develop a dynamic, diverse and knowledge based economy that excels in innovation, with higher value, lower impact activities’).

<sup>10</sup> There have also been other developments over the past 5-10 years to help strengthen regional innovation structures, particularly since the establishment of RDAs. For example, each RDA has now set up a Science and Industry Council or a similar regional body which brings together science, technology and business representatives from the private sector and universities with the aim of helping to shape policies and to implement initiatives. This resulted from recommendations made by the House of Lords Science and Technology Committee’s in its 2003 report *Science and the RDAs*.

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Specifically within the Thames Gateway context, considerable emphasis has also been placed on innovation and the promotion of knowledge-based activities as a driver of economic development. The three Greater South East Regional Development Agencies (EEDA, LDA and SEEDA) have invested over £600 million in the Thames Gateway since 2003 in addition to investment directly by the UK Government. The focus of this investment has been to unlock the economic potential of locations in the Thames Gateway to create the conditions for an innovation and enterprise culture, attract investment and to assist local people to participate in the economic opportunities. In November, 2006 the RDAs released a joint Economic Statement for the Thames Gateway in support of the Thames Gateway Strategic Partnership Interim Plan. A year later, the joint Economic Statement was supported by the launch of a broad 'Economic Development Investment Plan'. This sets out a programme of investment priorities that proposes some £175m of new capital investment in entrepreneurship and innovation support structures across the Thames Gateway together with significant revenue support (some £1.2m p.a. in the early years). According to the Investment Plan:

'The future prosperity of the Thames Gateway will depend on how well we are able to capture high value investment for the Gateway, build up a critical mass of complementary globally oriented companies and build a local culture of enterprise and entrepreneurial activity. There is a perception that innovation support is fragmented across the Gateway and that it needs to be intensified around key sectors if we are to achieve our ambitions to increase the productivity of the Gateway and to grow it as a location of choice for knowledge intensive enterprises'.

At a county level, the 'Vision for Kent' seeks to bring about 'a vibrant and successful economy and targeted regeneration delivered and sustained by innovative and creative businesses'. Kent Prospects, first produced in 1996 as a 10-year strategy and now extended to 2012, includes the aim of 'Developing approaches that support innovation, skills, enterprise, market opportunities, and attract investment, in locations, clusters and sectors with growth potential' (Priority 14) whilst another aim is to 'Promote Kent's knowledge base, and support a culture of innovation' (Priority 18). Kent Science Park is mentioned in relation to both Priorities as par of the infrastructure needed to support innovation and the development of a knowledge economy in Kent. 'Towards 2010' also includes economic goals where Kent Science Park has a potentially important role to play.

Within this overall strategic framework, KCC and its partners have actively supported a number of initiatives to promote innovation and the knowledge economy. This includes schemes such as Innov8, the East Kent Inventors Club, the UK Biometrics Institute which is supported by the University of Kent, 'Kent Year of Innovation', 'Kent Innovation Challenge' and 'Kent Creates'. The 'Kent Year of Innovation'



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provides an umbrella under which a variety of activities, initiatives and events are being organised throughout the county. In particular, the initiative aims to raise the profile of Kent as a place of innovation and creativity, showcase individual and joint innovations, involve and engage public and communities in innovative activities, and increase funding and partnership opportunities.

The Draft South East Plan, currently before the Secretary of State to consider the recommendations of the Panel, acknowledges the importance of higher value activity in Thames Gateway and supports the expansion of KSP subject to there being no overriding environmental impacts. The Kent & Medway Structure Plan 2006 again supports expansion of technology and knowledge activity at KSP but not a specific identification of a scale of growth. The Council's Swale Borough Local Plan Review includes KSP as part of its vision and encourages limited expansion beyond the existing security fence provided, amongst other things, that optimum use is first made of capacity within the existing site. Shorter term expansion needs of the order of 6 ha were presented to the Local Plan Inquiry by KSP's owners with a view to securing its allocation in the Plan. However, the Inquiry Inspector was not persuaded that there was sufficient, reliable information to be able to make a specific allocation of land for expansion although some indication as to a likely potential direction of growth was provided.

### 2.4 Science Parks - Positioning of KSP

**There are several definitions of a science park. Most definitions, however, combine the provision of physical infrastructure with a managed process of nurturing innovative technology-based enterprises as defining characteristics.** Thus, the UKSPA defines a science park as:

‘A business support initiative whose main aim is to encourage and support the start-up and incubation of innovative, high-growth, technology-based businesses through the provision of: infrastructure and support services including collaborative links with economic development agencies; formal and operational links with centres of excellence such as universities, higher education institutes and research establishments; management support actively engaged in the transfer of technology and business skills to small and medium-sized enterprises.’

In this section, we have focused on using the UK Science Park Association's definition as a framework for positioning Kent Science Park. There are a number of notable features of this and other (e.g. the International Association of Science Parks) definitions.<sup>11</sup>

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<sup>11</sup> In recent academic literature on science parks and incubators, there has also been an attempt to develop a typology of science parks in order to better understand the

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**Firstly, and most obviously, science parks are designed to nurture technology-based activities.** This is explicit in the UKSPA definition which sees them focusing on ‘technology-based businesses’. An analysis of its membership (2006) indicates that over half the tenants located in UK science parks are either engaged in Biotechnology or in ICT-related activities with Environmental, Energy, Materials, Technology Consulting and other science-related activities accounting for a further third. Amongst UKSPA’s members’ other tenants is a high proportion of business services companies. IASP’s distinction between ‘generalist’, ‘specialist’ and ‘semi-specialist’ science parks is helpful in this respect. ‘Generalist’ science parks are defined by IASP as those admitting companies from any technology sector while, at the other end of the range, ‘specialist’ science parks focus on one particular sector or technology. Implicit in both the UKSPA and IASP concept is that science parks define a target market and use admission criteria to screen applicants for space. In this respect, they differ fundamentally from business parks and other providers of business premises.

The role of science parks in providing space for tenants that are not directly engaged in technology-based activities is acknowledged in the IASP definition which emphasizes the key aims as being to promote a ‘culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions’. Broadly defined, therefore, the focus of science parks is on innovative enterprises and not just on technology-based firms. Flexibility in science park admissions criteria can indeed be extended beyond this by arguing that tenants engaged in business services activities often generate a significant proportion of their turnover from providing specialized services to other (technology-based) tenant companies. Networking between tenant companies is an important feature that most science parks seek to promote and which amongst other things tends to distinguish science parks from other entities such as business parks.

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appropriateness of different models for the creation, development and expansion of science parks depending on the socio-economic context, presence of clusters and other factors. For example, Yuehua Zhang, in an article published in the *International Journal of Entrepreneurship and Innovation Management (IJEIM)*, Vol. 5, No. 1/2, 2005, entitled *The science park phenomenon: development, evolution and typology*, the author notes that while an increasing number of science parks have been developed globally since the 1980s, there is a lack of systematised knowledge about the characteristics of science parks. The article proposes a basic science park typology with three main variables being identified: park/campus style, centre/incubator style and city/region style.

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Kent Science Park's profile is broadly similar to that of UKSPA science parks with similar proportions of tenant businesses in the Life Sciences/Biotech and ICT sectors. It has a broader range of 'other sectors' making up the remaining tenant population than is typical amongst UK science parks generally.

**Secondly, there is an emphasis in most science park definitions on promoting innovative start-up businesses.** This is described as the main aim of a science park in the UKSPA definition. Although IASP also sees this as one of the key features ('facilitating the creation and growth of innovation-based companies through incubation and spin-off processes'), there is an equal emphasis on existing companies ('stimulating and managing the flow of knowledge and technology amongst universities, R&D institutions, companies and markets').

In the classic model, a science park will use incubation facilities and other mechanisms to help universities to generate spin-offs from academic activities. Typically, this will involve working with university departments to help identify projects and technologies that have the potential to be commercialized, encouraging those involved in R&D to think in terms of entrepreneurship (perhaps by combining technological and business know-how), helping to identify proof of concept funding and perhaps commercial partners in a licensing deal, advising on IPR issues, etc. UKSPA do not provide statistics on the number of science parks with incubation facilities but at an international level, IASP estimate that 80% of its members have incubation facilities (some 10% of these consider incubation to be their main function; in 50% of other cases, incubators are owned by the science parks concerned and in the remaining cases there is collaboration with incubators owned by other organisations).

At present, KSP itself does not offer non-property services. Instead, the role of providing start-ups and other tenants with business support services is undertaken by Sittingbourne Enterprise Hub which is based at KSP.

KSP has various links with universities (UKC validates qualifications resulting from training provided by the Resource Centre at KSP towards foundation degrees and many tenants have links with universities – see Section 4) but it does not focus on incubating businesses start-ups that originate in universities.

**Thirdly, a key feature of science parks is to promote technology transfer and commercialization – either through start-ups and spin-offs, or through**

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**collaboration with existing companies.** However, neither the UKSPA nor the IASP definitions limit the technology transfer role of science parks in nurturing start ups in an academic environment. Thus, with UKSPA, the more general term ‘centers of excellence’ is used to describe the type of organisations that science parks are associated with. The IASP definition is even broader with an explicit recognition that science parks can perform a similar function in relation to R&D-orientated companies and other economic actors. According to IASP statistics, under half (around 42%) of science parks are located on campuses or university-owned land. In a corporate context, spinning out activities into separate undertakings can be a more cost-effective and efficient way of developing particular technologies and fulfilling overall corporate aims. This approach not only has benefits in terms of the spin-outs themselves, enabling those involved to focus exclusively on a particular task whilst (usually) maintaining a relationship with the parent company, but also benefits the parent company which is the better able to concentrate on ‘mainstream’ activities. In some cases, support for spin-outs can also be driven by the concept of ‘intreprenurship’, i.e. encouraging employees to pursue business interests that may culminate in a new start-up.

The role of science parks in supporting the development of existing companies, highlighted especially in the IASP definition, goes beyond using them as a mechanism for corporate spin-outs. More common, in fact, is a situation in which science parks, by providing premises close to universities, encourage for joint ventures and other forms of collaboration between academia and business. Such collaboration has several objectives - enabling businesses to tap into academic expertise, on the one hand, and providing universities with an opportunity to generate income from the commercialization of R&D, on the other. UKSPA statistics indicate that some 15% of science park tenants are subsidiaries of larger companies located elsewhere either in the UK or abroad that have pursued a strategy of this sort.

Around a quarter of Kent Science Park’s current tenants are estimated to have originated as start-ups (as opposed to relocations/inward investment). There is no comparable figure for UKSPA science parks. However, considerable emphasis is placed by UKSPA on this function which is typically associated with incubating spin-outs from universities although there are also corporate models. This aspect of KSP’s activities is not as well-developed as is the case with many other science parks.

**Fourthly, science park definitions tend to emphasize that apart from physical infrastructure, a key feature is the provision of specialized support services to tenants and promotion of networking.** Thus, the UKSPA definition speaks of ‘the provision of: infrastructure and support services’ and ‘management support actively

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engaged in the transfer of technology and business skills'. Similarly, in the case of IASP, a science park 'is an organization managed by specialized professionals' which provides 'value-added services together with high quality space and facilities' to tenant companies. In addition to facilities and services directly related to technology-based activities (wet labs, waste disposal systems, testing equipment, high speed internet, etc), most science parks also provide specialized business services (advice on IPR, help in raising risk capital, accounting and legal services, etc), either from in-house services or via arrangements with a network of other providers. By offering such facilities and services on a shared basis, it is possible to benefit from economies of scale, thereby reducing tenants' overhead costs and providing access to support that might otherwise be either unavailable or unaffordable.

Experience suggests that the facilities and services provided by science parks are often more critical to the successful development of technology-based firms than the provision of premises. That said, one of the attractions of a science park is often the prestigious image of the location. Similarly, the quality of the premises is often better than available elsewhere. The easy-in/easy-out rental terms for incubator space, and graduated charges, is also an important factor for start-up companies.

Until recently, KSP has not had an on-site manager. The role of the person now appointed to this position will be important but at present the function of providing tenants with business support services is undertaken through the Sittingbourne Enterprise Hub.

**Last but not least, science park developments are often part of a wider strategy to promote clusters and a 'knowledge economy'.** Promotion of clusters (there are many definitions but a widely accepted one is 'geographic agglomerations of firms in the same/similar or related industries') have become a central element in regional development strategies in many countries, including the UK. Underlying cluster development strategies is the view that the competitiveness and growth of local economies depends on specialization in knowledge-intensive fields.

Over the past decade, there has been an increased policy focus on the role of science parks and incubators in supporting the development of clusters. This is relevant given KSP's desire to concentrate on attracting and retaining companies in the life sciences, biotechnology and ICT. *Business Clusters in the UK - A First Assessment (2000)* included an assessment of cluster development across the UK and found that in the South East, Pharmaceutical and Biotech clusters were particularly significant, accounting for 40% of the South East's R&D employment.

More recently, a DTI report 'A practitioners guide to cluster development' identified key features of clusters and of how the public sector can support and encourage their

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development. It emphasised the importance of high quality business infrastructure (including science parks and incubators), adequate land supply, and high quality business and innovation support services as being critical to cluster development. It also noted that many clusters have developed based on their proximity to universities and access to world-class research excellence. There are of course highly successful clusters which have developed without links with universities.

The companies based at Kent Science Park do demonstrate some of the formal features of a cluster with a concentration particularly of Life Science/Biotech businesses. Moreover, in accordance with the cluster concept, there is a degree of interaction between tenants although the extent of this happening is very difficult to ascertain. KSP is also promoted by SEEDA, KCC and others as a key (physical infrastructure) element in developing a Life Sciences cluster.

### 2.5 Conclusions – Positioning of Kent Science Park

**KSP is seen as an important asset to the region and there is a generally supportive policy framework that has been developed by KCC, SEEDA and others.** However, these organisations do not have specific views as regards the nature and scale of any expansion of KSP

**KSP manifests many but not all of the characteristics of a science park in the ‘classic’ sense of the term.** KSP is a member of UKSPA and points out that 33% of the companies on site are ‘science-based’ (compared with 26% for national and international science parks) and that, furthermore, 40% of the businesses have links with the region’s further and higher education institutions. Measured against the ‘ideal’ it could be argued that the definition of KSP as a science park remains in part an aspiration rather than a current reality: firstly, because the interaction with the region’s universities is arguably not as strong as with most ‘classic’ science parks, partly because of a lack of physical proximity; secondly, there is, it can be argued, less emphasis on incubation, technology transfer and the process of developing spin-outs, than in most science parks; and, thirdly, because KSP – and the relationship with and between tenants - does not appear to be as proactively managed as in the ‘classic’ science park model. The explanation for these factors is not, however, one-sided and the causes lie - to some extent at least - in the relatively under-developed entrepreneurial culture in Kent and Medway’s further and higher education institutions. Being a private sector-driven science park, there are also commercial constraints on delivering the ideal without more substantial support from the public sector.

**If KSP is to develop a stronger ‘science park’ character, it would mean placing a greater emphasis on working with local universities and R&D centres to**



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nurture spin-outs with a process in place that takes start-ups through the incubation process to the point where they occupy larger premises and eventually graduate to grow-on' space. This approach would mean putting as much emphasis on support services – early stage finance, venture capital, mentoring, IPR and technology transfer support, specialised business advice, etc – as on the purely real estate aspects of the KSP offering. This applies irrespective of whether KSP pursues university or corporate-based science park model. As noted earlier, this function is being undertaken by Sittingbourne Enterprise Hub. However, for its role in promoting technology transfer to be fully developed, there needs to be a stronger supportive framework in place that engages local universities and R&D centres.

**An obvious question that needs to be asked is: what difference does it make to the Swale and wider area whether KSP is classified as a science park or not? It could be argued that if KSP aims to further develop as a science park, this would have marketing benefits because the 'science park' label is a recognisable and prestigious brand.** Furthermore, because science parks have a particular character, it could lead to developing KSP in a direction that would otherwise not be pursued. More generally, although the employment generated by science parks elsewhere is often no more (indeed less) than other facilities such as business parks, the quality of jobs is generally higher and this is important from the perspective of economic competitiveness and growth which is increasingly driven by the 'knowledge economy'. Incorporating more pronounced 'science park' features in the expansion scenarios would therefore affect not only their feasibility but also the scale, nature and timing of economic impacts.

# Demand & Supply Perspectives

# 3

In this section we review available evidence on actual/potential demand for space at Kent Science Park and then examine the supply-side and the extent of competition from other science parks and business parks in Kent and the wider region (Appendix A contains the assessment of wider competition). It should be noted that the assessment mainly focuses on demand from inward investors. It is in this sphere that KSP mainly faces competition from alternative locations.

## 3.1 Demand for Space at KSP

Previous studies have tended to be over-optimistic regarding KSP's growth prospects. Thus, Angle Technologies estimated (in the Amion Report, p.13) that by 2007 the existing accommodation in the KSP would be fully occupied. Their view was that expanding businesses might have to move away unless KSP offered more space and, at the same time, there would be a need to investment in laboratories to update them in terms of new regulatory requirements. Otherwise, it was argued, there would be the danger that KSP would loose tenants and could simply become a business park, as has arguably happened at Wavetree, Swansea and Hull.

Previous longer term forecasts (Amion Report, p.59) for potential demand for space over the next 20 years at KSP (based on industry demand forecasts less unlet floor space) pointed to a need for 140-150,000 square meters - that is, not far from the proposed expansion of KSP. The report pointed out that the expansion at KSP would add 170% to the B1 stock in Swale, which, based on past trends, means that the KSP would absorb nearly the whole of the 140% increase in demand over that period for such space in Swale. However, if the wider Kent area is considered, the increase in demand would be in the region of five times that. It was also estimated that additional supply of space in business parks would grow at higher than the historical trends at the main alternative locations (Lakeside, Kings Hill, Chatham Maritime, Gillingham and Crossways) without considering the emergence of new locations such as The Bridge, Ebbsfleet or those outside Kent.<sup>12</sup>

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<sup>12</sup> GVA Grimley, who provided property demand estimates for the Amion Report, based their estimates primarily on forecasts for growth of the three key sectors targeted by KSP – Biotechnology, ICT/ Telecoms and Environmental Services/ technology. The source data are forecasts made by the BioIndustry Association, NHS, DTI, SEEDA, Scottish Executive and Locate in Kent. The forecasts tend to be long term (up to 2010 or 2015) and have not been updated. We consider that there have not been major changes over the intervening few years and therefore take the industry growth and development forecasts that underlie those property demand forecasts as still indicative of future forecasted demand.

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A recent review of business parks by GVA Grimley (Autumn 2007) found that there is, UK-wide, some 368,000 square meters of floor space in business parks under construction, of which two-thirds is speculative and 30% of which is in the South East. National availability is in the region of 980,000 square meters, the highest since the GVA Grimley Review started in 1995. In the South East/Eastern region, some 109,000 square meters is under construction, 80% of which is speculative and their view is that of the demand being taken up, only some 15% is genuinely due to expansion, the remainder being opportunistic, or driven by consolidation and M&A activity.

### 3.3.1 Inward Investment Sector Trends

**Locate in Kent** has indicated that there were some 20 demands for information about KSP on its portal in 2005-06, 69 in 2006-07 and so far 38 in 2007-08. It tends to promote KSP as a general business park, in addition to its science park status, and over the period 2004-07 has undertaken six accompanied visits to the park. None of these have led to new establishments at KSP (UKC has won two of the projects, one went to Essex).

The three largest sectors represented at Kent Science Park are Business Services (26%), Biotechnology (24%) and ICT/Telecoms (20%). Table 3.1 below shows the number of Locate in Kent projects in these sectors between 2002 and 2007.

