

Chapter 5

**COMMUNITY,  
SOCIAL AND  
ECONOMIC  
EFFECTS**

## 5 Community, social and economic effects

### Introduction

- 5.1 Collison & Associates Ltd was commissioned to evaluate the potential economic effects of the proposed development, both during and post-construction. This chapter summarises the findings of the economic assessment and the full report is included as technical appendix C. The potential community and social effects of the proposed development have been assessed by Terence O'Rourke Ltd. The assessment also refers to the health impact assessment (HIA) undertaken by Public Health by Design and submitted in support of the planning application. The data sources and references used in the assessment are shown in table 5.1.

Brookdale Consulting, 2013, Impact of the John Innes Centre
Cambridge Econometrics, East of England Forecasting Model
Defra, 2016, Agriculture in the UK 2015
Defra, 2013, Agricultural Census
Defra, 2013, Local authority breakdown for key crops areas and livestock numbers on agricultural holdings
Department for Business, Innovation and Skills, 2012, BIS Economic Paper No.18: Industrial Strategy – UK Sector Analysis
Department for Business, Innovation and Skills, 2009, BIS Occasional Paper No.1: Research to Improve the Assessment of Additionality
Department for Communities and Local Government, 2012, National Planning Policy Framework
Government Office for Science, 2017, Technology Industry Futures
Greater Cambridge, Greater Peterborough Local Enterprise Partnership, Strategic Economic Plan
Her Majesty's Government, 2013, UK Strategy for Agricultural Technologies
Homes and Communities Agency, 2015, Employment Density Guide 3 <sup>rd</sup> edition
Homes and Communities Agency, 2014, Additionality Guide 4 <sup>th</sup> edition
London Stansted Cambridge Corridor Sector Profiles – AGRIFOOD: Review of key sectors in the London Stansted Cambridge Corridor
Office for National Statistics, Annual Population Survey
Office for National Statistics, Annual Survey of Hours and Earnings
Office for National Statistics, 2017, Gross Value Added (Average) at basic prices
Office for National Statistics, 2015, Business Register and Employment Survey
Office for National Statistics, Claimant count and 2015 mid-year population estimates
Office for National Statistics, UK Business Counts
South Cambridgeshire District Council, 2014, Services and Facilities Study
South Cambridgeshire District Council, 2013, Recreation and Open Space Study
South Cambridgeshire District Council, 2013, Proposed Submission Local Plan
South Cambridgeshire District Council, 2007, Development Control Policies Development Plan Document
The Landscape Partnership, 2012, Uttlesford Open Space, Sport Facility and Playing Pitch Strategy
UKTI, 2013, AgriTechnology Sector: Market Trends and Opportunities Report
Uttlesford District Council, 2012, Town and Village Profiles: Great Chesterford
<b>Table 5.1: References and data sources</b>

### Legislation and policy

#### *National policy*

- 5.2 The National Planning Policy Framework (NPPF; 2012) sets out the government's planning policies for England and how they are expected to be applied. Paragraph 20 states that *"To help achieve economic growth, local planning authorities should plan proactively to meet the development needs of*

*business and support an economy fit for the 21<sup>st</sup> century*”, while paragraph 21 advises that local planning authorities should:

- Set out a clear economic vision and strategy for their area that positively and proactively encourages sustainable economic growth
- Set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period
- Support existing business sectors, taking account of whether they are expanding or contracting and, where possible, identify and plan for new or emerging sectors likely to locate in their area
- Plan positively for the location, promotion and expansion of clusters or networks of knowledge driven, creative or high technology industries
- Identify priority areas for economic regeneration, infrastructure provision and environmental enhancement

5.3 The government developed the UK Strategy for Agricultural Technologies in 2013, which recognised AgriTech as a key growth sector alongside 10 other sectors in its Industrial Strategy. AgriTech’s central role in the UK’s future knowledge-led growth has recently been confirmed in the Technology Industry Futures report published alongside the Industrial Strategy Green Paper in January 2017.

#### ***Local policy***

5.4 The Greater Cambridge, Greater Peterborough Local Enterprise Partnership (LEP) has identified the AgriTech sector as a priority in its Strategic Economic Plan. The LEP is currently leading a Wave 2 Science and Innovation Audit for the East of England, which has identified the AgriTech sector as one of four regional priority sectors for knowledge growth. The London, Stansted, Cambridge Corridor (LSCC) has also identified AgriTech as a priority sector.