**Table 3.1: Locate in Kent projects in sectors similar to company sectors at KSP**

Sectors	2002-03	2003-04	2004-05	2005-06	2006-07
Business Services	22	20	29	41	23
Life Science	10	10	6	8	4
ICT	31	24	18	23	13
<b>Total</b>	<b>63</b>	<b>54</b>	<b>53</b>	<b>72</b>	<b>40</b>

**Business Services:** this includes a very wide category of activities ranging from specialist legal services to travel agents and recruitment services. There are generally good growth prospects at a sub-regional level.<sup>13</sup> Higher value added services such as M&A advice, legal, consulting and accounting tend to locate in clusters, and it is unlikely that such services will establish at the KSP. In activities where cost rather

<sup>13</sup> As noted in Section 1, the 2007 Thames Gateway Economic Development Investment Plan sees Business Services sector as having good growth prospects based on the potential to perform an increasingly important role as a provider of back office and other support services to the City of London

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than value is a driver (e.g. call centres, processing labs, shared service centres) there is an increasingly large potential selection of locations available for mobile projects. In addition, the extent to which such activities will be suitable for a science park is debatable.

**Life sciences:** KSP has an attractive product to offer to life sciences companies. However, given the better accessibility of many life science or biotech “wannabe” locations, KSP faces strong competition for clients. Overall, the prospects for the UK sector are good and according to Ernst & Young’s most recent Annual Survey of the Biotech Industry, it is expected that the sector should become profitable in 2010 (with the biotech element of the pharmaceutical sector increasing from its current 25% to closer to 75% in the coming decade).<sup>14</sup> However, in our view, demand that could come to the KSP from this sector needs to take into account the locational offer of the UK as a whole.<sup>15</sup>

Research by Ernst & Young’s European Investment Monitor (EIM, which tracks inward investment projects into Europe) in the pharmaceutical sector (which includes biotech) highlights recent trends overall. As can be seen from the following table, from a high point in 2004, there has been a decline in pharmaceuticals FDI projects at a European, UK and region level. That said, the South East region has increased its share of UK pharmaceuticals projects, from some 28% of the total in 2004 to around 43% in 2006. Of the 50 projects coming into the South East (NUTS 3 includes London with 23 projects) in the period since 2001, 15 have been for sales and marketing offices, 14 research and development, 13 HQs, five for manufacturing and three for logistics. One project did locate in the Sittingbourne area and there was another near location at KSP.

<sup>14</sup> The UK Bioscience Brochure of July 2007 identifies the UK as a major player in the European bioscience industry with nearly 40% of the European product pipeline, and 45% of late stage developments - stage III trials. There are some 435 biotech firms and service providers in the UK employing 18,900 people with revenue of £2.5 billion). The majority of UK companies are less than 15 years old. The sector is fast-growing - taking the biotech sub-sector as a proxy of the broader bioscience/healthcare sector, employee numbers have grown by 35% and revenues by 48% between 1995 and 2002, i.e. by around 5% p.a. and just under 7% p.a., respectively.

<sup>15</sup> A recent study (‘BioScience 2015’ published by the Bioscience Innovation and Growth Team, November 2003) suggests that the UK lacks sufficient perceived distinctiveness in the eyes of many Biotech potential foreign inward investors. The UK was compared against both recognized bioscience clusters (e.g. San Francisco, Boston, Germany, Denmark) and emerging bioscience clusters (e.g. Singapore, Puerto Rico, Korea). The UK scored 3 or 4 out of 5 on all categories, which included research presence, workforce skill levels, infrastructure and economic incentives. The UK was average but was not rated ‘poor’ in any area. At the same time, the UK did not excel in any area.

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**Table 3.2: Inward investment in pharmaceutical projects**

Source	2001	2002	2003	2004	2005	2006
Europe (ex UK)	98	113	129	144	108	50
UK	17	19	32	26	17	14
South East	7	6	9	11	11	6
<b>Total</b>	<b>122</b>	<b>138</b>	<b>170</b>	<b>181</b>	<b>136</b>	<b>70</b>

Source: Ernst & Young, *European Investment monitor*

**Information and communications technology:** ICT reflects Business Services from the point of view of diversity of the offer, including writing of code for supercomputers, developing computer games and “localising” foreign written software to very basic equipment repair services. However, ICT is considered to be more mobile than high value added business services. It is also prone to clustering. The sector is once again growing strongly since its setback at the turn of the century. Kent is relatively well-placed to attract ICT business given the range of good quality business sites and relatively low labour costs. The fact that KSP has an Ethernet Point of Presence is of course highly relevant in this context.

### 3.2 Overview - Competitor Assessment

To help assess KSP’s ability to let its space if expanded, CSES has examined both existing and planned business and science parks that are or could be competitors with KSP. This includes:

- Business parks and other developments (e.g. innovation centres) in **Kent and Medway**;
- Science parks elsewhere in the **South East region** that could be competing directly with KSP for a range of tenants;
- Selected science parks **elsewhere in the UK** that seek to attract Life Science/Biotech businesses and which could also be competing with KSP in these sectors.

Clearly, if KSP is competing directly with other facilities for tenants, this is likely to make it more difficult to expand. Conversely, there is also scope for collaboration through, for example, a cross-referral of enquiries for space, development of common services, etc. Below we focus on alternative business locations in Kent and Medway (Appendix A contains the assessment of the situation in the wider South East region and UK).

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### 3.3 Kent and Medway

Although KSP is the only UKSPA member in Kent, there are a number of other facilities, either already operating or planned/being developed, that are relevant to KSP.

**Medway Innovation Centre** – the 15,000 sq ft centre offers 34 units of which half are currently let (there is high demand and twice as many applications have been accepted as rejected). It opened at its present location in March 2007 and is a business-led venture involving partnership between the private sector (BAE Systems and the Royal Bank of Scotland), the public sector (Medway Council) and higher education institutions. Medway Innovation Centre, which was originally located in the Chatham Dockyard, consists of an incubator for hi-tech small businesses and start-ups. Support services are provided to help accelerate the growth of companies including flexible managed offices, hot desking facilities and virtual services including business advisory support services and mentoring.

The Innovation Centre specializes in catering for ‘homeland security’ activities (forensic data analysis, biometrics, etc) which are spin-offs from BAE’s main activities at the Rochester site. So far, most of its tenants are ex-BAE Systems employees (BAE employs some 650 technical staff at its Rochester subsidiary). It has an advisory board consisting of representatives from several universities (Cranfield, Edinburg, Cambridge and two others). There are also three BAE spin-outs although these are at a very early stage of development. A major requirement of projects undertaken at the Innovation Centre is secure hosting for software development. A further 30,000 sq ft of incubation space is being developed and is due to come on-stream in December 2008, and this will include a data centre for secure hosting – the only one in the South East outside the London Docklands. There is also the potential to develop science park-like premises for existing companies on the former Rochester airfield site.

The Medway Innovation Centre does not compete with KSP since its target markets are different. Indeed, several enquiries have been referred by the Innovation Centre to KSP. The Innovation Centre is currently around 50% occupied.

**Canterbury Innovation Centre and Kent Technology Park** – in early 2008, the Canterbury Innovation Centre will be launched. This will be the first of several buildings forming part of a larger development - the Kent Technology Park – being developed by the University of Kent at Canterbury and several partners on a site adjacent to the campus. At present the only facilities offered by the UKC are incubation units which have 17 tenants (at the Enterprise Hub). Support services are provided by the Canterbury Enterprise Hub at the University of Kent which commenced operations in 2004 and has since handled 76 clients. CEH clients are provided with business support services with a focus on enabling pre-seed ventures to



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develop into viable innovative businesses. Clients typically come to CEH at the ideas stage and receive advice on how to develop a business plan and to become investment-ready. The Innovation Centre should open in the summer of 2009.

The Technology Park/Innovation Centre will not offer wet lab facilities and any tenants requiring these will be referred to KSP. There is already a quite close link between UKC and KSP through the Resource Centre. This offers foundation degrees for technicians and KSP labs are used for some aspects of the training. The Resource Centre courses are delivered in partnership by Mid Kent College with UKC providing quality assurance. Otherwise, the Technology Park may well compete with KSP in other areas (e.g. ICT) where the businesses concerned want to work closely with UKC departments. However, the site where the Technology Park is being developed has a relatively limited capacity.

**Kent Innovation Centre** – this facility provides 45 units at Thanet Reach Business Park and its sister site (Margate Media Centre). KIC is a £3.8 million purpose-built facility providing serviced incubation space and business support, encouraging the creation and growth of technology and knowledge based companies. It began operations in 2002 and is owned and operated by Thanet District Council and situated adjacent to Canterbury Christ Church University. Basic services – access to meeting rooms, a virtual office facility, broadband access etc. are provided. Higher value added services are available – mainly through signposting to external service providers. At present it is some 95% occupied.

The **Nucleus Innovation Centre** (30,000 sq ft – 65 units, developed by Prologis) recently opened in 2007 at the London Science Park site in Dartford. The innovation Centre is currently 26% occupied. The Centre is part of a wider development of office, laboratory and studio space at The Bridge in Dartford and is one of the first of the major regeneration schemes in the Thames Gateway. The science park at the Nucleus is newly established and has benefited from strong investment from the RDAs and the public sector more widely. It involves partnership working between the Universities of Kent, Greenwich, Imperial College and East London. Its aim is to create ‘a stimulating environment for innovation and technology companies’. The Nucleus Innovation Centre is not especially sectorally focused but seeks to encourage innovative small companies and start-ups to locate there. Permission has recently been granted for the erection of four three storey office buildings on the site.

Amongst the developments that are being planned is the proposed **Science and Innovation Campus** at Ebbsfleet. It is envisaged that this will bring business and academics together to collaborate on R&D projects, to show working prototypes and provide a test bed for integrating current best practice technologies into large and complex systems. It will focus on developing links between businesses in a wide range

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of sectors (energy, waste, food, construction, manufacturing) and the knowledge base across the South East region (e.g. Building Research Establishment, Water Research Centre, Transport Research Laboratories, universities, etc). The Campus would be colocated with SUSCON. Another relevant proposal is the **Shellhaven Innovation Centre**. This innovation/demonstration centre for renewable energy technologies would be part the broader aspiration for the Thames Gateway to have a clear focus on innovation linked to environmental sustainability – building on the current investment in biofuels and distributed energy and the history of Shellhaven in terms of fuel processing.

### *Business Parks in Kent*

Over the years there has been a considerable expansion in business park space in Kent and a number of these facilities have a broadly similar offering to KSP. The impact assessment undertaken in 2004 by Amion identified five local competing business park developments - Lakeside International, Crossways Business Park, Chatham Maritime, Gillingham Business Park and Kings Hill.

**Lakesview** is a 40-acre business park that has received funding support from SEEDA of about £1.85m and a further £30m in private sector funding. Currently, the site is 60% occupied reflecting its recent establishment. It is currently relatively small-scale but like several of the other business parks in Kent has expansion plans. It is understood that the park is some 60% occupied.

**Crossways Business Park** has developed into the premier mixed-use business park in the south east quadrant of the M25. The 128 ha (315 acre) business park, which is 85% developed, has consent for a total of three million sq ft of office and industrial floor space. Over 50 different businesses from a range of sectors including banking, pharmaceuticals, and construction have located to the business park, which has generated over 5,000 jobs. In October 2005 Land Securities sold its remaining interest in Crossways Business Park to Legal & General. During 2006-2007 (KPMR) plans were approved for an additional 8,268 square meters of office space and 16,164 square meters of industrial accommodation. Most of the office space is currently occupied and 80,000 additional sq ft has been approved for development.

Another KSP competitor is **Chatham Maritime**, which was identified in the earlier impact assessment of one of three business parks dominating the B1 office market in Kent, together with King's Hill and Crossways. Chatham Maritime has received considerable funding support from SEEDA 85,000sq m of office space having been developed and around 3,500 new jobs created. Companies that have moved into Chatham Maritime include Micro Medical, Natwest Bank Plc, Halifax Plc and Medway Council. Occupancy rates at Chatham Maritime have been very high to date

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and two major office investment deals have been concluded there in the past year. Of the total of about 1,000,000 sq ft, some 95% is occupied.

**Gillingham Business Park**, Medway, is seen as one of KSP's competitors in Kent. The Park is a self-contained mixed-use business park on a 40-hectare site that provides over 140,000 sq m (1,500,000 sq ft) of industrial, office (about 10% of the total), retail, and leisure accommodation. The park is located in North Kent and is situated about two miles north of the M2 motorway (junction 4) and is immediately adjacent to the A2. The office space is about 95% occupied. The park was acquired relatively recently by Henderson Global Investors and public sector stakeholders include Medway Council. An estimated 3,200 jobs have been created by businesses operating from the Park. There are some links with academia, in particular the Medway Campus of the University of Greenwich and the University of Kent at Medway.

**Kings Hill Business Park**, which is owned by Liberty Property Trust UK and began life 18 years ago is located at the former West Malling airfield. It is today one of the largest mixed-use developments in Europe with more than £500 million invested to date with 5,000 people working at the business park. Currently, the park has approximately 800,000 sq ft of office and business space developed and has planning consent for a further 1.2 million sq ft gross. About 100 companies are located at the park. Office space available ranges from multiple occupant buildings to bespoke design buildings for single firms. Facilities management and related services are provided but the park does not offer incubation and business / innovation support services to tenants directly, rather through referrals to external service providers. Good progress has been made with letting of the recently build speculative development at 42 Kings Hill Avenue. Of the 800,000 sq ft, some 90-95% is occupied.

Other developments of interest include the completion of Phase 1 of Northdown at **Eureka business park** (Ashford) and sale of the final plots at **Shearway Park** (Folkestone). In Sittingbourne specifically, recent developments of note (2006-7) include the 25,547 square meter office space development at Watermark of which Phase 1 is under way and Eurolink where there have been developments at Waterview Business Park and Precision Park although these probably do not compete directly with KSP.

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**Table 3.1: Summary Description – Innovation Centres, Business and Science Parks in Kent**

Name	Space (square feet)	Use	Occupancy %	Links
<b>Medway Innovation Centre</b>	15,000 current 30,000 additional (2008)	34 high tech incubation units; “homeland security” – forensic data, biometrics, software	50	Cranfield/Edinburgh/Cambridge Universities; BAE
<b>Canterbury Innovation Centre/ Kent Technology Park (in development)</b>	Launch 2008 Not sure: either 2,500 (29,910 sq ft) or 3,638 sq m (39159 sq ft) say 35,000?	Being developed for spin offs from the University of Kent. Not wet labs	To open summer 2009	UKC/ Mid-Kent College
<b>Kent Innovation Centre</b>	21,600 sq ft (just office space)	45 units in Thanet; high tech, knowledge-based firms, also includes space at Christchurch	95	Canterbury Christ Church
<b>Nucleus Innovation Centre (“Bridge” – LSP)</b>	30,000 sq ft	65 units	26	UKC/ Greenwich/ Imperial/ East London Univ.
<b>Business Parks in Kent</b>				
<b>Lakeside</b>	40 Acres of office and other. space	Mixed use	60%	SEEDA
<b>Crossways</b>	315 acres, 3 million sq ft office/ industrial space	Mixed – banking, pharma, construction ...	Almost fully occupied. More sites to be developed; 80,000 sq ft	Legal & General
<b>Chatham Maritime</b>	c.1,000,000 sq ft	Mixed: financial, pharma, public sector	95% occupied	SEEDA
<b>Gillingham Business Park</b>	40 hectares, 1.5 million sq ft: 10% office/ 90% industrial space	Mixed use	Office c.95% occupied; industrial c.90%	Hendersons Global Investors, Universities of Greenwich, Kent @ Medway
<b>Kings Hill</b>	800,000 sq feet consent for additional 1.2 million sq feet	Mixed use	90% (of 800,000)	Liberty Trust plc

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## 3.4 Conclusions – Demand and Supply Perspectives

Looking back to 2004, the GVA Grimley estimate for demand for space from within the Swale area suggests that the KSP could be filled by such demand (if there was no differentiation between B1 and science park space) and much more so if the surrounding area was taken into consideration. However, this prediction did not consider new developments in supply, both as regards B1 and science park and incubator space. It may also have been too optimistic given the locational preferences of the sectors being targeted and the alternatives available.

**In our view, there is a need to be cautious about the chances of filling an expanded KSP with science-based companies (especially ICT and Biotech) in the short to medium-term.** That said, the assessment in this section suggests that KSP is not competing with other facilities in Kent itself as a location for Life Science/Biotech businesses. Indeed, the fact that KSP offers wet lab facilities and other specialized infrastructure needed by firms in these sectors is a major attraction which is generally acknowledged and has led to the referral of enquiries to KSP.

**Competition for tenants in these sectors does, however, come from science parks elsewhere in the South East, and the rest of the UK.** The development of the London Science Park/ Bridge Innovation Centre are also potentially significant in this respect. Biotech and ICT are fast-growing but amongst the most globalised of industries. The competitive locational offer from a value and a cost point of view is strong and getting stronger. A key strength of KSP's offer in this respect is cost. However, for higher value added activities, such as the R&D aspects Biotech and ICT, cost is not always the key driver. In the non-science sectors, further development of the Medway Innovation Centre (including the new Data Centre for secure hosting) means that it will be very well placed as a location for ICT-related businesses while Kings Hill and other business parks in Kent continue to offer alternatives to KSP for firms in other sectors. More generally, the supply of both generic B1 space and specific innovation/science park space has increased in the past few years within Kent, within the South East and throughout the UK.

# Kent Science Park's Tenants

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This section examines the characteristics of Kent Science Park's tenants. The analysis relies mainly on a survey of tenants carried out by CSES. Additional sources of information include other surveys and the most recent KSP tenant directory.

## 4.1 Sample Characteristics

A total of 26 KSP completed questionnaires, a response rate of around a third.<sup>16</sup> The activities of the KSP companies responding to the survey fell into one of four categories:

- **Science-based firms (7 firms):** examples included one company engaged in R&D for the pharmaceuticals industry and another involved in developing emission reducing, fuel additive technology. The sample also included a number of firms providing business and other services to science based companies. An example in this category is a firm providing services to the biotechnology industry, in particular help with the development and commercial exploitation of business opportunities arising from new Bioscience, Veterinary and Medical technologies.
- **Information and communications technology (6 firms):** examples in this category included software developers and consultants, and another business that provides support to pharmaceutical companies in running clinical trials.
- **Business services (4 firms):** KSP tenants in this category included business and financial advisers, and several firms providing telephone answering and call centre services. In fact the two largest companies in the sample, employing respectively 60 and 220 employees, were both call centres. In addition, there were several businesses providing sales and marketing services to the pharmaceuticals industry.
- **Other sectors (9 firms):** in addition to science-based, ICT-related and business services firms, the sample included a relatively large group of firms engaged in a wide range of other business activities. This includes several firms engaged in consulting (environment, engineering) and property management. In addition, there is a firm that hires out marquees and provides catering services, and a housing association.

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<sup>16</sup> One firm did not provide its name and is not included in the analysis. The survey questionnaires were sent by e-mail to the tenants with some being returned by e-mail and others by post. Tenants were given the additional option of completing the questionnaire on-line. There was also a telephone follow-up. In the KSP study carried out in 2004 a total of 22 responses were obtained from the 84 KSP companies.

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The following table compares the profile of KSP tenants as listed in its current directory (December 2007) with the sample.

**Table 4.1: Representativeness of the sample**

Sectors	Sample		KSP Directory (Dec 2007)	
	No.	%	No.	%
Science based	7	28.0	23	32.4
ICT related	6	24.0	11	15.5
Business services	4	16.0	12	16.9
Other sectors	9	32.0	25	35.2
<b>Total</b>	<b>25</b>	<b>100.0</b>	<b>71</b>	<b>100.0</b>

The conclusion to be drawn is that the sample is quite close to matching the sector profile of KSP tenants generally. Science-based firms and 'other sectors' were slightly under-represented in the sample and ICT related companies over-represented. However, the differences were not particularly significant and unlikely to produce biases in the survey analysis.

### 4.2 Characteristics of KSP Tenant Companies

The most recent KSP directory (December 2007) lists 71 tenants employing 872 people. The average employee per tenant at KSP ranges from 6.1 in the science-based sector to 17.1 in ITC-related firms with 'other sectors' employing an average of 14.2 per firm. As can be seen from the following analysis, KSP's tenants are mainly small businesses with the vast majority employing less than 10 people.

**Table 4.2: Number of KSP Company Employees**

Size bands	No.	%
Less than 10 employees	50	70.4
Between 10 and 50 employees	16	22.5
Over 50 employees	3	4.2
Not known	2	2.8
<b>Totals</b>	<b>71</b>	<b>100.0</b>

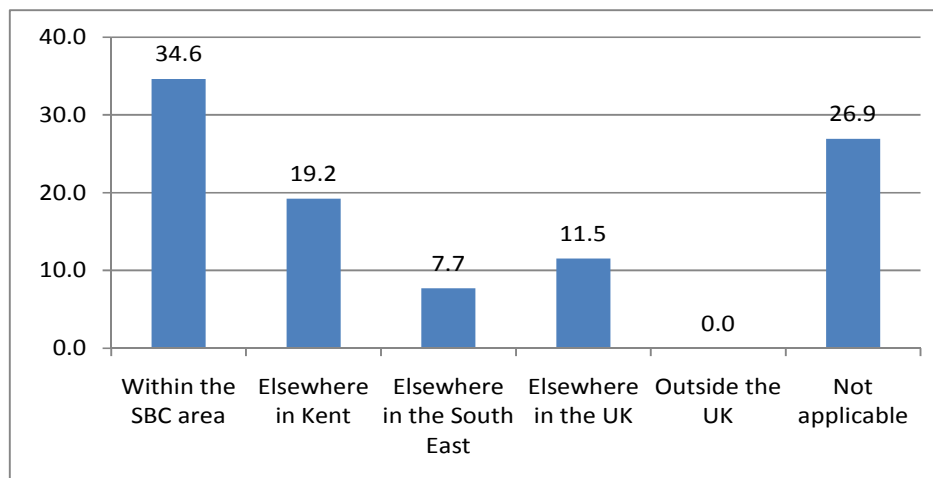
*Source: analysis of KSP Directory (December 2007)*

According to the survey results, a third of KSP's current tenants originated from within the Swale area. Six of the 26 tenants surveyed were start-ups or at a very early stage of development at the time when they began operating from KSP (five were science-based and the sixth 'other sector'). The following chart shows where the firms that were already trading when they relocated to KSP came from.

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**Figure 4.1: If your company was an existing business when it started operating at KSP, where did it come from?**



*Note: the category 'not applicable' mainly consists of start-ups but includes two firms that were not willing or able to answer this question.*

**Employees commute to work at KSP from quite a wide area with many doing so from outside the Swale area.** An earlier survey of KSP company employees was carried out by Locate in Kent in 2004.<sup>17</sup> This earlier research estimated that around three-quarters (73.2%) of those working at KSP commute to work from within a 20 mile radius of the science park. An analysis of travel-to-work patterns is shown below.

**Table 4.3: Distance traveled to work by KSP company employees (LiK)**

Distance	No.	%
Less than 1 mile	4	3.4
1 to 5 miles	21	18.1
6 to 10 miles	20	17.2
11 to 20 miles	40	34.5
21 to 30 miles	17	14.7
More than 30 miles	14	12.1
<b>Totals</b>	<b>116</b>	<b>100.0</b>

An analysis by postcode undertaken by LiK of the home location of KSP company employees indicated that half live in the Medway area. Of these, over a quarter live in Sittingbourne or surrounding localities.

<sup>17</sup> The survey carried out by Locate in Kent obtained feedback from 116 employees working for 14 companies located at the science park.

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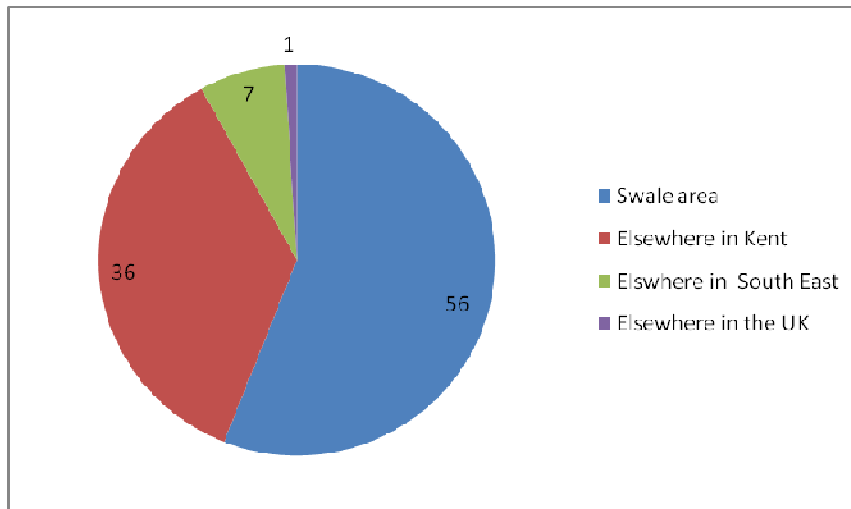
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**Table 4.4: Home location of KSP company employees (LiK)**

Postcodes	No.	%
All ME	58	50.0
All CT	16	13.8
All TN	5	4.3
All DA	2	1.7
Others	4	3.4
No Response	31	26.7
<b>Totals</b>	<b>116</b>	<b>100</b>

The survey carried out by CSES for this study broadly confirms the LiK estimate that around half of KSP employees live in the Swale area. Whereas the LiK research was limited to establishing where in Kent employees came from, our survey also identified the proportion living outside the county. As can be seen from the following chart, 8% of KSP employees live elsewhere in the South East region or elsewhere in the UK (probably either London or the East of England, both of which are within commutable distance of KSP).

**Figure 4.4: Home location of KSP company employees % (CSES Survey)**



**Most KSP company employees commute to work by car with few using public transport.** The LiK survey also established that most (88%) those working at KSP travel there by car. Public transport was not seen as a viable alternative. Other findings

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that are relevant to this study include levels of remuneration paid to employees. Most earn between £15,000 and £30,000 p.a.<sup>18</sup>

**Table 4.5: Remuneration of KSP company employees (source: LIK)**

Salary range	No.	%
Under £15,000	22	21.8
£15,000- £19,999	21	20.8
£20,000- £24,999	15	14.9
£25,000- £29,999	20	19.8
£30,000- £34,999	4	4.0
£35,000- £39,999	4	4.0
£40,000- £44,999	5	5.0
£45,000- £49,000	5	5.0
Over £50,000	5	5.0
<b>Total</b>	<b>101</b>	<b>100.0</b>

**Views on the importance of improving access to KSP by road are divided with a majority indicating that this is only of 'some importance'.** Another issue examined in the survey was the importance of improved road access to KSP. Here, the highest proportion (62%) of the survey responses fell into the 'some importance' category with most of the remaining feedback being divided between 'irrelevant' (12%) or - at the opposite extreme - critical (19%). 'Don't knows' accounted for the remaining 7%). Comments made by tenants generally stressed the need for both improved access to the M2 motorway but also to the Sittingbourne area.

### 4.3 Performance of KSP Companies

**When the companies covered by the survey first started operating from the science park, the average number of employees was 10.4 (range: 1 to 90). The same firms now have an average of 20.6 employees range: 1 to 220).** Taking into account the differing lengths of time that companies have been located at KSP gives an average annual rate of growth in employment of 15%. However, trends in

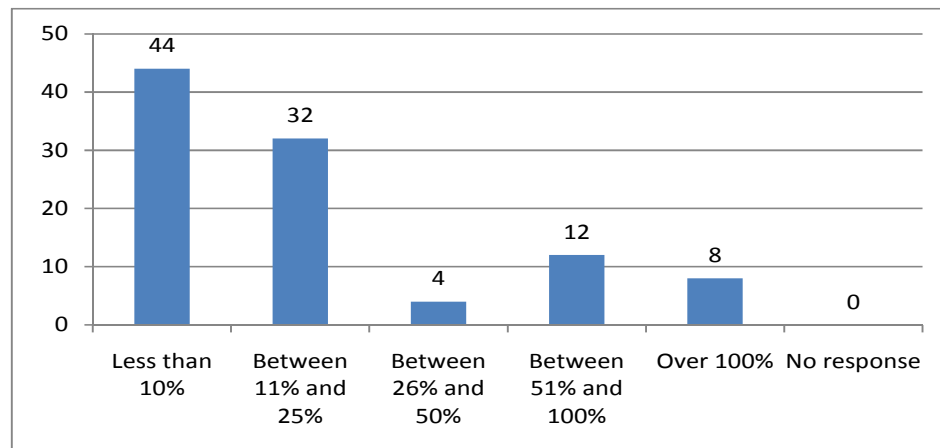
<sup>18</sup> Taking the mid point in each salary range for KSP company employees as an average level of earnings means that the average salary per employee at KSP when the survey was undertaken was £31,000. A recent Ernst & Young study (quoted in 'BioScience 2015' published by the Bioscience Innovation and Growth Team, November 2003) estimated that average earnings per employee in the UK Bioscience sector were around £28,500. If it is accepted that the average for those working at KSP in the South East is likely to be higher than for the UK as a whole, then the estimated average salary of £31,000 would seem reasonable.

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employment mask a difference between the growth achieved through the 'organic' development of start-ups and other firms at KSP since they started operating at the science park and larger FDI/relocation projects where jobs were created at KSP as a result of the initial investment.

**Figure 4.2: Growth in jobs since KSP tenants started operating at the science park (average change per annum)**



There is a considerable variation in the performance of KSP with regard to employment growth. Several KSP tenants have performed exceptionally well. For example, one company from the sample that started operating at KSP with five employees four years ago now has 60 staff. At the same time, three of the 26 firms have contracted in size whilst at KSP, albeit with only marginal effects on overall employment. For example, in one of the three cases, the firm concerned started with two employees but now has only one. The recent decision by Pfizer to cease activities at KSP, with the loss of around 100 R&D jobs, clearly changes this situation considerably.

**According to the survey, KSP's science-based tenants have tended to grow the fastest whilst ICT-related firms have performed least well.** For the purposes of the expansion scenarios it is clearly important to establish the propensity of different types of KSP tenants to grow. The sample was not big enough to be broken down into a large number of different sectors. However, adopting the broad sector classification indicated at the outset of this section, the analysis indicates that science-based KSP tenants have expanded at the highest rate in terms of employment levels followed by the category of 'other' companies and then ICT-related firms.

**Smaller KSP tenants have tended to grow at a faster rate than larger companies.** Apart from sector characteristics, there are several factors that could influence the

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propensity of KSP tenants to grow. Some of these factors are specific to the companies themselves (others are external). More particularly, analysis of the KSP survey data suggests that smaller companies have tended to expand at a faster rate than larger ones (this of course reflects wider experience in the economy). Thus, companies at KSP that had less than five employees when they started operating at the science park have expanded at the fastest rate - considerably faster than those with 6-10 employees and those with over 10 employees. It is also worth noting that the smaller size band achieving the highest average growth rate contained all but one of the science companies located at KSP that took part in the survey although, overall, this category contained an almost even mix between science-based and 'other' firms.<sup>19</sup>

**Whether KSP tenants are part of a larger organisation or not does not seem to have influenced growth rates.** Another factor that could influence the propensity of KSP tenant companies to grow is whether or not they are owned by another organisation. The argument here is that – assuming all other considerations are equal - such enterprises are likely to have easier access to the finance and other resources needed to expand. In fact, closer analysis of the survey data indicates only a marginal difference: whereas KSP tenants that are subsidiaries of other organisations increased employment levels by an average of +32% over the period since they started operating at the science park, independently-owned firms did so by +38%. Given the margin for error in a relatively small sample, it would appear that ownership is not a particularly significant factor in the growth propensity of KSP tenants.

## 4.4 Future Growth and Space Requirements

**The average KSP tenant responding to the survey currently occupies 1,970 square feet of premises at the science park (with a range for the sample from 170 to 5000 sq ft).** The combined space occupied by the 26 sample companies amounts to 33,400 sq ft or 9.2% of the 485,000 square feet of lettable space at KSP (around 9% of the space actually let).

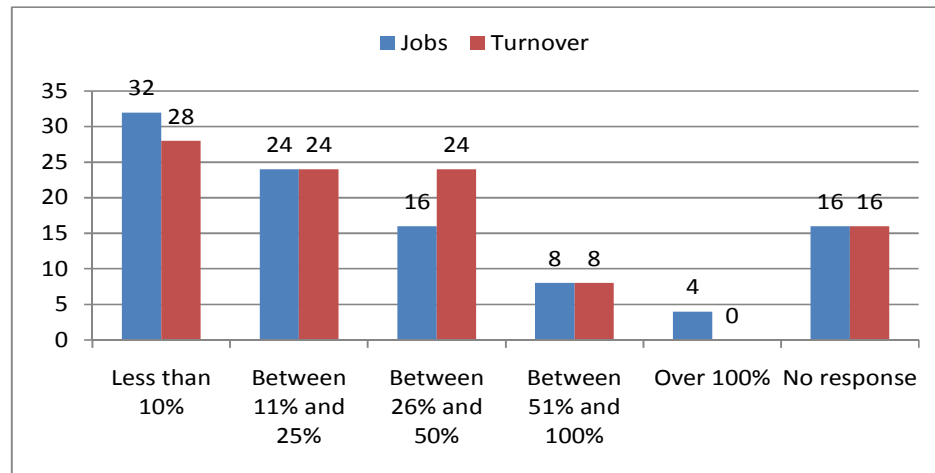
**KSP tenants are optimistic about their future growth potential.** Looking ahead, in the survey KSP tenants provided an estimate of expected growth in both employment and turnover over the next 1-2 years. The following chart provides an analysis of the responses.

<sup>19</sup> The average growth rate for KSP tenants in the smallest size band is strongly influenced by one (non-science based) company from the sample which grew from having five employees when it first started operating at the science park to 60 employees now. If this case is excluded, the average annual growth rate in employment for the 1-5 employees category is +35% p.a.

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**Figure 4.2: Looking ahead to the next 1-2 years, do you expect employment and turnover to increase? If yes, please indicate by approximately how much (% of all responses)**



**KSP's science-based firms are the most optimistic with regard to future growth prospects.** Not all KSP companies making up the sample provided a projection for future growth (21 did so). As can be seen from the above chart, just under a third of the tenants expect to grow at up to 10% with most of the remainder falling into the categories of either 11% to 25% or 26% to 50%. Taking the same sector classifications are earlier, there is a similar pattern with regard to growth expectations – science-based firms tending to be the most optimistic with ICT businesses being the least optimistic. There is also a similar pattern with regard to firm size – smaller KSP tenant companies tending to be more optimistic about future growth prospects than larger ones. As can be seen from the above chart, there is no significant difference between expectations concerning future growth in employment levels and growth in turnover.<sup>20</sup>

**Just under half the KSP companies surveyed are likely to need additional space in the near future.** Having examined the survey data regarding future growth expectations, a key question is what implications this has for future requirements with regard to space at KSP. In the survey, just under half the sample (46%) indicated that

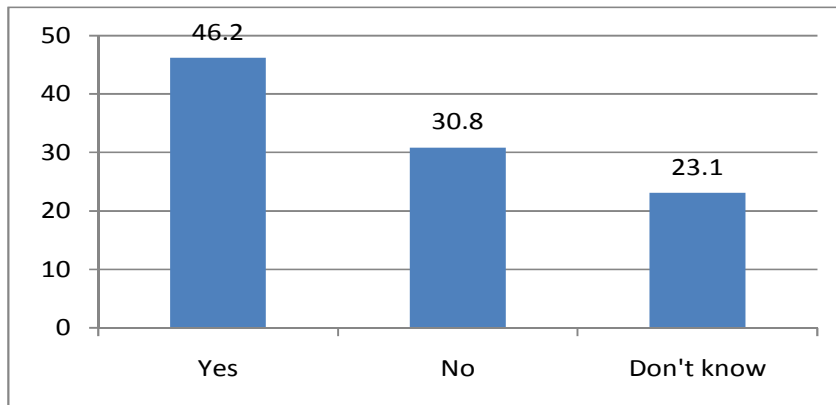
<sup>20</sup> KSP tenants were asked to indicate their current turnover band (less than £1m; £2m to £10m; £11m to £20m; and over £20m p.a.). Based on taking the mid point in each range, an analysis by sector suggests that for the sample, science-based firms have a turnover averaging £1.4m for the last financial year with the equivalent figures for ICT-related and 'other sectors' being £5.1 m and £4.7m respectively. The relatively low turnover of science-based firms is consistent with the findings for employment.

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they would need additional space at the science park for expansion in the next 1-2 years.

**Figure 4.3: Is your company likely to require additional space at Kent Science Park in the next 2-3 years? (%)**



Not all of these firms could quantify the amount of extra space that would be necessary. However, amongst those that could do this the expectation was for an additional requirement averaging 1,730 square feet (with a range from 200 sq ft to 8,000 sq ft) or 83% more than at present.

### 4.5 Links with Universities and Other Businesses

According to the survey, just over a third of KSP tenants (36%) have 'very important' or 'quite important' links with the universities and/or research centres in Kent. As can be seen from the following table, linkages with universities and research centres elsewhere in the region and UK, and abroad, are also significant.

**Table 4.7: How important are links with universities and/or R&D centres?**

Links with universities/research centres	Very important		Quite important		Not important at all		No response	
	Nº	%	Nº	%	Nº	%	Nº	%
In Kent	1	4.0	8	32.0	15	60.0	1	4.0
Elsewhere in South East	2	8.0	6	24.0	16	64.0	1	4.0
Elsewhere in the UK	2	8.0	4	16.0	18	72.0	1	4.0
Abroad	0	0.0	5	20.0	19	76.0	1	4.0

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**Our estimate based on the sample that 36% of KSP firms have either 'very important' or 'quite important' links with higher education in Kent is close to the estimate of 40% contained in the 2004 study.** It is clear, however, that if links with universities and research centres outside Kent are also taken into account, the proportion is higher. The exact proportion is difficult to estimate precisely because most KSP companies that have such links have relationships with multiple research partners. Interestingly, five of the firms concerned are engaged in ICT-related business with the remainder spread across a variety of non-science sectors).

**The survey results are not clear-cut with regard to the extent of networking/clustering between tenants (one of the key features of a science park).** One (but not the only) indication of clustering is the extent that some KSP companies provide services to other firms located at the science park. From the survey feedback provided by KSP tenants, it clear that some of the R&D-based firms are providing services to science-based businesses and it is to be expected that this includes other KSP tenants.

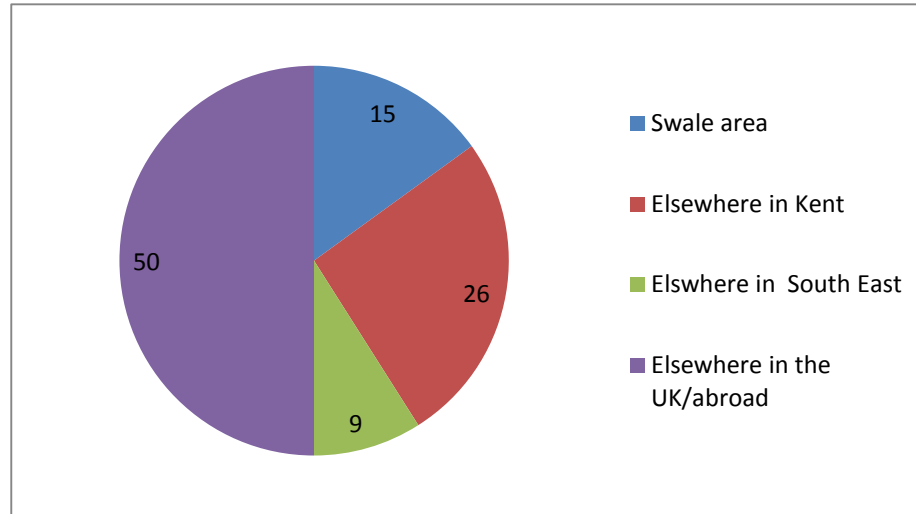
For example, one firm described itself as providing 'research and development of technologies for the pharmaceutical industry'. Another said it was a 'specialist business management group offering a range of high-level business services to the biotechnology sector'. In at least one case, the services provided to other KSP tenants are not sector-specific (the sample included a firm that manages KSP's football ground and other sports facilities). It is also possible that some of the ICT-related firms located at KSP provide services to other tenants across a range of sectors. A rough estimate would be that around 15-20% of KSP companies are trading with each other. It is impossible to say how important such trade is to individual businesses.