5.5 Objective ST/h of South Cambridgeshire District Council’s adopted Core Strategy Development Plan Document (2007) is *“to support the Cambridge Area’s position as a world leader in research and technology based industries, higher education and research, particularly through the development and expansion of clusters.”* Policy ET/2 of the adopted Development Control Policies Development Plan Document (2007) promotes the development of clusters, including in research and development.

5.6 Emerging policy is provided by the council’s Proposed Submission Local Plan (2013). Policy S/2 sets out the plan’s objectives, which include *“to support economic growth by supporting South Cambridgeshire’s position as a world leader in research and technology based industries, research, and education; and supporting the rural economy.”* Policy E/9 Promotion of Clusters promotes the development of clusters, including in research and development.

5.7 South Cambridgeshire District Council’s adopted Development Control Policies Development Plan Document (2007) contains the following policy to minimise the potential for new development to lead to adverse effects on community facilities:

- Policy DP/3, development criterion 2s: planning permission will not be granted where the proposed development would have an unacceptable adverse impact on recreation or other community facilities
- 5.8 Policy HQ/1 Design Principles of the Proposed Submission Local Plan (2013) includes requirements for new developments to “provide a harmonious integrated mix of uses both within the site and with its surroundings that contributes to the creation of inclusive communities providing the facilities and services to meet the needs of the community” and “protect the health and amenity of occupiers and surrounding uses”.
- 5.9 Policy E/10 Shared Social Spaces in Employment Areas states that small scale leisure, eating and social hub facilities will be permitted in business parks and employment areas where the use is ancillary and supports the functionality of the employment area, will not have unacceptably adverse effects on existing businesses and is intended primarily to meet the needs of workers in the business park.

## **Methodology**

### ***Baseline***

#### *Economic effects*

- 5.10 A desk-based study was undertaken to establish the existing economic baseline across four geographical levels: South Cambridgeshire district, Hinxton sub-regional impact area, regional and national. The Hinxton sub-regional impact area was identified based on the districts that supply the majority of South Cambridgeshire’s workforce and includes Cambridge, Huntingdonshire, East Cambridgeshire, St Edmundsbury, North Hertfordshire, Forest Heath and Uttlesford. Full details of how the impact area was defined are provided in technical appendix C.
- 5.11 The references and data sources used in the study are shown in table 5.1. Areas where limited data were available are highlighted in the relevant sections below. The collation of baseline data was structured around a number of indicators considered to be most relevant to the proposed development, including gross value added (GVA), jobs and businesses, labour market, earnings, where people work and qualifications.

#### *Community and social effects*

- 5.12 A desk-based study was carried out to examine the existing community and social environment in Hinxton, surrounding parishes and the nearest rural centre (Sawston). The references and data sources are shown in table 5.1. Areas where limited data were available are highlighted in the relevant sections below.
- 5.13 Community and social receptors identified during the scoping process as requiring consideration include community facilities and services, health and amenity. The sensitivity of receptors is determined by their capacity to adjust to change and is assessed with reference to the guidance in figure 5.1.

## ***Impact assessment***

### *Economic effects*

- 5.14 The quantitative economic effects of the proposed development were determined in accordance with government guidance using the following four-step process:
- Determine the gross impacts of the proposed development
  - Take into account aspects of additionality, including displacement (an estimate of the economic activity on the site that will be diverted from other businesses in the local area and region), leakage (the proportion of jobs that benefit individuals outside the area studied), substitution (replacing one economic activity with another) and multiplier effects (impacts from spending by the businesses or those they employ)
  - Develop a reference case – in this instance, this is based on keeping the land in agricultural production with no further development, so it assesses the effect that the loss of agricultural land on the site will have on the local and regional agrifood economy
  - Subtract the reference case impacts from the assessment of the proposed development to take account of deadweight (benefits that would have happened anyway in the absence of the scheme). The difference between the two cases is the net additional impact of the proposed development
- 5.15 The loss of local agricultural production at Hinxton (the reference case) is likely to be offset by the increase in agricultural productivity elsewhere as a result of the work conducted at Hinxton to commercialise new agricultural technologies. As this off site effect is likely to occur elsewhere in the region, UK and globally, is uncertain and is long term in nature, it has been examined qualitatively.
- 5.16 Full details of the assumptions used in the assessment are provided in technical appendix C.