**A high proportion of KSP companies' suppliers are located elsewhere in the UK or abroad.** In our survey we asked KSP companies to indicate where their most important suppliers and customers are located. The first chart below examines the first of these questions. As can be seen, a high proportion (50%) of suppliers is located elsewhere in the UK or abroad. Most of the remainder are in either the Swale area (15%) or in Kent (26%).

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Figure 4.5: Location of KSP company suppliers (%)



Closer analysis of the characteristics of KSP companies indicates, perhaps not surprisingly, that those with suppliers predominately outside Kent and the South East are either science or ICT-based firms (thus, whereas science-based firms made up some 27% of the sample, they accounted for 42% of the firms with suppliers outside Kent and the South East. There is a similar pattern with ICT. Conversely, KSP companies with a relatively high proportion of suppliers located within Swale and Kent are from the category used earlier in this section of 'other').<sup>21</sup>

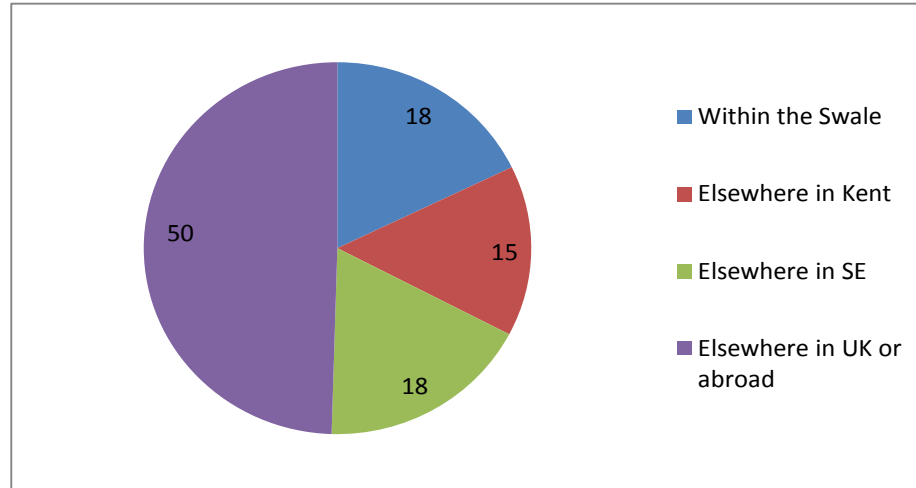
**There is a very similar pattern with regard to the location of KSP company customers with 50% of these being located outside Kent and the South East.** Otherwise, there is a fairly even geographical spread with the clients of the other KSP companies making up the sample being mainly located in either the Swale area (18%), elsewhere in Kent (15%) or elsewhere in the South East (18%). The following chart provides a summary.

<sup>21</sup> Only half the sample provided information on their expenditure on local suppliers. For this sub-sample, the average amount spend on local suppliers in the last financial year was just over £6,000.

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Figure 4.7: Location of KSP company customers (%)



As with suppliers, science-based firms at KSP have markets that are predominately outside Kent and the South East (whereas these firms made up some 27% of the sample, they accounted for 43% of the survey respondents stating that their customers were mainly outside Kent and the South East). This is far less true of the category 'other' but also ICT-related businesses at the science park.

### 4.6 Views on Kent Science Park

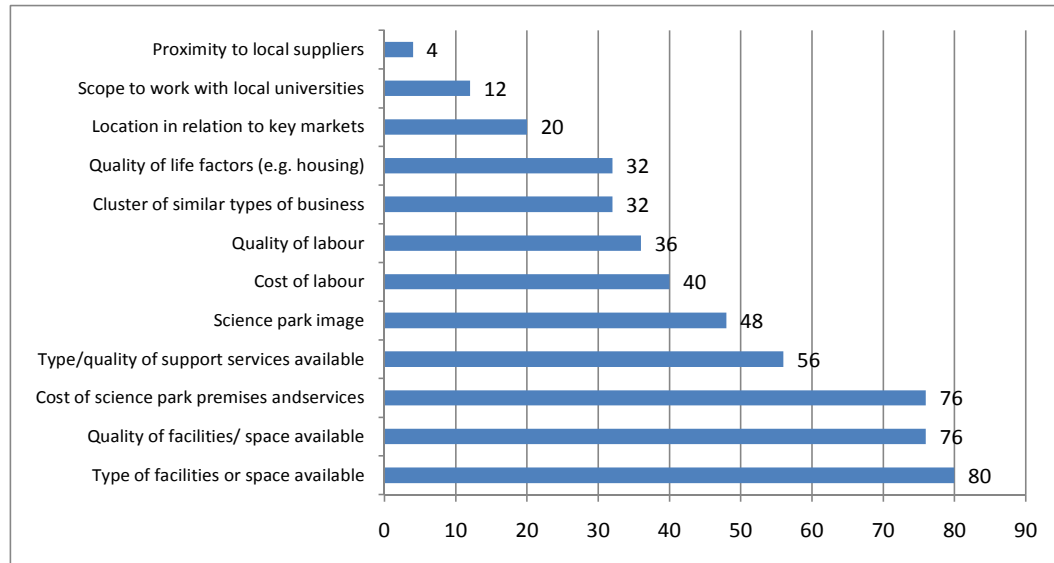
In the survey, KSP companies were asked for their views on the science park as a location.

**For tenants, the most important advantage of being located at KSP is the type and quality of premises available. Related to this, the cost of facilities is also a very significant factor.** In the 'intermediate' range in terms of their importance are generic attributes, namely the 'science park' image and support services. With the exception of the cost of labour, purely economic considerations such as proximity to markets and suppliers, appear to be far less significant as reasons why companies decided to locate at KSP. These findings are generally positive. Less so perhaps - at least from a conventional science park perspective - is the low importance placed on being able to work with local universities and on being part of a cluster of similar businesses. Other factors mentioned by survey respondents included security and, in several cases, the fact that KSP was 'close to home'.

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Figure 4.8: Why did you originally choose Kent Science Park as a location? (%)



**Around half the companies surveyed had considered alternative locations to KSP when they were originally looking for a location.** KSP companies were also asked if they had considered alternatives to KSP. Seven of the 10 companies that answered this question had looked elsewhere in Kent but not found a suitable location. For example, one respondent indicated that he had looked ‘elsewhere in Swale but [was] unable to find suitable accommodation at the right price’ while another stated that ‘We were at the University of Kent at Canterbury but it was cramped and there was little synergy’. Two other firms had considered locations outside Kent – in both cases Oxford – but in one case at least the cost of housing had been the reason for choosing KSP.

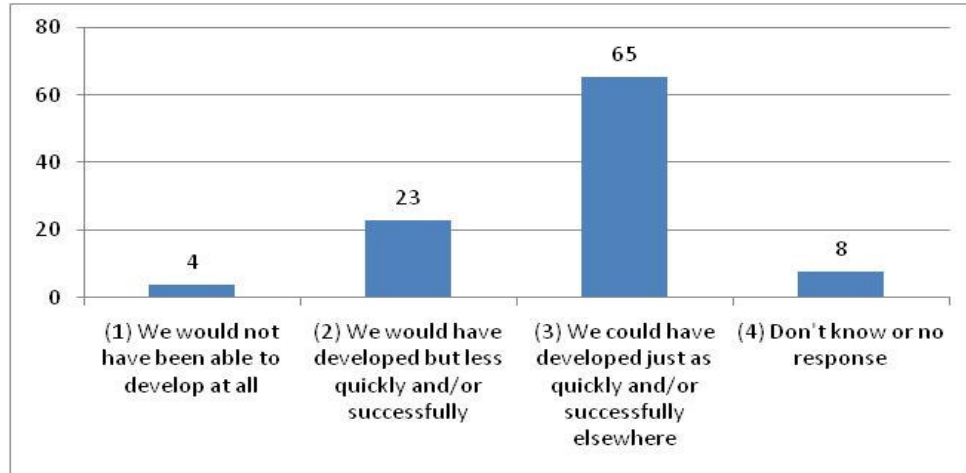
**Although helpful, most companies surveyed do not consider that being located at KSP has been critical to their successful development.** A key question is the extent to which being located at KSP has helped improve tenant companies’ performance. This is a difficult question to answer because there are of course many factors that influence a business’s performance and disentangling the effect of different factors is not straightforward. There are also other considerations: for example, previous research suggests that as time passes, beneficiaries of any type of business support tend to increasingly understate the importance that such support may have played at an earlier stage in their development.

Factors such as these could help explain the survey findings. As can be seen from the following chart, most of the KSP companies stated that they could have developed just as quickly and/or successfully elsewhere.

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Figure 4.9: How important has KSP been to the company's development? (%)



Closer analysis of the characteristics of KSP companies in the various categories shown in the above chart suggests that there is no particular pattern. It might, for example, be expected that smaller firms which are likely to have greater support needs than larger ones would be concentrated in the first two categories shown in the above chart and yet this is not the case (the average size of firms is exactly the same for Categories 2 and 3). Likewise, it might be supposed that there is a sectoral pattern with science-based companies with specialist support needs more likely to be concentrated in Category 2 and yet this is not the case either.

**A significant proportion of the companies surveyed have considered moving to another location.** KSP tenants were also asked whether they are likely to move in the next 1-2 years. The following table provides a summary of the responses.

Table 4.8: Have you, or are you considering at present, relocating?

Option	Nº	%
No - not considering relocating	14	53.8
Yes - the company could relocate to premises elsewhere in the next 1-2 years	5	19.2
Don't know	7	26.9
<b>Total</b>	<b>26</b>	<b>100.0</b>

As can be seen, while just over half (54%) of KSP companies stated that they have no plans to relocate, a significant proportion (19%) indicated that this was conceivable with the remainder saying they didn't know which could be interpreted as falling well short of a positive endorsement of their current location. Although those saying they

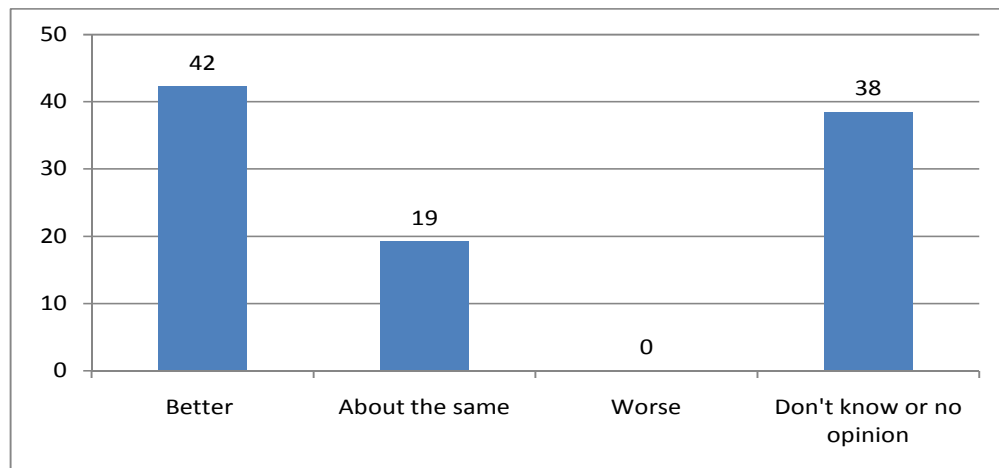
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could move were invited to explain why, very few (four tenants) did so. In two cases, the explanation was that the businesses concerned would like to buy their own premises, another indicated that it would soon need a larger building (warehousing) whilst the fourth stated that its decision would be driven by cost considerations and it would move if rents increased.

The final question in the survey asked KSP companies to compare the science park with other locations in Kent. As can be seen from the following chart, the feedback is quite positive with 42% of respondents saying that KSP is 'better'. However, there was also a relatively high proportion of don't knows.

**Figure 4.10: Overall, how do you think KSP compares with other sites and premises in Kent?**



Perhaps somewhat paradoxically given the views summarized above concerning transport links, there were a number of comments from KSP companies highlighting the attractiveness of a 'countryside location' and the fact that this and other factors made it a 'pleasant place to work'. One comment summed this up: 'the rural location is KSP's greatest benefit. KSP staff and contractors are friendly'.

### 4.1 Conclusions – Feedback from Kent Science Park's Tenants

**KSP's tenants are mainly small businesses with 50 of the 71 firms listed in the current directory having less than 10 employees.** According to the survey results, around a quarter of the tenants were start-ups or at a very early stage of development at the time when they began operating from KSP. A third originated from within the Swale area. Employees commute to work at KSP from quite a wide area with most

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doing so from outside the Swale area. An earlier survey of KSP company employees (carried out by Locate in Kent in 2004) estimated that around three-quarters (73.2%) of those working at KSP commute to work from within a 20 mile radius of the science park. It is estimated that average salaries are around £30,000 p.a.

**There is a considerable variation in the performance of KSP with regard to growth rates.** KSP's science-based tenants have tended to grow the fastest whilst ICT-related firms have performed least well. Smaller KSP tenants have tended to grow at a faster rate than larger companies. Overall, growth rates amongst science-based firms at KSP seem to have averaged around 10% p.a. in recent years (higher than the rate of 5% p.a. in the UK Bioscience study – see Footnote 14 – although exact comparisons cannot be made because the time periods are not the same). Looking ahead, science-based firms also tend to be the most optimistic with ICT businesses being the least optimistic (there is also a similar pattern with regard to firm size – smaller KSP tenant companies tending to be more optimistic about future growth prospects than larger ones). Just under half the KSP companies surveyed are likely to need additional space in the near future.

**The most important advantage for tenants of being located at KSP is the type and quality of premises available. Related to this, the cost of facilities is also a very significant factor.** In the 'intermediate' range in terms of their importance are generic attributes, namely the 'science park' image and support services. With the exception of the cost of labour, purely economic considerations such as proximity to markets and suppliers, appear to be far less significant as reasons why companies decided to locate at KSP. Although helpful, most companies surveyed do not consider that being located at KSP has been critical to their successful development. Looking ahead, while just over half (54%) of KSP companies stated that they have no plans to relocate, a significant proportion (19%) indicated that this was conceivable with the remainder saying they didn't know which could be interpreted as falling well short of a positive endorsement of their current location.

# Scenarios & Impact Assessment

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In this section we examine three scenarios for Kent Science Park's development and the economic implications for Swale, Kent and the South East. Key aspects of the impact assessment are summarised in this section with detailed estimates in Appendix C.<sup>22</sup>

### 5.1 Baseline and Overview of Scenarios

Before examining the various scenarios in detail, we first provide a summary of the assumed baseline situation and then provide an overview of the scenarios and key assumptions.

#### 5.1.1 Baseline Situation

The baseline situation that we have assumed existed as at December 2007 is summarised in the following table:

<u>Tenants</u>	<u>Lettable Space</u>	<u>Economic Factors</u>
<ul style="list-style-type: none"> <li>• KSP has 80 tenant companies</li> <li>• The sector mix is: Science based (32.4%), ICT related (15.5%), Business services (16.9%) and other sectors (35.2%)</li> </ul>	<ul style="list-style-type: none"> <li>• There is 46,000 sq m of lettable space</li> <li>• The KSP occupancy level is 76.3%</li> <li>• It is possible to provide an additional 5,000 sq m of space, largely within the existing perimeter fence</li> </ul>	<ul style="list-style-type: none"> <li>• KSP tenants employ 12.3 people on average with variations across sectors (total: 983 based on 80 tenants)</li> <li>• Growth rates for KSP firms are above those for the UK economy as a whole</li> </ul>

To briefly summarise key features of the baseline in the mode (these and other parameters are explained more in Appendix B):

**KSP tenants:** in Table 5.1, we have assumed that not all KSP tenants are listed in the current directory and that the total should be 80 rather than the lower figure of 71 (see Table 1.2 on page 3 which provides an analysis of the December 2007 KSP directory). The sector mix is based on our analysis of the tenant profiles contained in the current directory. The profile of the nine 'missing' KSP tenants is assumed to be the same as the tenant profile as a whole. It is assumed that 63% of employees are engaged in knowledge-based activities (see Table 1.3).

<sup>22</sup> In assessing the economic effects of KSP's possible expansion, it was beyond the scope of our work to examine the feasibility of the various scenarios in any detail. Similarly, there are many factors that could influence the economic effects arising from any expansion of KSP (e.g. improving road links to the site) which were not within the scope of this study to examine in detail. Estimates of economic impacts are given for a number of given scenarios at the time when the research was undertaken and changing circumstances during the period of the forecasts could also affect the nature and scale of actual effects.

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**Letable space/occupancy:** the amount of space currently occupied by KSP tenants has been estimated by calculating the average sq m/per person employed by companies. In 2004, when the Amion Report was prepared, there were 82 tenants employing 957 people and occupying 34,165 sq m which gives an average of 35.7 sq m per employee. Applying this factor to the current (December 2007) adjusted total number of employees, i.e. based on 80 rather than 71 tenants, means that an estimated 35,077 sq m of space is occupied at KSP, i.e. 76.3% of the total letable area of 46,000 sq m. On this basis, there should be enough space available within the existing perimeter fence for an additional 5,000 sq m of business units. In reality this may not be the case because a considerable amount of the accommodation is let on a room by room basis with few buildings being totally vacant. However, it is not possible given the information available to us to take this into account in estimating current occupancy levels/vacant space.

**Economic factors:** future growth rates for KSP tenants take into account a number of factors. Firstly, we have examined HM Treasury and independent forecasts for the UK economy for the 2007-11 period (these assume that GDP will increase annually by an average of 2.5% (with a range in the forecasts from +2.0% pa to just over +3.0% pa). We have assumed that KSP tenants will grow at a faster rate with some sectors (e.g. Life Sciences) expanding more quickly than others (e.g. 'Other Sectors'). Secondly, we have included projections based on the survey feedback from KSP tenants in the model; and, thirdly, past growth rates of other science parks have been taken into account. Based on these factors, two growth rates are used for each of the scenarios: 2.5% p.a. and 5% p.a. The application of simple growth rates does not of course take into account the fact that some KSP buildings are specialist in nature, requiring specific types of tenant. Likewise, some prospective and/or expanding tenants may have requirements that cannot be met by existing space and/or within the confines of the science park. An assumption that there should be full occupancy therefore potentially has an opportunity cost in terms of investment and jobs.

### 5.1.2 Overview of Scenarios

Three possible scenarios have been examined for Kent Science Park's future development:

- **Scenario 1: Status quo** – no significant additional investment in KSP to expand its facilities beyond the existing perimeter fence;
- **Scenario 2: Incremental expansion** – assumes a staged expansion of KSP beyond the existing perimeter fence to provide a total of just over 100,000 sq m. Scenario 2(a) assumes expansion is driven by knowledge-based firms while Scenario 2(b) assumes growth is achieved by opening KSP up to a broader range of (non-knowledge based sectors);
- **Scenario 3: Major KSP development** – a more ambitious and speculative expansion to provide approaching 200,000 sq m of total space by 2025.



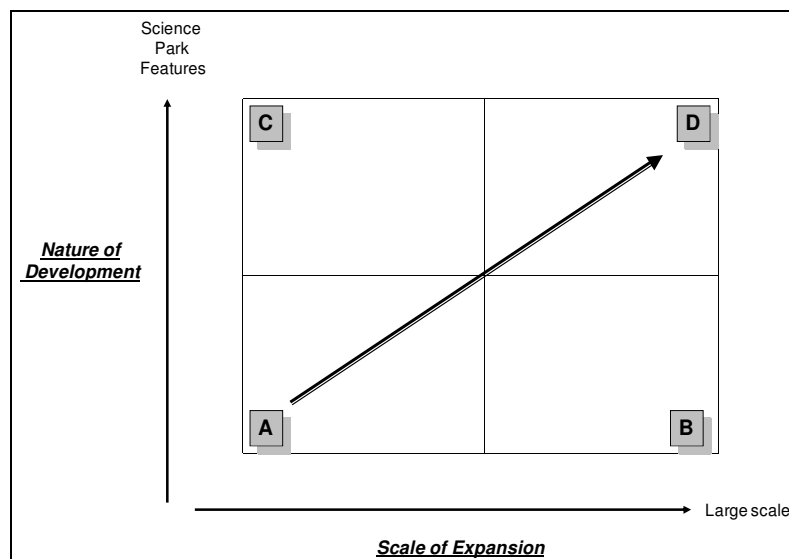
# Scenarios & Impact Assessment

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These scenarios – and variations on them (e.g. the ‘dispersed model’) – were discussed with a number of interested parties during the earlier stages of the assignment.<sup>23</sup>

**Science park vs business park:** cutting across the scenarios are a number of factors that could affect both the nature and scale of Kent Science Park’s expansion. In particular, there is the question of the extent to which KSP’s expansion is driven by knowledge-based projects, i.e. whether it develops as a science park or as a business park. As the previous section has noted, the performance of KSP tenants – and their likely future space requirements – varies according to a number of factors, the most important being sector orientation and size. Whilst it would probably be easier (and quicker) to expand KSP as a business park, this would produce different economic outcomes to those that might be reasonably expected if KSP retains its science park features. The following diagram summarises the possibilities:

**Figure 5.1: Science Park vs. Business Park**



<sup>23</sup> The last of these scenarios is broadly similar to the scale of KSP’s expansion discussed in the 2004 study. This argued that: ‘Assuming an average annual development rate of 7,800 sq m at KSP, over a 20 year period this would result in approximately 156,000 sq m of development at KSP. From the evidence presented above, and the nature of the offer of KSP, GVA believe this to be a realistic aspiration. In terms of additional or expansion floorspace, allowance must be made for the currently unlet space at KSP – some 11,388 sq m. Accordingly, it is estimated that over the 20-year period expansion space amounting to 144,612 sq m would be demanded. As a result KSP would total 191,715 sq m after 20 years’ (pages 81-82, Amion Report).

# Scenarios & Impact Assessment

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In the above diagram, the possibilities can be summarised as follows:

- **A – Status quo:** Scenario 1 in its simplest form, i.e. no physical expansion and no change to the character of KSP as it is at the moment.
- **B – Expansion as a business park:** Scenario 2/3 but with premises made available to firms from a broad range of sectors. Whilst this approach would make it easier to attract tenants, it could jeopardize KSP's science park status.
- **C – Status quo but more focus on science park features:** a variation on Scenario 1, i.e. no significant physical expansion but a strategy concentrating on developing KSP's science park features. This could, for example, come about if space within the perimeter fence (or existing buildings) is used to develop incubation units for science-based spin-offs. Similarly, an effort could be made to 'replace' non-science tenants with science-based firms.
- **D – Expansion as a science park:** Scenario 2/3 i.e. KSP is expanded physically and at the same time the emphasis is put on its development as a science park. This is the most challenging proposition.

### 5.2 Scenario 1 – Status Quo

The status quo scenario assumes that there is no expansion of KSP beyond the existing perimeter fence. A distinction can be made between this basic 'status quo' scenario and two variations of this – 'limited development, i.e. fully utilizing the space available within the existing perimeter fence and possibly just beyond it, and a scenario under which KSP occupancy falls.

<u>(1.1) Status quo</u>	<u>(1.2) Limited Development</u>	<u>(1.3) Reduced Occupancy</u>
<ul style="list-style-type: none"> <li>• KSP's lettable space remains at an estimated 46,000 sq m</li> <li>• KSP does not lose any tenants and these grow at a rate that is at or above forecasts for the UK economy (i.e. 2.5% p.a. or 5% p.a.)</li> <li>• Sector mix and other key variables (e.g. average space per tenant) remains unchanged</li> </ul>	<ul style="list-style-type: none"> <li>• Lettable space is increased by 5,000 sq m</li> <li>• KSP does not lose any tenants and these grow at a rate that is at or above forecasts for the UK economy (i.e. 2.5% p.a. or 5% p.a.)</li> <li>• Sector mix and other key variables (e.g. av. sq m per tenant) remains unchanged</li> </ul>	<ul style="list-style-type: none"> <li>• Lettable space remains at an estimated 46,000 sq m</li> <li>• KSP occupancy rates fall by 20% between 2008/10 (and a further 20% during 2011/15) but remaining tenants grow as under status quo scenario</li> <li>• Sector mix changes with a lower proportion of science based firms. Other variables including average space per tenant remain unchanged</li> </ul>

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### 5.2.1 Status Quo

Under the ‘status quo’ aspect of this scenario, there would no further investment in Kent Science Park, at least for the foreseeable future, other than to maintain its existing facilities. Likewise, there would be no investment in associated infrastructure such as a new access road. This scenario assumes that demand for additional space at KSP will arise purely from the expansion of its existing tenants with none leaving and no new entrants. Two growth rates have been used – 2.5% p.a. and 5% p.a. (within these overall rates, different growth rates are assumed for the different KSP sectors<sup>24</sup>).

At the lower average growth rates of 2.5% p.a., the expansion of existing firms could reasonably be expected to lead to KSP being close to 100% occupied by 2015. This is shown in Table 5.3(a).<sup>25</sup> Under this scenario the total number of people directly employed by KSP companies would increase from a baseline of 983 in December 2007 to 1,209 by 2015 (+32%). Table 5.3(b) summarises the estimates and includes both projections for direct and indirect employment. Because there would be insufficient space to accommodate growth after 2015, an estimated 390 jobs (direct and indirect) would effectively be lost.

**Table 5.3(a): Scenario 1 ‘Status Quo’ – KSP Space & Occupancy Levels (2.5% p.a. Average Growth Rate 2007-25)**

Sectors	2007	2010	2015	2020	2025
Life sciences	6,719	7,342	8,511	9,867	11,438
ICT-related	5,433	5,851	6,619	7,489	8,473
Business services	16,732	18,151	20,788	23,808	27,267
Other sectors	6,193	6,572	7,256	8,011	8,845
<b>Total</b>	<b>35,077</b>	<b>37,915</b>	<b>43,174</b>	<b>49,175</b>	<b>56,023</b>
Space available (sq m)	46,000	46,000	46,000	46,000	46,000
Occupancy%	76.3	82.4	93.9	106.9	121.8

<sup>24</sup> For 2.5% average growth rates, the model varies the projected growth rates for different sectors: +3.5% pa (science-based), +2.5% pa (ICT related), +2.75% pa (business services) and +2.0% pa (other sectors). For the 5% average growth rates sub-scenario: +5.5% pa (science-based), +5.0% pa (ICT related), +5.255% pa (business services) and +4.5% pa (other sectors). Under this version of Scenario 1, the sector profile of the 80 KSP tenants remains constant and as at the baseline (Table 5.1).

<sup>25</sup> In reality, 100% occupancy of KSP or any other facility is unrealistic. However, we have nevertheless based this scenario and others on a target of 100% occupancy to illustrate a theoretical state of full occupancy.

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**Table 5.3(b): Employment Effects (2007-25)**

Direct employment	2007	2010	2015	2020	2025
Science based	188	206	238	276	320
ICT-related	152	164	185	210	237
Business services	469	508	582	667	764
Other sectors	173	184	203	224	248
<b>Total direct</b>	<b>983</b>	<b>1,062</b>	<b>1,209</b>	<b>1,377</b>	<b>1,569</b>
Indirect jobs	84	91	104	119	135
<b>Total direct + indirect</b>	<b>1,067</b>	<b>1,153</b>	<b>1,313</b>	<b>1,496</b>	<b>1,704</b>

At the higher average growth rates for KSP tenants (+5.0 p.a.), the model estimates that full occupancy would be brought forward to some point in 2012. Beyond this date, KSP's tenants would have to look for space elsewhere to expand if the status quo remains unchanged and no new facilities are provided. Under this scenario the total number of people directly employed by KSP companies would increase from a baseline of 983 in December 2007 to 1,262 by 2012 (+28%). Table 5.4(b) summarises the estimates and includes both projections for direct and indirect employment. Because there would be insufficient space to accommodate growth after 2012, an estimated 1,450 jobs (direct and indirect) would effectively be lost.

**Table 5.4(a): Scenario 1 'Status Quo' – KSP Space & Occupancy Levels (5.0% p.a. Average Growth Rate 2007-25)**

Sectors	2007	2010	2015	2020	2025
Life sciences	6,719	7,889	10,311	13,476	17,613
ICT-related	5,433	6,289	8,027	10,245	13,075
Business services	16,732	19,508	25,196	32,542	42,030
Other sectors	6,193	7,067	8,807	10,975	13,676
<b>Total</b>	<b>35,077</b>	<b>40,754</b>	<b>52,341</b>	<b>67,238</b>	<b>86,394</b>
Space available (sq m)	46,000	46,000	46,000	46,000	46,000
Occupancy%	76.3	88.6	113.8	146.2	187.8

**Table 5.4(b): Employment Effects (2007-25)**

Direct employment	2007	2010	2015	2020	2025
Science based	188	243	318	415	543
ICT-related	152	191	244	311	397
Business services	469	591	763	986	1273
Other sectors	173	215	267	333	415
<b>Total direct</b>	<b>983</b>	<b>1,240</b>	<b>1,592</b>	<b>2,045</b>	<b>2,628</b>
Indirect jobs	84	98	126	162	208
<b>Total direct + indirect</b>	<b>1,067</b>	<b>1,338</b>	<b>1,718</b>	<b>2,207</b>	<b>2,833</b>

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Apart from average growth rates, the ‘status quo’ projections are especially sensitive to the sector profile of KSP tenants. In particular, it could take longer for full occupancy of existing facilities to be achieved based primarily on the growth of existing tenants if the science profile is diluted. There are clearly many other possible variations on the status quo scenario. For example, if it is assumed that the sector profile of KSP tenants changes with the proportion of knowledge-based firms reducing in 2007-10 and 2011-15 from a current 65% to 25%, and assuming that growth rates are based on the lower projection of 2.5%, then the current KSP facilities would not be fully occupied until 2021 with a requirement for a total of 53,000 sq m of space by 2025.

## 5.2.2 Limited Development

The ‘limited development’ variation on Scenario 1 would see KSP expand so that the area within the existing perimeter fence is fully utilised, giving a total of 51,000 sq m of lettable space rather than 46,000 sq m as at present.<sup>26</sup>

**If the same key assumptions are made, i.e. current occupancy of 76% and no net turnover in tenants, then the expanded facility is likely to become fully occupied some time between 2015 and 2020.** At 5.0% p.a. average growth rates the expanded facility would be fully occupied by 2015. However, the lower average growth rate of 2.5% p.a. is used, then it would only be in 2020 that KSP would achieve full occupancy based on the expansion of existing tenants. To bring full occupancy of a 51,000 sq m facility forward to say the end of 2011 (a cautious assumption with regard to the timeframe for ‘limited development’), would only be possible according to the model if KSP’s 80 companies achieved growth rates averaging at least 11.5% p.a. each year over the next four years.<sup>27</sup>

<sup>26</sup> In fact, together with the current planning application for the Phase 2 Technology Units, all land capable of being developed within the existing boundary fence is already committed (we understand that both the Technology Units Phase 1 and Phase 2 are, in effect, pre-let). The model seeks to take this into account by adding additional business activity associated with the Technology Units to that of the existing KSP tenants.

<sup>27</sup> Several variations on this scenario are worth examining. In particular, the survey work (Section 4) suggested that many KSP companies have very optimistic growth expectations. If the higher growth rates forecast in the survey by tenants for the next 1-2 years (Figure 4.2) are applied to the model - averaging around 20% pa in the next 1-2 years with a more modest 15% pa after that – then the science park’s 51,000 sq m of space would be fully occupied in mid 2010. However, given the more difficult economic conditions expected in 2008 as a result of the ‘credit crunch’, these forecasts, which were made in a survey carried out before the full extent of the likely downturn was apparent, will almost certainly not be fulfilled.

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## 5.2.3 Reduced Occupancy

**Given the survey feedback suggesting that a quite high proportion of KSP tenants have considered other locations, falling occupancy must be viewed as a real danger if there is a status quo.** It is too early to assess the impact of the recent decision of Pfizer to withdraw some 100 R&D jobs from KSP although this is clearly an unwelcome development. Although this will have negative effects in its own right, a key question how (if at all) other KSP tenant companies will be affected and whether it will influence their views on KSP as a location. As noted in Section 4, it would appear that there is some cross-trading between KSP companies and the exit of a major tenant such as Pfizer could have wider detrimental effects on businesses. Feedback from KSP tenants (see Section 4) does provide a broad indication of their views about KSP and intention or otherwise to remain there. To summarise, the research indicates that around half (54%) of the sample are satisfied with their location at KSP, a further 19% might consider relocation in the next 1-2 years and the remainder (27%) 'don't know'.<sup>28</sup> Clearly an alternative to this scenario would be to assume a faster run-down to zero occupancy over the period 2008/10.

A further question relating to this scenario is: if Kent Science Park were to close down, what alternative use could be made of the site? One possibility is that the site continues to be used for employment purposes with companies of various types renting premises (this would make it, in effect, a business park). However, subject to planning consent, another possibility is that the site is redeveloped and used for residential housing. This would require a re-designation of the site's status since it is currently only intended for employment purposes. Notwithstanding pressure on Swale Borough Council to meet housing targets, the likelihood of such a re-designation being permitted is at best very uncertain. Moreover, steps would probably need to be taken to improve the area's road infrastructure to handle higher traffic volumes.

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<sup>28</sup> For the purposes of this scenario, we have assumed that 20% of KSP's existing tenants leave the science park between 2008/10 with a further 20% doing so in the period 2011/15 with the situation stabilizing thereafter. It is also assumed that there are no new entrants but that those remaining at KSP grow at the rates used for the basic 'status quo' scenario. On this basis, the number of tenants at KSP would have halved by 2010 with the space occupied falling to 20,000 sq m (43.5% of the 46,000 lettable space currently available). Assuming exits were distributed evenly across different sectors and types of firms, the total number of directly employed people would have reduced to 600 by 2010.

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**Table 5.5: Summary - Scenario 1 ('Status Quo')**

<b><u>1.1: Status Quo</u></b>	<b><u>1.2: Limited Development</u></b>	<b><u>1.3: Reduced Occupancy</u></b>
<ul style="list-style-type: none"> <li>Assuming tenants grow at between 2.5% and 5.0%, KSP would be fully occupied between 2012 and 2015.</li> <li>By 2025, the shortfall of 67,000 sq m means that tenants would have had to look elsewhere for premises. Depending on growth rates, the jobs lost would be between 390 and 1,450.</li> </ul>	<ul style="list-style-type: none"> <li>KSP expands so that the area within the existing perimeter fence is fully utilised, i.e. there is a total of 51,000 sq m of lettable space</li> <li>Assuming the current sector profile remains unchanged and tenant growth rates average between 2.5% and 5%, KSP is likely to be fully occupied in 2015 and 2020.</li> </ul>	<ul style="list-style-type: none"> <li>20% of KSP's existing tenants leave the science park between 2008/10 with a further 20% doing so in the period 2011/15 with the situation stabilizing thereafter.</li> <li>On this basis, the number of tenants at KSP would have halved by 2010 with the space occupied falling to 20,000 sq m (43.5% of the 46,000 lettable space currently available).</li> </ul>

### 5.3 Scenario 2 – Incremental Expansion

**Under Scenario 2, Kent Science Park would be expanded incrementally beyond the perimeter fence to eventually provide just over 100,000 sq m of space.** We have assumed that any expansion would take place in stages – an additional 5,000 sq m initially bringing the total lettable space at KSP up to 56,000 sq m by 2010 with subsequent expansion of an additional 15,000 sq m and 30,000 sq m in the 2011/15 and 2016/20 periods respectively.

This would mean that by 2020 KSP would provide a total of just over 100,000 sq m. Although this expansion is less than foreseen under Scenario 3 ('Major Development'), it would nevertheless make KSP one of the larger science parks in the UK. Scenario 2 represents a mid-way position between the status quo and major expansion.

We start by examining the feasibility of incremental expansion being driven by demand from existing tenants and then go on to consider the effect of combining this with various levels of demand for space from inward investors. Sub-scenarios examine the effect on the growth of KSP, and the economic impacts brought about by staged expansion, of varying the sector mix, in particular by reducing the proportion of tenants at KSP that are knowledge-based. It should be stressed that Scenario 2 could be affected by factors that cannot be taken into account in the model and this includes the effect of improving road access to the science park. The basic features of Scenario 2 are summarised in the following table.

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**Table 5.6: Key Assumptions - Scenario 2 ('Incremental Expansion')**

<u>2.1: Short term</u>	<u>2.2 Medium term</u>	<u>2.3: Long term</u>
<ul style="list-style-type: none"> <li>• Demand for additional 5,000 sq m space arises mainly from expansion of existing tenants over the period 2007/10</li> <li>• But in addition, there is demand for space from inward investors</li> <li>• Sector mix and other key variables (e.g. average space per tenant) remains unchanged from 2007</li> </ul>	<ul style="list-style-type: none"> <li>• Continuing demand from growth of existing tenants and new entrants leads to an additional 15,000 sq m of space being developed in the 2011/15 period</li> <li>• Sector mix orientated more towards knowledge based firms with an emphasis on science</li> <li>• As a sub-scenario, demand is driven by non knowledge-based firms</li> </ul>	<ul style="list-style-type: none"> <li>• Continuing demand from growth of existing tenants and inward investors leads to an additional 30,000 sq m of space being developed in the 2016/20 period</li> <li>• Sector mix continues to be more orientated towards knowledge based firms</li> <li>• As a sub-scenario demand is mainly driven by non knowledge-based firms</li> </ul>

### 5.3.1 Incremental Expansion Driven by Existing KSP Tenants

To begin with we examine the feasibility of staged expansion being justified on the basis of the growth of existing KSP tenants. The following tables summarise the model's projections based on 'average' and 'high' growth rates (i.e. +2.5% p.a. and +5% p.a.). To summarise:

- 'Expansion from within' based on the growth of existing tenants at average rates (+2.5% p.a.) would lead to a 54% occupancy rate by 2025 if KSP extends its premises to provide just over 100,000 sq m of space.
- At a higher average growth rate of +5.0% p.a., 'expansion from within' would lead to KSP's 100,000 sq m of space being 83% occupied by 2025;
- To achieve 100% occupancy of a facility providing 101,000 sq m of space by 2025, KSP companies would need to grow at an average rate of around 10% p.a. during the 2007-25 period.

Overall, therefore, incremental development based on the expansion of existing tenants would not be sufficient to justify expansion of KSP to just over

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100,000 sq m within the timeframe examined in this study except at unrealistically high growth rates. It should be noted that it has been assumed that there are 80 tenants in 2007, none leave and there are no new entrants, and that the sector profile of KSP companies remains unchanged from the baseline situation.