### *Community and social effects*

- 5.17 Prior to assessing the significance of the effects of the proposed development on the community and social environment, it is important to identify what constitutes a potential effect. In the context of this assessment, potential effects will be related to the increase in the working population on the site, the associated increase in demand for local services and facilities, and provision of facilities as part of the proposed development.
- 5.18 The HIA submitted in support of the application assesses the potential for effects on health as a result of the proposed development. It does not use the same assessment method as the EIA, so only a general summary of the report's findings is given in this chapter.

## ***Assessment of significance***

- 5.19 The significance of community, social and economic effects has been determined using criteria developed from best practice techniques and expert knowledge. Significance has been derived from measures of receptor sensitivity

and the magnitude of change, as shown in figures 5.1 and 5.2. The sensitivity and magnitude criteria were combined to determine the degree of effect using the matrix shown in figure 5.3, which was then used to determine whether the effect was significant. Effects that are moderate or above are considered to be significant in EIA terms.

## Baseline

### *Economic effects*

#### *Gross value added*

- 5.20 GVA is a measure of economic value that expresses the difference between the value of goods and services produced and the cost of raw materials and other inputs used in their production. It is an internationally recognised indicator of economic performance.
- 5.21 Table 5.2 shows that South Cambridgeshire district performs well, with GVA per head above the national and regional rates. The Hinxton sub-regional impact area's GVA per head is similar to the national figure, but above the regional figure. GVA growth in both South Cambridgeshire and the Hinxton sub-regional impact area over the last five years has been significantly above regional and national levels. This indicates that the site is located in an area with a strong and growing economy.

Area	GVA (£m)	GVA per head	GVA growth
South Cambridgeshire	4,055	£26,455	23.6%
Hinxton sub-regional impact area	24,463	£26,246	22.6%
East of England	145,651	£23,970	18.7%
England	1,433,164	£26,159	19.4%

**Table 5.2: GVA (Office for National Statistics)**  
 Note: GVA and GVA per head figures are from 2014 for local authority areas and 2015 for other areas. GVA growth figures are for 2009-14 for local authority areas and 2010-15 for other areas

#### *Jobs and businesses*

- 5.22 South Cambridgeshire has a higher percentage of full-time employees than the regional and national figures, while the Hinxton sub-regional impact area is more consistent with these areas (table 5.3). Both South Cambridgeshire and the Hinxton sub-regional impact area have experienced strong growth in both total employment and full-time employees, with the Hinxton sub-regional impact area also experiencing growth in part-time employees at double the national rate. These figures indicate that the economies of these areas are performing well.

Category		South Cambridgeshire	Hinxton sub-regional impact area	East of England	England
Employees	Total	75,000	451,000	2,608,000	24,867,000
Full-time	Total	56,000	315,000	1,763,000	17,282,000
	Percentage	75%	70%	68%	69%
	Growth	14%	13%	12%	10%
Part-time	Total	19,000	137,000	844,000	7,585,000
	Percentage	25%	30%	32%	31%
	Growth	0%	6%	2%	3%
Employment*	Total	78,000	463,000	2,694,000	25,699,000
	Growth	11%	9%	8%	7%

**Table 5.3: Employment type and growth (Business Register and Employment Survey, Office for National Statistics)**

\*Employment includes employees and self-employed workers registered for VAT or PAYE schemes

Note: Total and percentage figures for 2015, growth figures 2010-15

5.23 South Cambridgeshire was home to 8,785 business units in 2016, of which 7,990 were individual enterprises<sup>(1)</sup>. The Hinxton sub-regional impact area had 49,805 business units, of which 42,935 were individual enterprises. This analysis focuses on business units, in order to capture total business activity in the area.

5.24 While employment growth was stronger in both South Cambridgeshire and the Hinxton sub-regional impact area than nationally between 2010 and 2015, the growth in business numbers (while still strong at 15% and 13% respectively) was below national rates (18%). This suggests that more of the employment growth seen locally in both South Cambridgeshire and the Hinxton sub-regional impact area was as a result of existing businesses expanding than is typical at the regional and national levels.

#### *Employment structure*

5.25 The distribution of employment across different sectors is shown in table 5.4. A higher proportion of employment in both South Cambridgeshire and the Hinxton sub-regional impact area is provided in the manufacturing sector than regionally or nationally. There is also a much stronger representation of business service activities, particularly in South Cambridgeshire.

<sup>1</sup> A business unit is an individual site (such as a factory or shop) associated with an enterprise. It can also be referred to as a workplace. An enterprise can be thought of as the overall business, made up of all the individual sites or workplaces. It is defined as the smallest combination of legal units that has a certain degree of autonomy within an enterprise group.

Sector	South Cambridgeshire	Hinxton sub-regional impact area	East of England	England
Agriculture, forestry and fishing	2.4%	1.9%	1.6%	1.3%
Production	0.9%	1.2%	1.2%	1.1%
Manufacturing	12.6%	9.3%	7.6%	8.0%
Construction	5.7%	5.1%	6.2%	4.6%
Distribution, transport, accommodation and food	18.6%	26.2%	28.8%	27.5%
Information and communication	6.3%	4.7%	3.8%	4.3%
Financial and insurance activities	1.1%	1.4%	2.3%	3.5%
Real estate activities	1.3%	1.8%	1.6%	1.9%
Business service activities	28.4%	19.6%	18.6%	17.8%
Public administration, education and health	18.9%	24.4%	23.7%	25.5%
Other services and household activities	3.8%	4.4%	4.6%	4.5%

**Table 5.4: Employment by broad industrial group, 2015 (Business Register and Employment Survey, Office for National Statistics)**

5.26 The AgriTech sector encompasses all aspects of agriculture, horticulture and forestry production, food and drink processing, input supplies (such as machinery, fertilisers, seeds, packaging etc), food wholesaling and marketing, food logistics, agri-tech (e.g. plant health, crop storage, animal health, engineering and precision farming, and advisory services) and food-tech (e.g. food production technology and dietary health).

5.27 Table 5.5 shows that the AgriTech sector is under-represented in South Cambridgeshire, as it provides a lower proportion of employment in the district than at the regional and national levels. In contrast, this sector is over-represented in the wider Hinxton sub-regional impact area. Therefore, while employment in this sector is lower in the immediate area around Hinxton, the site sits at the centre of a sub-region where this sector is much more important to employment than it is at the regional or national level (43% more important to employment than the national average).

Area	Employment	Percentage of total employment	Location quotient <sup>(2)</sup>
South Cambridgeshire	2,300	3	0.76
Hinxton sub-regional impact area	21,500	6	1.43
East of England	117,200	4	1.13
England	992,900	4	--

**Table 5.5: AgriTech employment (Business Register and Employment Survey, 2015, Office for National Statistics and Agricultural Census, 2013, Defra)**

### *Labour market*

5.28 The claimant count measures the number of people claiming benefit principally for the reason of being unemployed. Claimant count rates in both South Cambridgeshire (0.5%) and the Hinxton sub-regional impact area (0.8%) are below the regional (1.3%) and national (1.9%) rates and have fallen over time.

<sup>2</sup> The location quotient illustrates how the proportion of employee jobs in the AgriTech sector in each area compares to the national figure. A location quotient greater than 1.0 indicates that an area has a relative specialism in AgriTech, while a figure greater than 1.0 indicates that the sector is relatively under-represented in the area.



Unemployment rates in the local area are very low by historical standards and significantly below national rates, showing a labour market with little slack.

5.29 The economic activity rate is the proportion of the working age population that is in the active labour force. Economic activity in both South Cambridgeshire (86%) and the Hinxton sub-regional impact area (83%) is above the regional (80%) and national (78%) figures. The increase in economic activity rates over time has been particularly strong in South Cambridgeshire, rising from 81% in 2010 to 86% in 2016.

5.30 Self-employment is relatively high in South Cambridgeshire (15.6% of those aged 16-64 were self-employed in 2016) compared to both the East of England (14.6%) and England as a whole (14.4%). However, the Hinxton sub-regional impact area has a lower self-employment rate (13.3%).

### *Earnings*

5.31 The analysis of earnings considers both workplace-based earnings and residence-based earnings. Workplace-based earnings are based on the earnings of those working within a given geographical area (some of whom will live elsewhere), while residence-based earnings are based on the earnings of people living in a given geographical area (some of whom will work elsewhere).

5.32 Table 5.6 shows that residence-based earnings in South Cambridgeshire are well above the regional and national figures, while those for the Hinxton sub-regional impact area are slightly above regional and national levels. This indicates that the site lies in an area of high wages among the resident population. Resident wage growth in South Cambridgeshire between 2010 and 2016 was very strong, but in the Hinxton sub-regional impact area wage growth was well below both the regional and national rates.