**Table 5.7(a): Scenario 2 (2.5% p.a. Growth Rates, 2007-25)**

2.5% p.a. average growth	Years				
	2007	2010	2015	2020	2025
80 KSP tenants					
<u>KSP lettable space sq m</u>	<u>47,000</u>	<u>56,000</u>	<u>71,000</u>	<u>101,000</u>	<u>101,000</u>
Space occupied (sq m)	35,077	37,774	42,738	48,354	54,708
Occupancy rate (%)	74.6	67.4	60.1%	47.8%	54.1
Jobs	983	1,058	1,197	1,354	1,532

**Table 5.7(b): Scenario 2 (5% p.a. Growth Rates, 2007-25)**

5.0% p.a. average growth	Years				
	2007	2010	2015	2020	2025
80 KSP tenants					
<u>KSP lettable space sq m</u>	<u>47,000</u>	<u>56,000</u>	<u>71,000</u>	<u>101,000</u>	<u>101,000</u>
Space occupied (sq m)	35,077	40,606	51,824	66,142	84,416
Occupancy rate (%)	74.6	72.5	72.9	65.4	83.5
Jobs	983	1,137	1,452	1,853	2,365

### 5.3.2 Expansion Driven by Knowledge-Based Firms

A further variation on Scenario 2 is that in addition to the existing 80 companies at KSP now, the science park is successful in attracting new tenants particularly from knowledge-intensive sectors. The following projections assume that KSP is successful in increasing the net number of tenants from the baseline of 80 in 2007 to 95 by 2015 and 125 by 2025. It should be noted that we have used the relatively optimistic 'high' growth rate (+5.0% p.a.) for existing and new tenants. We have also assumed that the net increase in KSP tenants is concentrated exclusively in the three knowledge-based sectors.<sup>29</sup>

<sup>29</sup> The earlier analysis (Section 3) of projects handled by Locate in Kent in sectors that KSP is well-positioned to attract (science based, ICT related, business services) indicated that the agency has handled an average of 50 enquiries p.a. in these sectors. For the purposes of the model, we have assumed that this level of enquiries continues throughout the 2007-25 period and that KSP is successful in securing an average of two of these projects each year. These entrants have been distributed across the sectors in proportion to the level of LiK enquiries. At the same time, we have assumed that the additional two entrants per annum generated by inward investment/relocations represents the net increase in KSP companies with any exits

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To summarise this sub-scenario projections, if a net increase averaging two additional firms per year is achieved through successfully attracting inward investors/relocations, and these new tenants grew at the same rate as existing tenants, KSP would achieve full occupancy of an expanded 100,000 sq m facility by 2020. From 2020 onwards, there would be a shortfall in capacity with a need to either further expand the facilities at KSP's current location and/or to provide facilities elsewhere. Between 2020 and 2025, 'jobs lost' would amount to around 90.

**Table 5.8 (a): Scenario 2 – Incremental Expansion Driven by Existing/New Tenants in Knowledge Based Sectors (5% p.a. growth rates for KSP tenants)**

Assumptions	KSP Space (sq m)				
	2007	2010	2015	2020	2025
5% pa average growth					
<b>KSP space sq m</b>	<b>47,000</b>	<b>56,000</b>	<b>71,000</b>	<b>101,000</b>	<b>101,000</b>
<b>Number of tenants</b>	<b>80</b>	<b>85</b>	<b>95</b>	<b>115</b>	<b>125</b>
Science based	6,719	8,499	12,759	21,283	30,732
ICT-related	5,433	6,872	10,267	17,126	24,730
Business services	16,732	21,166	31,621	51,508	72,581
Other sectors	6,193	7,169	9,149	11,677	14,904
<b>Total space occupied</b>	<b>35,077</b>	<b>43,706</b>	<b>63,797</b>	<b>101,594</b>	<b>142,947</b>
Occupancy rate	74.6%	78.0%	89.8%	100.6%	141.5%

At a lower average annual growth rate of KSP tenant companies (2.5% pa instead of 5.0%), the increase in the number of KSP tenants during the period 2007-25 shown in Table 5.8 (a) would lead to a 91.6% occupancy rate by 2025. Tables 5.8 (b) to 5.9 (d) summarise basic economic effects in terms of employment and turnover:

**Table 5.8 (b): Scenario 2 - Incremental Expansion Driven by Existing/New Tenants in Knowledge Based Sectors (5% p.a. growth) - Employment**

Direct employment	2007	2010	2015	2020	2025
Science based	188	238	370	631	912
ICT-related	152	193	299	487	686
Business services	469	593	835	1,297	1,828
Other sectors	173	201	256	327	417
<b>Total</b>	<b>983</b>	<b>1,224</b>	<b>1,760</b>	<b>2,743</b>	<b>3,843</b>

being offset by inward investment/relocation projects.

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**Table 5.8 (c): Scenario 2 - Incremental Expansion Driven by Existing and New Tenants in Knowledge Based Sectors (5% p.a. growth) – Location of Jobs<sup>30</sup>**

Location of jobs	2007	2010	2015	2020	2025
Within Swale	491	612	880	1371	1922
Elsewhere in Kent	393	490	704	1097	1537
Elsewhere in South East	88	110	158	247	346
Elsewhere in UK/abroad	10	12	18	27	38
<b>Total</b>	983	1,224	1,760	2,743	3,843

**Table 5.8 (d): Scenario 2 - Incremental Expansion Driven by Existing and New Tenants in Knowledge Based Sectors (5% p.a. growth) – Business Turnover**

Turnover per (£m)	2007	2010	2015	2020	2025
Science based	18.820	23.807	36.967	63.138	91.171
ICT-related	15.218	19.251	29.892	48.691	68.611
Business services	46.869	59.288	83.544	129.727	182.800
Other sectors	17.347	20.081	25.629	32.710	41.747
<b>Total p.a.</b>	98.254	122.426	176.032	274.265	384.329

### 5.3.3 Expansion Driven by Non Knowledge-Based Firms

This sub-scenario assumes that growth will be primarily driven by a combination of existing tenants and inward investors/relocations (as with 2.1) but with an emphasis on non-knowledge based sectors (the category ‘other sectors’ shown in Table 5.9).<sup>31</sup> In other words, an alternative to KSP expanding as a science park is a scenario where the site increasingly acquires the characteristics of a business park.<sup>32</sup> Table 5.9 (a) summarises the results of the model’s projections based on these assumptions.

<sup>30</sup> Whereas in the baseline scenario 60% of jobs are generated in the Swale area, for the Scenario 2 (knowledge-based growth) the breakdown applied is: Swale (50%), Elsewhere in Kent (40%), Elsewhere in the South East (9%) and Elsewhere from the UK/abroad (1%).

<sup>31</sup> In the earlier projections, the number of KSP in ‘other sectors’ remains constant throughout the 2007-25 period although the 28 firms concerned that were tenants in 2007 grow at an average of 5% p.a. and therefore increase their demand for space over the period.

<sup>32</sup> For the purposes of the model we have assumed that the proportions of knowledge-based/non-knowledge based firms are reversed, i.e.: science based firms reduce from 32.4% of the total number of KSP tenants in 2007 to 21.5% in 2025; ICT related firms reduce from 15.5% to 10.3%; business services firms from 16.9% to 11.2%; and tenants in other sectors increase from 35.2% in 2007 to 57.0% in 2025.

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The projections suggests that occupancy rates at KSP would increasingly drop behind those based on expansion driven by knowledge-based demand – 79.6% in 2015 (compared with 89.8%) and 107.0% in 2025 (141.5%). That said, there could be a higher intake of inward investment/relocation tenants from ‘other sectors’ than the projections assume. As such, Table 5.9 (a) is relatively conservative in assumptions about demand for space at KSP from non knowledge-based projects and occupancy rates for an expanded facility. Tables 5.9 (b) to 5.9 (d) summarise basic economic effects in terms of employment and turnover:

**Table 5.9 (a): Scenario 2 - Expansion Driven by Existing/New Tenants in Non Knowledge Based Sectors (5% p.a. average growth rates for KSP tenants)**

Assumptions	KSP Space (sq m)				
	2007	2010	2015	2020	2025
5% pa average growth					
<b>KSP space sq m</b>	<b>47,000</b>	<b>56,000</b>	<b>71,000</b>	<b>101,000</b>	<b>101,000</b>
<b>Number of tenants</b>	<b>80</b>	<b>85</b>	<b>95</b>	<b>115</b>	<b>125</b>
Science based	6,719	7,778	9,927	12,669	16,170
ICT-related	5,433	6,289	8,027	10,245	13,075
Business services	16,732	19,370	24,721	31,551	40,268
Other sectors	6,193	8,538	13,908	26,081	38,589
<b>Total space occupied</b>	<b>35,077</b>	<b>41,975</b>	<b>56,583</b>	<b>80,546</b>	<b>108,101</b>
Occupancy rate	74.6%	74.9%	79.6%	79.7%	107.0%

**Table 5.9 (b): Scenario 2 - Incremental Expansion Driven by Existing/New Tenants in Non Knowledge Based Sectors (5% p.a. growth) - Employment**

Direct employment	2007	2010	2015	2020	2025
Science based	188	218	278	355	453
ICT-related	152	176	225	287	366
Business services	469	543	692	884	1,128
Other sectors	173	239	390	731	1,081
<b>Total</b>	<b>983</b>	<b>1,176</b>	<b>1,585</b>	<b>2,256</b>	<b>3,028</b>

**Table 5.9 (c): Scenario 2 - Incremental Expansion Driven by Existing/New Tenants in non Knowledge Based Sectors (5% p.a. growth) – Location of Jobs**

Location of jobs	2007	2010	2015	2020	2025
Within Swale	688	823	1109	1579	2120
Elsewhere in Kent	197	235	317	451	606
Elsewhere in South East	88	106	143	203	273
Elsewhere in UK/abroad	10	12	16	23	30
<b>Total</b>	<b>983</b>	<b>1,176</b>	<b>1,585</b>	<b>2,256</b>	<b>3,028</b>

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**Table 5.9 (d): Scenario 2 - Incremental Expansion Driven by Existing/New Tenants in non Knowledge Based Sectors (5% p.a. growth) – Business Turnover**

Turnover per (£m)	2007	2010	2015	2020	2025
Science based	18.820	21.787	27.806	35.488	45.293
ICT-related	15.218	17.617	22.484	28.696	36.624
Business services	46.869	54.257	69.247	88.379	112.797
Other sectors	17.347	23.917	38.958	73.056	108.091
<b>Total p.a.</b>	<b>98.254</b>	<b>117.577</b>	<b>158.495</b>	<b>225.620</b>	<b>302.805</b>

In conclusion, Scenario 2 suggests that without relatively high growth rates (i.e. at least 8-10% p.a.), demand purely from the 80 existing tenants would not be sufficient to justify expansion of KSP's facilities much beyond a doubling of the current provision, i.e. a total of 84,500 sq m by 2025.

However, if demand from existing tenants is combined with a moderate level of demand for space inward investment/relocations, this should be sufficient to justify staged expansion of KSP from 47,000 sq m in 2007 to 100,000 sq m in 2020. Assuming that existing and new tenants grow at an average of 5% p.a. throughout the period, and the intake of firms is mainly from knowledge-based sectors, occupancy levels would increase and remain at 90%+ by 2015.

### 5.4 Scenario 3 – Major Development

The third scenario is the most ambitious of the three. Whereas Scenario 2 assumes incremental expansion to a total area of just over 100,000 sq m, under Scenario 3 KSP would be developed beyond this to provide 192,000 sq m of space. We have assumed that this development would take place over the next 20 years.<sup>33</sup>

<sup>33</sup> Estimates by KSP itself suggest that expansion of the science park on this scale would lead to 229 new companies being established at the enlarged site with an additional direct 5,000 direct jobs and generating a further £250m in the Swale economy and £117m in the wider Kent economy (source: 'Kent Science Park: The Future – Sittingbourne Urban Extension', 2006). The phasing of KSP's expansion shown in Table 5.12 is broadly based on the approach outlined by KSP itself in 'Kent Science Park: The Future – Sittingbourne Urban Extension', 2006. This does specify the phasing in terms of physical development but does indicate the rate at which new jobs are expected to be created. We have modeled the physical expansion around these projections.

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The key assumptions, and the extent to which they differ from Scenario 2, are:

- The 80 tenants at KSP as at December 2007 will remain at the site with none leaving (as in Scenario 2);
- Unlike Scenario 2, between 2007 and 2025, KSP will attract an additional 45 new entrants from knowledge-based sectors but also, at the same time, a further 45 from non knowledge-based sectors (i.e. combining the two Scenarios 2 sector based variations);
- KSP tenants will grow at an average annual rate of +5% each year throughout the 2007/25 period (as with Scenario 2).

<b>Table 5.11: Key Assumptions - Scenario 3 ('Major Expansion')</b>	
<u>Expansion phases</u>	<u>Sources of demand</u>
<ul style="list-style-type: none"> <li>• Between 2008/10, 21,750 sq m of additional space is developed (15% of the total 145,000 sq m)</li> <li>• Between 2011/15, the main expansion takes place adding a further 58,000 sq m (40% of the total)</li> <li>• Between 2016/20, a further 43,500 sq m is added (30% of the total). In the final period 2021/25, the remaining 21,750 sq m of space is developed (15% of the total)</li> </ul>	<ul style="list-style-type: none"> <li>• Demand is driven in the first instance by the growth of the 80 tenants at KSP as at December 2007</li> <li>• There is additional demand from inward investors/relocations (same rate of demand as Scenario 2). Further demand is generated by start-ups. Growth rates of KSP tenants average 5% p.a.</li> <li>• The sector mix remains knowledge-based with 65% of tenants being science-based, ICT related or business services</li> </ul>

Under Scenario 3, KSP occupancy would be 83.7% by 2025 but lower than this during much of the intervening period when most of the physical expansion occurs.

**Table 5.12 (a): Scenario 3 - Expansion Driven by Existing/New Tenants (5% p.a. average growth rates for KSP tenants) – Space**

Assumptions	KSP Space (sq m)				
	2007	2010	2015	2020	2025
5% pa average growth					
<b>KSP space sq m</b>	<b>47,000</b>	<b>68,750</b>	<b>126,750</b>	<b>170,250</b>	<b>192,000</b>
<b>Number of tenants</b>	<b>80</b>	<b>90</b>	<b>110</b>	<b>150</b>	<b>170</b>
Science based	6,719	8,499	13,197	22,540	32,548
ICT-related	5,433	6,872	10,671	17,383	24,494
Business services	16,732	21,166	29,825	46,312	65,260
Other sectors	6,193	8,538	13,908	26,081	38,589
<b>Total space occupied</b>	<b>35,077</b>	<b>45,076</b>	<b>67,602</b>	<b>112,316</b>	<b>160,891</b>
Occupancy rate	74.6%	65.5%	53.3%	65.9%	83.7%

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In terms of economic impacts, the number of people employed by KSP companies would under this version of Scenario 3 rise from a baseline of 983 in 2007 to just over 4,500 in 2025 (in addition there would be a further 389 jobs created indirectly). These and other economic effects are summarised below:

**Table 5.12 (b): Scenario 3 - Expansion Driven by Existing/New Tenants (5% p.a. average growth rates for KSP tenants) - Employment**

Direct employment	2007	2010	2015	2020	2025
Science based	188	238	370	631	912
ICT-related	152	193	299	487	686
Business services	469	593	835	1,297	1,828
Other sectors	173	239	390	731	1,081
<b>Total</b>	<b>983</b>	<b>1,263</b>	<b>1,894</b>	<b>3,146</b>	<b>4,507</b>

**Table 5.12 (c): Scenario 3 - Expansion Driven by Existing/New Tenants (5% p.a. average growth rates for KSP tenants) – Location of Jobs**

Location of jobs	2007	2010	2015	2020	2025
Within Swale	590	758	1136	1888	2704
Elsewhere in Kent	295	379	568	944	1352
Elsewhere in South East	88	114	170	283	406
Elsewhere in UK/abroad	10	13	19	31	45
Not known	0	0	0	0	0
<b>Total</b>	<b>983</b>	<b>1,263</b>	<b>1,894</b>	<b>3,146</b>	<b>4,507</b>

**Table 5.12 (d): Scenario 3 - Expansion Driven by Existing/New Tenants (5% p.a. average growth rates for KSP tenants) – Business Turnover**

Turnover per (£m)	2007	2010	2015	2020	2025
Science based	18.820	23.807	36.967	63.138	91.171
ICT-related	15.218	19.251	29.892	48.691	68.611
Business services	46.869	59.288	83.544	129.727	182.800
Other sectors	17.347	23.917	38.958	73.056	108.091
<b>Total p.a.</b>	<b>98.254</b>	<b>126.262</b>	<b>189.361</b>	<b>314.612</b>	<b>450.674</b>

The alternative way of looking at Scenario 3 is to ask the question: what would it take to achieve full occupancy of KSP's 192,000 sq m by 2025? Table 5.13 summarises various sub-scenarios and tests the sensitivity of three key variables – the average growth rate of KSP companies, the rate of new entries/exits and sector profile - in relation to achieving 100% occupancy of the expanded KSP facilities.

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The projections in Table 13 (a) suggest that at lower growth rates (employment) of 2.5%, even with a higher net number of new tenants (+100 compared with the baseline of 80) than is assumed in the basic Scenario 3 analysis, KSP would fail to achieve more than two-thirds occupancy of a 192,000 sq m facility by 2025. However, a higher average growth rate of 5% p.a., combined with a net increase of +100 tenants over the 2007/25 period, the position changes and an expanded KSP providing 192,000 sq m would be 98% occupied by 2025. In the last three columns of Table 5.14 (a), an even higher annual growth rate of 7.5% p.a. is assumed. As can be seen, the 192,000 sq m would be over-subscribed irrespective of the assumptions made with regard to increasing tenant numbers. In this situation, there would clearly be scope either to focus admission more on knowledge-based firms and/or to develop a 'dispersed' KSP model.<sup>34</sup>

**Table 5.13: Sensitivity Test – Number of KSP Tenants/Growth Rates**

Assumptions:	Growth Rate 2.5%		Growth Rate 5%			Growth Rate 7.5%		
	+90	+100	+80	+90	+100	+80	+90	+100
New tenants:								
Science based	21,093	24,044	27,129	32,548	37,100	41,436	49,713	56,666
ICT related	15,874	20,392	21,937	24,494	31,466	33,505	37,412	48,061
Business services	42,293	57,073	67,561	65,259	88,067	103,190	99,676	134,511
Other sectors	25,008	21,123	38,463	38,588	32,594	58,748	58,939	49,783
<b>Total</b>	<b>104,268</b>	<b>122,633</b>	<b>155,089</b>	<b>160,890</b>	<b>189,227</b>	<b>236,879</b>	<b>245,740</b>	<b>289,021</b>
Space available	192,000	192,000	192,000	192,000	192,000	192,000	192,000	192,000
<b>Occupancy</b>	<b>54.3%</b>	<b>63.8%</b>	<b>80.7%</b>	<b>83.7%</b>	<b>98.5%</b>	<b>123.3%</b>	<b>127.9%</b>	<b>150.5%</b>

Note: new tenants (Row 2) are additional to the 80 assumed to exist as at December 2007. In all cases, Table 5.14 assumes that the baseline sector profile of tenants remains unchanged.

**Table 5.14: Summary - Scenario 3 ('Major Expansion')**

<ul style="list-style-type: none"> <li>Between 2008/25, in addition to the existing 47,000 sq m of space at KSP, a further 145,000 sq m is developed (total: 192,000 sq m).</li> <li>Scenario 3 assumes that the existing 80 tenants remain at KSP and there are 90 new entrants during the 2008/25 period, drawn equally from knowledge-based and non knowledge-based sectors.</li> </ul>	<ul style="list-style-type: none"> <li>On this basis, and assuming average annual growth of 5%, KSP would be 84% occupied by 2025.</li> <li>Variations on this scenario suggests that if there are more new entrants (+100 rather than +90), and growth of 5% pa is achieved, occupancy of 98% would be achieved by 2025. At an even higher growth rate (7.5% pa), KSP would be over-subscribed by 2025.</li> </ul>
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<sup>34</sup> As with the other scenarios, it should be stressed that Scenario 3 could be affected by factors that cannot be taken into account in the model and this includes the effect of improving road access to the science park.