		South Cambridgeshire	Hinxton sub-regional impact area	East of England	England
All employees	Average earnings	£29,382	£25,586	£24,233	£23,350
	Growth	11.8%	2.3%	8.8%	8.3%
Full-time employees	Average earnings	£35,373	£30,073	£30,000	£28,503
	Growth	9.6%	0.7%	10.2%	8.5%
Part-time employees	Average earnings	£13,815	£9,547	£9,475	£9,612
	Growth	29.8%	9.8%	14.2%	12.3%

**Table 5.6: Residence-based median average earnings 2016 and growth 2010-16 (Annual Survey of Hours and Employment, Office for National Statistics)<sup>3</sup>**

5.33 The picture is similar for workplace-based earnings (table 5.7), with figures for South Cambridgeshire well above regional and national levels and those for the Hinxton sub-regional impact area more similar to the regional and national picture. However, with the exception of part-time wages, levels of workplace wage growth in South Cambridgeshire between 2010 and 2016 were well

<sup>3</sup> It should be noted that the source of this information uses small sample sizes, particularly at local authority and district level, and the margin of error in these figures can be large. This issue is more acute for part-time employment, as this makes up a smaller proportion of an already small sample size. Caution is therefore required when interpreting the figures for South Cambridgeshire. Results for the Hinxton sub-regional impact area have been arrived at by calculating the median figure of the local authority district results, some of which were unavailable for certain years. The figures for this area are therefore an estimate and should be treated as such.

below those in the other areas. This probably results from higher initial rates and some catching up by other areas as the economy continues its long recovery from the 2008-10 downturn. The larger increase in part-time wages in all areas is the result of both a very tight labour market and increases in the minimum wage and national living wage.

		South Cambridgeshire	Hinxton sub-regional impact area	East of England	England
All employees	Average earnings	£29,667	£23,287	£22,374	£23,349
	Growth	6.1%	8.7%	8.7%	8.3%
Full-time employees	Average earnings	£32,699	£28,870	£27,908	£28,500
	Growth	1.9%	7.6%	10.0%	8.5%
Part-time employees	Average earnings	£11,063	£10,451	£9,258	£9,600
	Growth	18.5%	11.9%	12.9%	12.5%

**Table 5.7: Workplace-based median average earnings 2016 and growth 2010-16 (Annual Survey of Hours and Employment, Office for National Statistics)** (see footnote 3 above)

- 5.34 The fact that both residence-based and workplace-based earnings in South Cambridgeshire and the Hinxton sub-regional impact area are either higher or in line with national rates indicates that many people who live in the area commute to London and other outside areas for better paid jobs. However, South Cambridgeshire and the surrounding area also provides many higher paid job opportunities that draw in people with higher skills from surrounding districts to meet the needs of employers.

#### *Residence-based analysis*

- 5.35 Analysis of origin and destination data of commuters from the 2011 Census shows that both South Cambridgeshire (59%) and the Hinxton sub-regional impact area (50%) have at least half of their workforce travelling in to the area. This is a higher proportion than most other districts nationally and shows the dependence of the immediate vicinity on people who live elsewhere to meet employers' workforce needs.

#### *Qualifications*

- 5.36 When compared to the East of England (26%) and England as a whole (27%), both South Cambridgeshire (40%) and the Hinxton sub-regional impact area (33%) have relatively high proportions of the resident population with qualifications at degree level and above and correspondingly low proportions with no qualifications (15% in South Cambridgeshire, 18% in the Hinxton sub-regional impact area, 23% in the East of England and 22% in England as a whole).

#### *Assessment of sensitivity*

- 5.37 As a result of the strong relative performance of the South Cambridgeshire and Hinxton sub-regional impact area economies, and the limited slack in the labour market in these areas, employment and the local economy are considered to be of low sensitivity to change.

## Community and social effects

### Community facilities and services

5.38 The availability of recreation facilities and public open space in Hinxtton, the surrounding parishes and Sawston is summarised in table 5.8.