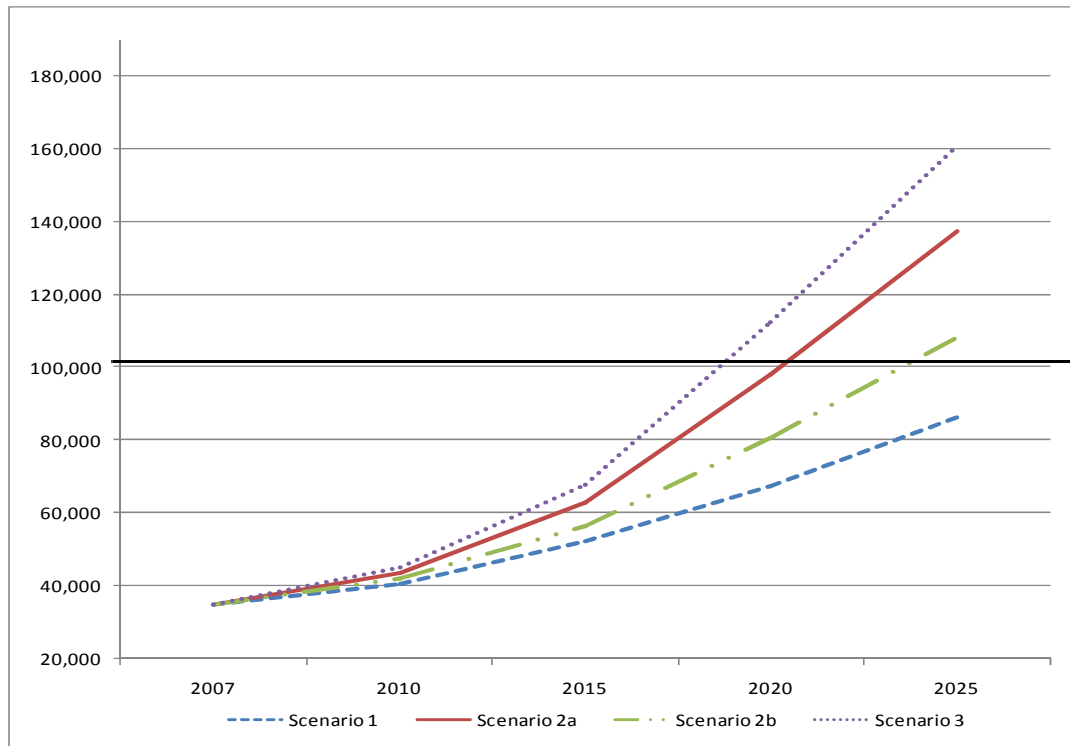
# Scenarios & Impact Assessment

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### 5.6 Conclusions – Scenarios and Impact Assessment

The following chart maps out the three scenarios, illustrating the difference between them in terms of the amount of KSP space occupied at different points in time:

**Figure 5.1: Summary of KSP Scenarios (av. 5% p.a. growth, 2007-25)**



Note: the bold horizontal lines represent assumptions regarding KSP's expansion used in the three scenarios (Scenario 1: 47,000 sq m; Scenario 2: incremental expansion to 101,000 sq m with the effect of a primary focus on knowledge-based firms being examined in one sub-scenario (2a) and a focus on other types of firms in another sub-scenario (2b); and Scenario 3: major expansion to 190,000 sq m).

#### 5.6.1 Demand for Space and Occupancy Levels

Scenario 1 assumed that KSP will not be expanded beyond its current facilities and that expansion driven purely by KSP's existing tenants with growth rates either around the same as forecasts for the UK economy throughout the 2008-25 period (2.5% p.a.) or considerably above this (5% p.a.). The projections suggest that KSP's existing facilities would be fully occupied at some point between 2012 and 2015. In growth rates were maintained, but KSP is not expanded beyond its existing facilities, there would be a shortfall of just over 67,000 sq m of

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space by 2025 with a lost potential to create around between 950 and 1,400 jobs (depending on the growth rate of tenants). If KSP is expanded ('limited development') so that the area within the existing perimeter fence is fully utilised, i.e. there is a total of 51,000 sq m of lettable space, and assuming the current sector profile remains unchanged and tenant growth rates average between 2.5% and 5.0% p.a., KSP is likely to be fully occupied at some point between 2015 and 2020.

**Scenario 2 examined expansion beyond the existing perimeter fence, assuming that this would take place on an incremental basis with KSP being more than doubled in size (from a current 47,000 sq m to 101,000 sq m) in stages over the 2008/25 period.** This scenario represents a mid position between the 'status quo' scenario and the more ambitious Scenario 3. The assumptions used in Scenario 1 regarding the growth of existing tenants are adopted but in addition to this two sub-scenarios are developed. The first examines a situation where the emphasis is on developing KSP as a science park with the proportion of knowledge-based tenants progressively increasing during the 2008/25 period. It is assumed that in addition to its existing 80 tenants, KSP will be successful in attracting two knowledge-based inward investment/relocation projects a year, and that these will perform in line with the growth rates and other characteristics of similar firms already at KSP. In this situation, demand for space would be sufficient to justify staged expansion of KSP from 47,000 sq m in 2007 to 100,000 sq m in 2020. The alternative sub-scenario – expansion driven by new entrants in non knowledge-based sectors – would only lead to demand for 80,000 sq m of space by 2020. These differing effects arise because knowledge-based firms have a higher job creation propensity. However, although demand for space from existing tenants might fall as knowledge intensity is reduced, this could be offset by a higher intake of inward investment/relocation tenants from as KSP promotes itself to a wider range of businesses.

**Scenario 3 differs from Scenario 2 in terms of scale with an assumption being made that 192,000 sq m of space will be developed at KSP rather than 101,000 sq m. The analysis examines a situation in which demand is driven by a combination of the growth of existing tenants (Scenario 1), and between 80 and 100 new entrants that are drawn equally from knowledge-based and non-knowledge-based sectors. On this basis, and assuming average annual growth of 5%, KSP would be 84% occupied by 2025.** Variations on this scenario suggests that if there are more new entrants (+100 rather than +90), and growth of 5% pa is achieved, occupancy of 98% would be achieved by 2025. At an even higher average growth rate (7.5% pa), KSP would be over-subscribed by 2025. Again, the projections depend on the sector mix and the balance between knowledge-based/non knowledge-based activities. If the proportion of KSP tenants and jobs that are non-knowledge based is increased, then demand for space from existing tenants grows more slowly in the model although, as pointed out above, this could be offset by a higher intake of new tenants.

# Scenarios & Impact Assessment

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Overall, it is clear that some expansion of KSP beyond the perimeter fence could be justified between now and 2015 if existing tenants perform well and grow. However, this alone would not be sufficient to justify more ambitious expansion. Any expansion of KSP to provide 100,000 sq m or more space would need to be supported by attracting at least 80 net additional new entrants (i.e. at least three p.a.) combined with relatively high and steady growth rates (at least +5% p.a.) throughout the 2008/25 period. These are relatively optimistic assumptions, especially in light of an expected economic downturn in the 2008-10 period.

### 5.6.2 Economic Impacts

In examining economic impacts, two key measures are generally used – employment and turnover/GVA. A distinction needs to be made between:

- **Direct effects** - job opportunities created by start-ups at KSP and/or relocations to the science park;
- **Indirect effects** - job creation and other effects that result from a combination of income multipliers and supplier-related effects.<sup>35</sup>

At present, KSP tenants are estimated to employ 983 people directly and a further 84 people indirectly. A summary of the employment projections for different scenarios is below:

**Table 5.14: Summary of KSP Employment Effects**

Scenario	Direct	Indirect	Total	Swale
Baseline - 2007	983	84	1,067	600
Scenario 1 - 2025	1,209	104	1,313	787
Scenario 2 - 2025	2,743	237	2,980	1,788
Scenario 3 - 2025	4,500	389	4,889	2,933

<sup>35</sup> Income-related effects arise because the recruitment of additional employees leads to more expenditure on local goods and services, thereby creating jobs indirectly. The precise scale of these indirect effects depends on remuneration levels and how much of this is disposable income and spent locally. Supplier related effects arise because of expenditure by businesses on the procurement of goods and services from local sources. Again, the scale of such effects depends on the amount spent on procurement from local sources. With both income and supplier-related effects, assumptions need to be made concerning the cost per job created indirectly. We have used a combination of the feedback from the survey work (Section 4) and an analysis of local data as a basis for the assumptions built into the model. A further explanation of these and other terms is provided in Appendix B.

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**Scenario 1** - assuming tenants grow at between 2.5% and 5.0%, KSP would be fully occupied between 2012 and 2015. By this time, KSP companies would be employing an estimated 1,313 people (1,209 directly and 104 indirectly). Because this scenario assumes that KSP will not be expanded, tenants would have had to look elsewhere for premises and by 2025 the 'jobs lost' to other locations could be as high as 1,450.

**Scenario 2** - with investment in KSP leading to the development of a total of 101,000 sq m by 2025 under Scenario 2, expansion driven by a combination of the growth of existing tenants and new tenants would lead to an estimated 2,980 jobs being created (2,743 directly and 237 indirectly). As the earlier analysis suggested, science-based firms have a propensity to create more jobs than other types of KSP tenants and if the focus remains on attracting these types of firms (rather than by relaxing admission criteria and opening the facility up to all types of firms), then job creation effects should be achieved on a larger scale more quickly.

**Scenarios 3** - with 190,000 sq m of available space, the number of people employed by KSP companies would rise from a baseline of 983 in 2007 to just over 4,500 in 2025 (in addition there would be a further 389 jobs created indirectly), assuming tenants can be found for the enlarged facility.

### 5.6.3 Impacts on Local Economy

The key factor that will determine how any future expansion of KSP benefits Swale is the capacity of the local labour market to respond to new job opportunities at the science park. As the analysis earlier in the report has shown, around 60% of jobs at KSP are occupied by people who live in Swale. This does not, however, mean that people originally from Swale have taken up the vacancies – it could be that jobs have been taken by people living elsewhere in Kent or further afield who have subsequently moved to the Borough.

Direct job opportunities are likely to be the most difficult to fill. In the science-related sectors at KSP, many of the high level and specialist skills are likely to be only possessed by individuals living elsewhere (perhaps also by young people from Swale who have gone to university elsewhere to study science and want to return to the area). Technician jobs could be filled by local people more easily and initiatives such as the Kent Science Resource Centre at KSP are highly significant from this point of view. Paradoxically, if KSP's future development is more as a business park, this might open up more direct job opportunities to local people. In particular, if KSP is able to secure further inward investment/relocations in the Business Services sector (e.g. call centre, back office and other support functions), then this could lead to a high proportion of new jobs going to local people. As noted earlier in this report, this sector has generally good prospects across the North Kent Thames Gateway as a whole. Across all sectors at KSP, further expansion is also likely to increase demand

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for local services (e.g. office cleaning, catering services, etc) that should benefit the Swale economy.

Turning to indirect impacts, as noted earlier these will come about through a combination of income multipliers and expenditure on local suppliers. Impacts arising from income multipliers should have benefits across the entire local Swale economy with indirect job creation being apparent in most sectors. With supplier-related effects, the extent of local impacts is more uncertain. All companies will, as suggested above, have local suppliers for office and other support services. However, many KSP tenants – particularly those in the science-related field, will have specialised procurement needs that are met by suppliers located elsewhere in the UK and possibly also abroad. The ‘leakage’ of indirect impacts in these cases could be considerable.

To put the scale of projected employment effects into context, unemployment in Swale is currently 2.1% with 1,623 people out of work (February 2008). If unemployment were to remain at around this level throughout the period covered by the projections, the additional direct and indirect employment generated by KSP’s expansion that is likely to benefit Swale (e.g. 1,788 jobs in the case of Scenario 2, i.e. 1,188 in addition to the 600 jobs at present shown in Table 5.14) could have a significant impact on joblessness. This of course presumes that the local labourforce can supply the skills required by KSP tenants. Related to this, one effect of KSP’s expansion could be to help persuade people currently commuting to workplaces outside the Borough to seek local job opportunities instead. More generally, from the perspective of the quality of jobs, KSP’s expansion has the potential to almost double the workforce currently employed by Swale’s knowledge economy.

Quantifying the impacts of KSP’s possible expansion on the Swale and wider Kent and Medway economies is not only highly speculative but also gives only part of the picture. KSP’s expansion should - if the current science park profile is maintained - consolidate the cluster of business activities that has been developing at KSP and put the Borough on the map as a location for dynamic, knowledge-based activities. There are likely to be considerable (unquantifiable) benefits associated with this including the prospect of being able to attract new inward investment to the area across a broad range of sectors as its image improves.

# Overall Conclusions

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## 6.1 Current Situation

**Kent Science Park makes an important contribution in terms of job and wealth creation to the Swale and wider Kent economies.** Although the KSP tenants' 872 employees represent only a small proportion of the Swale Borough's 46,800 workforce, the science park accounts for almost a third of employment in knowledge-based sectors. It is also important to the image of Swale. At a Kent level, the science park represents some 2% of employment in these sectors (defined as Science/R&D, ICT and Business Services). However, it is also very important in raising the profile of Kent and the wider South East region as a location for Bioscience and other knowledge-intensive activities.

**There is a real danger that the current status quo with regard to KSP's development will result in a decline in occupancy rates leading to either closure or to it no longer being recognizable as a science park.** Evidence exists of this already happening with the recent decision of Pfizer to relocate 100 R&D jobs. The exit of one or more anchor tenants is not only serious in its own right but could also have wider ramifications. In common with other science parks, an important feature of KSP is the development of clusters with firms growing more successfully than would be possible elsewhere through interaction with each other. Major companies such as Pfizer have a key role in cluster development but also in fostering an overall science park image. Experience elsewhere suggests that without prestigious and well-known anchor tenants of this type, science parks struggle to survive. More generally, in our survey, whilst just over half (54%) of KSP companies stated that they had no plans to relocate, a significant proportion (19%) indicated that this has been or is being considered (the remainder said they didn't know).

## 6.2 Expansion Scenarios and Benefits

**Overall, our assessment suggests that there is a case for expanding Kent Science Park beyond the perimeter fence but on an incremental basis when demand for space exists or can be reasonably forecast.** The analysis of various scenarios suggests that if KSP's existing tenants continue to perform well, the science park will be fully occupied at some point between 2012 and 2015 (subject to caveats indicated earlier). Thereafter, failure to expand will lead to high quality jobs being effectively lost to Swale and possibly the Kent economies. This does not take into account inward investment which, if it occurred on a significant basis, would clearly speed up the process of achieving a full occupancy of the existing KSP premises.

A number of alternative scenarios are examined in the report including: further expansion within the existing perimeter fence; incremental expansion to provide an overall total of 100,000 sq m of space by 2020; and an ambitious development of KSP

# Overall Conclusions

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with 192,000 sq m of space becoming available by 2025. In each of these scenarios, differing assumptions are made regarding growth rates, the mix of science/non-science sectors, level of inward investment and other key factors, and these are varied to test the sensitivity of the projections.

**The most ambitious expansion scenarios for KSP would need to be supported by a significant level of inward investment and in the short term we do not foresee this being likely if the focus is to remain on attracting science-based firms.** The Life Science sector has good growth prospects nationally and internationally but KSP is competing with other UK science parks that are better placed to attract such investment, at least for the foreseeable future. Although KSP is competitive in terms of cost, and also offers facilities to science-based firms not available elsewhere in Kent, these factors alone would probably not be enough to secure new projects in the sectors being targeted on the scale required to justify a major expansion of KSP in the short term. Improved road access to KSP could make it more attractive to inward investors but this is only one of a range of improvements needed to help develop competitive advantage. An alternative would be to seek inward investment/relocations from other non-science-based sectors but here KSP is competing with existing and new business parks elsewhere in Kent. Moreover, expansion based on opening KSP up to a broader range of sectors could result in it losing key science park features.

**Apart from the growth of KSP's existing tenants and perhaps some inward investment, a further possible source of demand for space is from new start-ups.** Medway Innovation Centre demonstrates the feasibility of a model based on spin-offs from large companies (in this case BAE Systems), as do several science parks further afield. However, there is no comparable corporate entity in the Life Sciences/Biotech field that could perform a similar function as far as KSP is concerned (this is especially so following the departure of Pfizer). As far as the higher education sector is concerned, neither Greenwich University nor the University of Kent at Canterbury have a track-record of generating significant numbers of spin-outs and there is no indication that this is likely to change in the foreseeable future. Moreover, any start-ups from these sources could be catered for by incubation facilities (actual/planned) in the Canterbury and Medway areas. In the longer term, but still within the time period covered by this study, development of the Thames Gateway could change this situation. In particular, if the North Kent area becomes established at a location for knowledge-based activities across a range of sectors, KSP would be well-placed to attract start-ups, especially given its relative cost competitiveness.

**If large-scale expansion of KSP were to take place to provide a total of around 190,000 sq m of space over the period (Scenario 3), this should result in up to**

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**4,800 jobs being created either directly or indirectly.** This scale of job creation would have significant benefits for the Swale and wider Kent economy. As argued in the previous section, if the current science park profile is maintained, KSP's expansion would consolidate the cluster of business activities that has been developing at KSP and put the Borough on the map as a location for knowledge-based activities. There are likely to be considerable (unquantifiable) benefits associated with this including the prospect of being able to attract new inward investment to the area across a broad range of sectors as its image improves.

**To fully exploit KSP's potential for development, there is a need to support any expansion of the science park with a comprehensive strategy in Kent to promote innovation, technology transfer and the growth of knowledge-based activities.** Such a framework is not at present in place although some elements (incubation space, start-up support services) are better developed than others (e.g. risk capital financing). Similarly, although science parks are an important aspect of the supporting infrastructure required for a thriving knowledge economy, they cannot on their own stimulate innovation (e.g. R&D centres and universities need to promote entrepreneurship and the commercialization of projects). This limitation applies especially to commercially-owned science parks such as KSP where public intervention is necessary to support private sector initiatives and to address factors where market failure may apply.

**Constraints on developing KSP might be eased through the development of a 'dispersed' or multi-site science park model, i.e. expansion of KSP is accompanied by the development of science park facilities elsewhere through one or more satellite developments.** This 'dispersed' model could be networked and managed as a single entity with different parts of it being designed for different types of business/technologies. There are several precedents elsewhere in the UK (e.g. Manchester Science Park which is spread across several sites). Clearly this would only be possible if suitable sites are identified elsewhere and if the KSP owners/other investors were interested in developing a multi-site science park model along these lines.

**An important question relating to any expansion of KSP is the question of improved access to the M2 motorway.** Feedback from the survey work and interviews with KSP's existing tenants is not clear-cut on the importance of doing this. Whilst 20% of the sample argued that improved road access is 'critical', 61% said it was only of 'some importance' and the remainder (19%) argued that it was 'irrelevant'. This suggests that if the expansion of KSP is driven, in part at least, by the growth of existing tenants, then the question of improved M2 access will not be critical for the time-being. The views of companies that could be targeted in the future by KSP as inward investors may of course be different on the question of access to

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the M2 but it was not within the scope of the study to examine this question. Feedback from tenants pointed to the need for improved access to the Sittingbourne area and in this respect a strategy of improving public transport links with KSP (perhaps through a bus services from Sittingbourne town centre) could reduce the need for new road infrastructure.<sup>36</sup>

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<sup>36</sup> The need for improved transport is acknowledged in the draft SE Plan Panel Report of August 2007 which states that ‘ In Sittingbourne and Sheppey we recognise that future development, including the expansion of Kent Science Park, could also depend on finding solutions to congested junctions and relieving pressures on Sittingbourne town centre.

# *Review of Other Business Locations*

# A

This appendix provides a description of other business parks and science parks/innovation centres that could either compete or collaborate with KSP. It supports the assessment of demand and supply in Section 3 of the report.

## A1. South East and London

In the wider South East region and the London area there are also a number of developments that are relevant to KSP.

**Brunel Science Park (London)** opened in 1982 and is funded solely by Brunel University. The focus in obtaining tenants is on foreseeable future collaboration with the university. It covers four acres on the edge of the university campus. Phase I consists of high quality laboratory space with negotiable area and lease periods and rates; Phase II consists of 1,200 square meters with open space/ incubator units.

**South Bank Technopark (London):** is owned by London South Bank university and is managed by Granby Martin (managing agents). Conceived in 1981 and backed by Prudential in 1982 it currently is a three storey high-tech innovation centre in Southwark adjacent to the London South Bank university campus. The building (completed in 1987) provides 6,714 square metres (72,200 sq ft) in units of 19 sq m (200 sq ft) upwards. The London Knowledge Innovation Centre was launched in 2006, to provide 20,000 sq ft for business incubation services for knowledge-based industries.

**Culham Science Centre:** just south of Oxford is a purpose built laboratory for the Euratom/ UK Atomic Energy Authority set up in 1962 and some 2,000 people work on the site. While a leading establishment in fusion research, there is also on site the Culham Innovation Centre (11,000 square feet), managed by Oxford Innovation Limited, aimed at attracting high tech start up companies to the site.

**Harwell Science and Innovation Campus:** based on its credentials in nuclear research and close links with industry (through spin-outs and privatisation) the conclusion of civil nuclear research programmes in the early 1990s led to a significant public sector research focus on the campus at present. Much of this is into multidisciplinary technology programmes (materials, bioscience, aerospace, particle physics, engineering, instrumentation). The campus covers some 740 acres, and the 100 organisations (80 private sector firms) established are all technology based. About 4,500 staff work there. The campus also hosts the Harwell Innovation Centre (run by Oxford Innovation) and the Medical Research Council. There are strong knowledge transfer and training programmes.

# *Review of Other Business Locations*

# A

**Oxford Science Park:** is being developed as a joint venture between Prudential and Magdalen College. 4.5 miles from the city centre, the park has a potential development area of some 75 acres. The development is being expanded gradually and new plots are being developed and occupied. The site provides facilities for companies in start-up or early growth phase. There is also business support available and strong links with the academic departments of the university exist. Strong biotech and ICT presence.

**Begbroke Science Park (Oxford University)** is closely integrated with Oxford University's science and technology departments, acting as a technology transfer conduit with entrepreneurs through proactive industry facing activities. The site is 5 miles from Oxford and was acquired in 1998. It covers 6,500 square meters with office, research, laboratory and high-tech business space. There is a Centre for Innovation and Enterprise that offers a supportive professional environment for such firms to grow in. First and ground floor wet and dry lab and office space with one month notice periods are available. Also present are: the Institute of Advanced Technology, Oxford Materials Characterisation Services, and the Knowledge Transfer Partnership Office.

**Reading (University of) Science & Technology Centre & Enterprise Hub** is located on the university's Whiteknights campus, and comprises 3,100 square metres of lettable space (office and laboratory). The Science and Technology Centre provides high-quality labs and the adjacent Enterprise Hub office accommodation from 10 to 50 square feet. There is ready access to university facilities, collaboration and specialist technical services.

**Southampton (University of) Science Park** - is an example of a well-established, technology-oriented park seeking to attract firms from across the region as well as from London/ Kent. Positioning itself as "1 hour from London", Southampton Science Park is a 45-acre development in Hampshire. The Science Park provides high quality office and lab space. It also offers incubation space through the Chilworth Business Incubator (2 incubator buildings) and space for commercial property. With regard to service provision, services are tailored to the needs of start-up or early stage businesses. Small companies can benefit from flexible leasing arrangements (including "easy-in/easy-out" facilities) and access to shared facilities (for example meeting rooms and photocopiers). With regard to location, the park is situated one mile from the M3 motorway and 1 hour from London. It is home to science and technology based companies of all sizes, from fast growing start-ups to international household names. As well as incubator units, the park offers grow-on space in units of 540 to 12,000 ft<sup>2</sup>. The park has been through three major expansion phases.

# *Review of Other Business Locations*

## A

A high percentage of tenants are technology-oriented though the targeting strategy is not prescriptive with regard to the sectoral orientation of these. The Park offers also offers start-ups and SMEs the possibility of virtual tenancy. It allows companies to enjoy many of the benefits of residency at Southampton Science Park without the commitment of taking on a lease. For a small fee, companies can use the science park address, have a dedicated phone line answered in their name and have access to a range of other services.

**South Central Technopole (Milton Keynes)** is a new development to act as a focal point for generating technology/knowledge-based business initiatives in the area. The partners in the development signed the SCT MoU in December 2006. With access to Open University and Cranfield University facilities, the site size still needs to be finalised but would be in the region of 40 acres.

**Surrey Research Park:** is owned by University of Surrey's Foundation Fund. Some 120 high-tech companies operate from over 58,000 square meters of office and laboratory space. There is a restriction on use to research, development and design in science (including social sciences) engineering and technology development and design. Space is offered in units from 25 to 10,000 square meters. Close links between the university and tenants are fostered. There is a pre-incubator unit, and centres such as the BOC Priestley Centre and the Surrey Technology Centre.

### A2. Other Science and Technology Parks

Unlike some of the other competitor parks located in the Kent region and more widely, KSP is privately funded and operates on using a corporate science park model in which the management and operating framework are both private sector led. We have examined two science parks in this category, both owned and operated by LaSalle Investment Management - Langstone Technology Park, Havant and the Wilton Centre, Teeside.

**Langstone Technology Park** is located in Havant, Hampshire, and is situated close to the major A3(M) and A27 trunk routes with Portsmouth and Chichester accessible within a 10 minute drive. It provides circa 700,000 sq feet of space and offers combined facilities management and property solutions. A variety of types of space are provided including office, laboratories, IT facilities and facilities for manufacturing companies. The Technology Park offers an interesting comparator in that, like KSP, the science park is a corporate science park. The site was a former IBM facility and is comprised of a freehold multi-let office and R&D park which offers 640,695 sq ft of space in 40 acres of land. A further 125,000 sq ft of space has additional development potential. The park currently houses 17 tenants, many of which are well known multi-

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nationals such as AT&T, Lockheed Martin and Xyratex. With regard to sectoral orientation, Langstone Technology Park is mainly occupied by technology and telecommunications companies. The Langstone Technology Park has had a major impact on regional development and on regeneration in particular by bringing knowledge-based industries into an area suffering from the decline of traditional industries through the 1990s. Although the park is corporate rather than public sector-led, with no formal public-private partnership structure, there are nevertheless strong links between the property managers running the park and universities, SEEDA and local authorities.

**Wilton Centre, Teeside** – although “outside region”, the Wilton Centre is a corporate science park. It provides 520,000 sq ft of offices, laboratories, research and development, pilot plant, conference and restaurant facilities, across a site of 75 acres. The site is located nine miles east of Middlesbrough town centre. The Wilton Centre was the former North-East headquarters for ICI. Again, as was the case for Langstone, the site has been developed on the former premises of a large company, in this case, ICI. The park, is home to around 30 companies, including a number of well-known multinationals, including ICI and Du Pont. It makes accommodation available on flexible terms and is able to offer immediate occupancy. As well as having a professional facilities management team in place, it also offers a comprehensive service package to tenants. Additionally, a number of professional support services providers are located at the site including those offering the following types of services: research, development and technology, knowledge management, occupational health and hygiene, reprographics, recruitment and typical business support services (consultancy, accounting and marketing etc.).

### *Science parks focusing on life sciences/biotech*

There are a large number of UK science parks with tenants in the life sciences, biotech (and ICT) sectors. However, many specialist facilities in these sectors are relatively small-scale and consist mainly of an incubation facility. In the life sciences sector, examples of smaller operators include the Centre of Excellence for Life Sciences and the Mersey Bio Business Incubator. For the purposes of the comparator analysis, we have sought to identify some of the larger-scale, well-established science parks operating in key KSP target sectors. Additionally, in the assessment, we have included relatively early-stage science parks where these are of considerable scale.

The following science parks have been examined: Cambridge Science Park (biotech, life sciences); York Science Park (biotech, ICT); BioCity Nottingham (biotech, healthcare); Edinburgh Science Park (biotech, R&D and technology-based

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businesses); and Micro Technium at the Institute of Life Sciences, University of Wales, Swansea.

**Cambridge Science Park** - was established by Trinity College in 1970, and is the UK's oldest science park. In common with typical development trajectory of a science park CSP has undergone several expansion phases and today houses more than 90 hi-tech companies ranging from small start-ups and spin-outs to subsidiaries of multinational corporations. These enterprises collectively employ about 5,000 people. Recent expansions at the site include the development of 22.5 acres of brownfield development land adjacent to the Park including five bespoke buildings of between 29,000 sq ft of 36,000 sq ft. In common with many other science parks having reached a mature phase in their development, as the success of the park has grown, support facilities have been developed such as a conference centre, restaurant and bar, fitness centre and child care facilities.

With regard to the sectoral focus, companies across a wide variety of R&D and technology-oriented sectors have based themselves at the park. Particular strengths include the life sciences sector. Since 2002 the creation of new clusters has begun on the Cambridge Science Park, specifically in the areas of photonics, nanotechnology and materials science. A key trend noted by managers at the park is the internationalisation of R&D activities with 67% of tenants at Cambridge Science Park having facilities outside the UK, a figure which is projected to rise.

**York Science Park** – is located on a 21 acre business park site and focuses on the biotech and ICT sectors, as well as on knowledge-intensive enterprises more widely. YSP seeks to facilitate technology transfer and to promote business development in start-ups and early-stage development enterprises by providing firms with purpose-built incubation and research facilities.

The park supports the development of all types of businesses from start ups to growth stage companies and large corporations. The park consists of three purpose-built incubation facilities - the Innovation, Bio and IT Centres – which combined offer around 100 000 sq ft of specialist facilities at a single site. Currently, more than 1200 people are employed at the park and approximately 85 companies are located there including biotech and ICT companies – as well as pharmaceuticals, life sciences, computer science, electronics and healthcare firms.

The park has direct links with the University of York, which in areas such as biotechnology, claims to have world-class science. Tenants are able to access the research facilities of the University of York and also have access through networking

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to other local bioscience companies and life scientists. The Bio Centre opened in 2003 and offers laboratory suites and adjoining offices on flexible terms as well as specialist business support services.

**BioCity Nottingham** – the park focuses on the bioscience and healthcare sectors. Amongst the key features of the park are approximately 12,000 square metres of ‘world-class laboratories’ and office space. As with many other parks, it offers flexible tenancy agreements designed to meet the needs of small start-ups as well as more established businesses. With regard to service provision to tenants, BioCity provides the full range of business support services to tenants. Like some other parks, in addition to providing support to tenants located at the site, it also offers a Virtual Tenancy for start-ups which gives companies many of the benefits of residency at BioCity Nottingham without the commitment of taking on a lease (use of a BioCity address, call handling, access to meeting rooms and facilities, etc.).

**Edinburgh Technopole** – is another science park renowned for its strengths in the biotech sector. The site which is spread across 126 acres and is located on a site to the south of the city on the Bush Estate on the outskirts of Edinburgh city. With regard to physical space available, it offers 500,000 sq ft (46,450 sq m) of high quality buildings to tenants on a flexible basis and seeks to attract research and technology based companies, with an emphasis on biotech. The park contains Scotland's first bio-manufacturing facility.

A key feature of the park is the presence of world-class research and development institutes, some of which have been present since 1946. Examples of these located alongside the Technopole include leading international research organisations such as the Roslin (Dolly the Sheep) and Moredun Institutes, The Scottish Agricultural College, the Scottish Veterinary Field Station and the Natural Environment Research Council. The cluster consists of more than 30 companies and employs over 1500 knowledge workers. The park offers research facilities on-site as well as access to the University of Edinburgh’s state-of-the-art equipment and research facilities, incubation space, build-to-suit space for larger firms, and the full range of business support and networking services.

Another characteristic is the wide range of types of space that can be provided to firms ranging from small office space and laboratory suites on flexible leases to highly customised office and laboratory suites within multi tenanted buildings, capable of accommodating maturing companies. Self-contained, bespoke buildings from 25,000 sq.ft. (2,323 sq.m.) upwards are also provided for larger companies.

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**Micro Technium at the Institute of Life Sciences, University of Wales, Swansea**  
- there are currently nine Technium centres across the south west Wales region. Techniums are incubation-type facilities which provide space to start-ups and early growth stage firms and to the full range of business and innovation support services.

Within the Technium network, the Micro Technium located at the new £50 million Institute of Life Science which is part of Swansea University focuses on supporting life sciences companies. The new Technium was driven by a public-private partnership which involved IBM, the Welsh Assembly Government and Swansea University. It also attracted significant European Objective 1 money. It has a strong regional economic development and inward investment attraction remit and intends adding value by promoting the growth and development of spinout companies and by harnessing technology transfer.

The building which will open in 2007 will seek to harness the results of innovative research being undertaken at Swansea University's School of Medicine. It has been estimated that the ILS could produce as many as 30 new spinout companies. It could also increase spending on research & development and science training by around £70 million during its first five years of operation.

# Key Model Parameters

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### A1: Key Parameters

The model developed to help assess the economic effects of the three scenarios is Excel-based and incorporates various assumptions that are varied according to the scenario:

**Number of tenants and sector spread:** for the base case the current total of 80 tenant companies has been used. This has been adjusted over time to take into account failure rates and exits, on the one hand, and new entrants on the other. The spread across sectors is based on the profile contained in the current (December 2007) tenant directory with four categories being used to classify firms (science-based, ICT related, business services, other sectors). The weighting of these categories has also been adjusted depending on the scenario.

**Origin of KSP companies and employees:** the model draws on the survey results to obtain parameters. These distinguish between companies originating in the Swale area, Kent, South East, and UK/abroad. The results of the 2004 LiK survey are used to determine the likely distribution of existing and new employees across these categories.

**Space occupied at KSP:** using the survey results and 2004 Amion report, an estimate has been made regarding the average space occupied by KSP tenants (based on the sq m per employee, assumed in the model to be 35 sq m).

**Growth rates:** growth rates for KSP companies have been estimated by drawing on the survey data and . Separate growth rates have been applied to firms in the science, non-science and 'other sectors'.

**Direct effects:** these are estimated by calculating the average number of jobs per KSP company with compound growth rates over four periods (2008-10, 2010-15, 2015-20 and 2020-25). A similar approach has been applied to turnover. The model indicates the distribution of new jobs and turnover using the same geographical categories as for existing employees (see above).

**Future space requirements:** these are arrived at using the ratio of employees/space as established through the survey and by applying growth rates to exiting and new tenants.

**Indirect effects:** the model estimates income-related effects by using 2004 LiK data on KSP employee remuneration (adjusted for inflation), together with assumptions regarding the cost per job based on other research and the level of disposable income. Supplier related effects are based on survey data for expenditure on suppliers and on the distribution of spending across different geographical categories.

### A2: Other Parameters

Assumptions have to be made regarding a number of factors that could affect KSP's development:



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**Supply side - nature of the KSP 'offer':** the configuration of new premises at an expanded KSP site and whether, for example, these include incubation units designed for start-ups and smaller businesses, could affect the pace of any future expansion. If the emphasis is on start-ups and smaller firms, the build up to full occupancy might take a relatively long period of time and, likewise, the job and wealth creation impacts could be modest, at least in the short-medium term. If, on the other hand, the expanded facilities were to be primarily designed for larger companies then high levels of occupancy and short-term employment gains could probably be achieved more quickly, assuming of course that inward investment (or possibly the expansion of existing larger companies at KSP) can be secured.

**Demand side - level of demand for space at KSP:** the level of future demand for space at KSP is of course difficult to assess but various options exist – projecting past KSP occupancy trends forward; assuming that demand will be in line with trends for other science parks; using feedback from the survey of KSP tenants on their growth prospects; using feedback from other informed sources on the demand for premises at KSP and in Kent generally; and a combination of these approaches. Taking this last consideration, views on the actual/potential demand from inward investors for KSP space and the capacity of local universities and R&D centres (including corporate sources of spin-outs) to generate start-ups are clearly relevant.

**Other business and science parks – competition/synergies:** demand for space at KSP will be affected if it is competing for tenants with other facilities in Kent and the wider region (see Section 3). The key questions are, firstly, the extent to which other facilities are targeting the same types of business/technology and, secondly, how their 'offer' compares with KSP's. In addition to existing facilities, the prospect of new developments coming on stream elsewhere in Kent and the UK also needs of course to be considered. Apart from the (potential) competition, the scope for synergies also exists, for example through a cross-referral of enquiries from prospective tenants, or through the use of (incubator) facilities located elsewhere to supply KSP with tenants. If synergies with other science/business parks exist or could be developed, this could boost demand for space at KSP.

**UK business environment** – growth rates for KSP tenant companies – and the prospects of attracting new entrants – will be affected by the performance of the UK and global economies. Medium-term forecasts for the UK economy are published by HM Treasury and a number of independent organisations. The following chart summarises the consensus view regarding average annual GDP growth for the period 2007-11.<sup>37</sup>

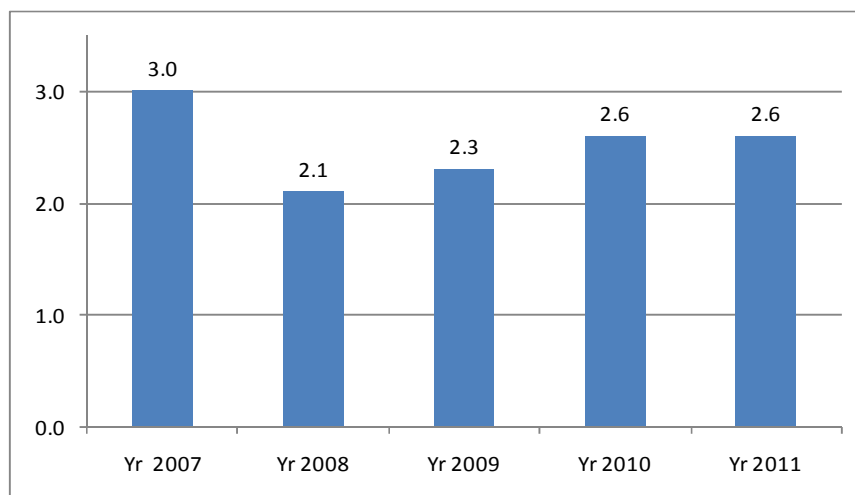
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<sup>37</sup> 'Forecasts for the UK Economy – A Comparison of Independent Forecasts', HM Treasury, November 2007.

# Key Model Parameters

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**Figure A1: Forecasts for UK Economy 2007-11**



Source: HM Treasury (November 2007)

Taking the period 2007-11 as a whole, the forecasts for annual UK GDP growth average out at 2.5%. Beyond 2011, there are very few forecasts. However, for the purposes of the scenarios, we have assumed that growth will lie in the range 1.5% to 3.5%. Compared with the forecasts for the UK economy as a whole, some sectors will grow more quickly and others more slowly. Added to this is the benefit of a science park location. Taking these factors together, the following table summarises the assumptions with the second column ('Diff.') indicating the extent to which different sectors grow at a faster rate than the 'high' and 'low' forecasts for economy as a whole.

**Table A1: Assumptions for KSP Sector Growth 2007-25**

Sectors	Diff.	2007-10		2011-15		2016-20		2021-25	
		High	Low	High	Low	High	Low	High	Low
Science based	+1.00	4.0	3.0	4.5	2.5	4.5	2.5	4.5	2.5
ITC related	+0.50	3.5	2.5	4.0	2.0	4.0	2.0	4.0	2.0
Business services	+0.75	3.8	2.8	4.3	2.3	4.3	2.3	4.3	2.3
Other sectors	+0.25	3.3	2.3	3.8	1.8	3.8	1.8	3.8	1.8
Average	+1.25	3.6	2.6	4.1	2.1	4.1	2.1	4.1	2.1
UK GDP	-	3.0	2.0	3.5	1.5	3.5	1.5	3.5	1.5

**Road access and other infrastructure** - if access to KSP by road is improved this could make it easier to attract additional tenants. For the impact assessment, it is immaterial how improved road access is achieved. Other 'infrastructure' factors that could affect KSP's expansion prospects include the availability of housing, labour etc. The various scenarios simply assume that the necessary factors are in place to make KSP's expansion on the given scale possible.

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**Investment** - KSP's expansion will obviously depend on sufficient funding being secured and any expansion will have to demonstrate a profitable return on investment if it is to continue as a private sector-led.

**Local policies and other factors** - the planning and overall policy framework at a Swale and Kent level will affect the prospects of KSP being successfully expanded and possibly the timescales. Taking the overall policy framework, KSP's expansion prospects could arguably be enhanced through a more coordinated/strategic approach at a Kent level to promoting innovation and the knowledge economy. For example, a scheme to promote the availability of risk capital (proof of concept funding, seed capital for early stage firms, etc) - which would almost certainly only be feasible through a county-level initiative - could make it easier for KSP to attract clients and to help them develop. This, in turn, could not only affect demand for space from start-ups but also their growth prospects (and hence local economic impacts).