Parish	Type of space	Provision	Requirement from standard	Surplus / shortfall
Hinxtton	Sport	0 ha	0.50 ha	-0.50 ha
	Play space	0.03 ha (1 LEAP <sup>(4)</sup> )	0.25 ha	-0.22 ha
	Informal open space	0.18 ha	0.13 ha	+0.05 ha
	Allotments	0.24 ha	0.13 ha	+0.11 ha
Duxford (including Whittlesford Bridge)	Sport	1.91 ha (1 football pitch, 6 bowls rinks, 2 hard tennis courts, 1 pavilion)	3.30 ha	-1.39 ha
	Play space	0.15 ha (1 NEAP <sup>(5)</sup> )	1.65 ha	-1.50 ha
	Informal open space	0.07 ha	0.82 ha	-0.75 ha
	Allotments	1.90 ha	0.82 ha	+1.08 ha
Ickleton	Sport	3.03 ha (1 football pitch, 1 cricket pitch, 1 pavilion)	1.10 ha	+1.93 ha
	Play space	0.11 ha (1 NEAP, skate park and basketball hoop)	0.55 ha	-0.44 ha
	Informal open space	0 ha	0.28 ha	-0.28 ha
	Allotments	1.43 ha	0.28 ha	+1.15 ha
Sawston	Sport	6.43 ha (3 senior football pitches, 1 junior pitch, 1 mini-soccer pitch, 1 cricket pitch, 1 bowls green, 2 grass tennis courts, 3 pavilions)	11.52 ha	-5.09 ha
	Play space	0.46 ha (3 LEAPs, 1 LAP <sup>(6)</sup> )	5.76 ha	-5.30 ha
	Informal open space	4.21 ha	2.88 ha	+1.33 ha
	Allotments	3.08 ha	2.88 ha	+0.20 ha
	Community orchard	0.11 ha	No standard	N/A
Whittlesford	Sport	3.52 ha (1 senior football pitch, 2 mini-soccer pitches, 1 cricket square, 2 hard tennis / netball courts, 1 pavilion)	1.98 ha	+1.54 ha
	Play space	0.09 ha (1 LEAP)	0.99 ha	-0.90 ha
	Informal open space	0.85 ha	0.50 ha	+0.35 ha
	Allotments	1.58 ha	0.50 ha	+1.08 ha
	Community orchard	0.01 ha	No standard	N/A
Pampisford	Sport	0 ha	0.54 ha	-0.54 ha
	Play space	0.34 ha (2 LEAPs)	0.27 ha	+0.07 ha
	Informal open space	1.29 ha	0.14 ha	+1.15 ha
	Allotments	0.92 ha	0.14 ha	+0.78 ha
	Community orchard	0.2 0ha	No standard	N/A
Great Abington and Little Abington (combined in the council's report)	Sport	3.72 ha (1 senior football pitch, 1 cricket pitch, 1 MUGA <sup>(7)</sup> , 1 pavilion)	2.21 ha	+1.51 ha
	Play space	0.08 ha (1 LEAP)	1.11 ha	-1.03 ha
	Informal open space	0.27 ha	0.54 ha	-0.27 ha
	Allotments	0 ha	0.55 ha	-0.55 ha

**Table 5.8: Availability of recreation facilities and public open space in the vicinity of the application site (South Cambridgeshire District Council, 2013)**

Note: Comparable information is not available for Great Chesterford parish, which is in Uttlesford district

<sup>4</sup> Local equipped area of play – a play area equipped for mainly early school-age children (four to eight years old), with at least five types of equipment.

<sup>5</sup> Neighbourhood equipped area of play – a play area equipped mainly for older children, with at least eight types of equipment.

<sup>6</sup> Local area of play – a small area of open space for young children (four to six years old) to play close to where they live.

<sup>7</sup> Multi-use games area.

- 5.39 Although table 5.8 indicates that there are deficiencies in the provision of one or more of the types of recreation provision and public open space in all the parishes, South Cambridgeshire District Council (2013) did not identify any need for improved or additional facilities in Hinxton, Ickleton and Pampisford. A need to enlarge and improve the pavilion was identified in Duxford, while Whittlesford has a need for more space for football pitches for junior clubs and upgrades to the LEAP, and changing facilities are needed in Great Abington and Little Abington.
- 5.40 The greatest level of need for improved facilities was identified in Sawston, which requires upgrades to existing football pitches, two additional senior football pitches, one additional junior football pitch, two additional mini soccer pitches and one additional cricket pitch. The Landscape Partnership (2012) identifies the need for additional amenity greenspace, natural and semi-natural greenspace and allotment provision in Great Chesterford to address existing deficiencies in provision.
- 5.41 Other community facilities and services in the parishes include the following (South Cambridgeshire District Council, 2014, and Uttlesford District Council, 2012):
- Hinxton: a village hall, a pub and a service station on the A505
  - Duxford and Whittlesford Bridge: several shops and local businesses, a scout hut, a hotel and three pubs
  - Ickleton: a village shop and Post Office, a pub, a social club and a village hall
  - Sawston: a range of shops, restaurants, take-aways and local businesses, a Post Office, two pharmacies, two building societies, four pubs, two church halls
  - Whittlesford: a village store, a Post Office, a social club, a petrol station, two pubs, an art gallery and a village hall
  - Pampisford: several shops and local businesses, a pub and a village hall
  - Great and Little Abington: a village store and Post Office, several local businesses, a pub, two village halls and a service station on the A1307
  - Great Chesterford: a village shop and Post Office, two pubs and a community centre with sports hall and meeting rooms
- 5.42 While no deficiencies were identified in recreation and open space provision in Hinxton parish, and there is a generally good availability of other community facilities and services in the area, deficiencies in recreation and open space provision were identified in a number of parishes. Overall, therefore, community facilities and services are considered to be of medium sensitivity to change.

### *Health*

- 5.43 The HIA submitted in support of the application identifies that the health of people in South Cambridgeshire is generally better than the national average, with lower levels of deprivation and longer life expectancies for both men and women. Key challenges at the district level are that physical activity is declining and excess weight appears to be increasing, road traffic injuries and deaths are higher than the national average because of the rural nature of the local roads,

and there has been a potential worsening in winter-related deaths of older people.

#### *Amenity*

- 5.44 The site and surrounding area have a generally rural aspect, with agricultural land and parkland on site and further fields surrounding the site and the village of Hinxton. However, the area is affected by noise from surrounding A-roads and the railway line to the west of Hinxton. Overall, the area's amenity is considered to be of medium sensitivity to change.

#### **Future baseline**

- 5.45 In the absence of the proposed development, the site will remain in its current use. However, the community, social and economic baseline will still change in the future. Cambridge Econometrics forecasts that the South Cambridgeshire economy will grow by around 28% between 2015 and 2029, while employment is predicted to grow by around 7.5% over the same period. Broadly speaking, projected levels of GVA and employment increases are similar across all four impact zones, although jobs are predicted to grow faster in the three regional spatial levels than the national average.
- 5.46 The availability of recreation space and other community facilities and services in the nearby parishes is likely to improve over time in the areas where a need for new facilities was identified. The amenity of the site and surrounding area will remain generally similar in the absence of the proposed development, as the site will remain in its current use.

#### **Effects during construction**

##### ***Economic effects***

##### *Employment generation*

- 5.47 An average of 200 people are predicted to be employed directly during the on site construction phase, based on information on similar projects provided by Hill Commercial, giving a total of 2,000 direct job years across the minimum 10-year construction period. A further 117 construction job years are estimated to be generated by the enabling infrastructure works, giving a gross total of 2,117 construction job years.
- 5.48 In calculating net employment, the assessment allowed for leakage outside the region at 5% and outside the UK at 1% of the construction workforce. Displacement for construction projects is estimated by the Department for Business, Innovation and Skills (BIS) at an average of 43% at the sub-regional level and 36% at the regional level. Displacement is expected to be moderate to low for the proposed development, given its unique nature, so a value of 30% was used for both the regional and sub-regional levels. Multipliers were allowed for based on the mean capital projects multiplier provided by BIS (2009), which states that for each direct job the multiplier for construction projects is 1.46 at the sub-regional level and 1.42 at the regional level. There will be no substitution of construction jobs, as there is no current construction activity at the site to be substituted.

- 5.49 Based on the above figures, the proposed development is predicted to generate 2,033 net construction job years over the minimum 10-year construction period. Full details of the calculations behind this figure are provided in technical appendix C.
- 5.50 The construction contractors for the proposed development are not currently known. However, it is assumed that most staff employed during the construction of the proposed development will live within the Hinxton sub-regional impact area, as the construction phase will last for at least 10 years and will therefore be attractive to local construction companies and workers. The Cambridge area and wider region also has large construction companies with experience in working on similar business and science park developments. Therefore, the data on current employment domiciles for those working in South Cambridgeshire were used to allocate the jobs across the spatial study areas (table 5.9).

Location	Percentage of net workforce	Net job years
South Cambridgeshire	41%	834
Hinxton sub-regional impact area	43%	874
East of England	10%	203
<b>Total</b>	<b>--</b>	<b>1,911</b>

**Table 5.9: Allocation of construction job years to impact areas**

- 5.51 As shown in table 5.9, 1,911 of the 2,033 construction job years created will be within the region. The net additional construction job impacts at the regional level average 191 per year over the minimum 10-year construction period, of which 83 are estimated to be created in South Cambridgeshire, a further 87 in the Hinxton sub-regional impact area and the remainder in the East of England. This represents an increase of approximately 0.11% in employment at the district level, which is a change of negligible magnitude and a negligible effect that will not be significant.

#### *Gross value added*

- 5.52 BIS data from 2012 estimate the GVA per construction worker at £45,030. This has been updated to 2016 values using the BIS GVA deflator of 1.195, to give a figure of £53,810 per construction job. Over the minimum 10-year construction period, therefore, the proposed development is predicted to generate a total of £102.83 million GVA, of which £44.85 million will be created in South Cambridgeshire, £47.04 million in the Hinxton sub-regional impact area and £10.94 in the wider East of England. This equates to an increase in GVA of approximately 0.11% at the district level, which is a change of negligible magnitude and a negligible effect that will not be significant.

### **Community and social effects**

#### *Community facilities and services*

- 5.53 As discussed above, it is envisaged that the majority of construction workers on site are likely to come from a relatively local area. It is therefore unlikely that there will be an increase in demand for community facilities and services as a result of the in-migration of construction workers. No significant effects are predicted on community facilities and services during construction.

### *Health*

- 5.54 The HIA submitted in support of the application identified limited potential for adverse health and wellbeing effects on existing local residents as a result of increased traffic, noise, lighting and dust and loss of amenity associated with construction activities. Limited potential was also identified for a beneficial health effect from stimulation of the wider economy. Beneficial effects were identified for construction workers associated with the proposed development as a result of increased employment and demand for materials and services during the development's construction.

### *Amenity*

- 5.55 There will be an increase in noise, traffic and dust generation during construction and works will be visible from surrounding roads and nearby dwellings. However, as set out in chapters 4 (air quality) and 11 (noise and vibration), best practice construction techniques will be put in place through a construction environmental management plan to minimise noise and dust generation. Chapter 12 confirms that construction traffic associated with the proposed development will not significantly affect pedestrian amenity in the vicinity of the site. The assessment of visual effects in chapter 9 shows that the changes to views of the site during construction will be greatest at receptors closest to the site. Overall, the combined noise, dust, traffic and visual effects associated with the construction works are predicted to lead to a small to medium reduction in amenity in the vicinity of the site, which will be a temporary, slight to moderate, significant adverse effect.

## **Effects post-construction**

### ***Economic effects***

#### *Employment generation*

- 5.56 The final tenant profile when the proposed development is fully built out, based on an assumed number and mix of tenants that mirrors other science and business parks, is projected to provide a total of 70 commercial AgriTech-focused tenants and two service provider business units (park management and central services), giving a total of 72 business units. The projected tenant profile and associated gross employment generation are shown in table 5.10. Full details of the assumptions behind the estimates are provided in technical appendix C.

<b>Occupier type</b>	<b>Number of tenants</b>	<b>Average number of employees per tenant</b>
Large company / international base	2	500
UK growth company	8	200
Small to medium sized enterprise	25	40
Start-ups	35	5
Park management	1	25
Central services (café, leisure, childcare etc)	1	200
<b>Total</b>	<b>72</b>	<b>4,000</b>
<b>Table 5.10: Estimated gross post-construction employment creation</b>		

- 5.57 In calculating the net employment, the assessment has allowed for leakage outside the region at 6% and outside the UK at 3% of the workforce, given the likely specialist nature of the work undertaken at Hinxton and the impact this will have on where permanent staff are drawn from. Displacement caused by the proposed development is expected to be relatively low because of the development's specialist nature in a large sector, lack of similar development in the district or LEP area and existing undersupply of commercial property in the Cambridge sub-region (particularly of high technology spaces, laboratories and larger units). Any displacement is therefore likely to occur primarily at the international or national level by drawing investment into the UK or East of England that may otherwise have been located elsewhere. Displacement has therefore been calculated based on a figure of 16% at the regional level.
- 5.58 Multipliers have been accounted for based on BIS (2009) figures. The multiplier impact is predicted to be above average because the proposed development will attract international investors and perform a regional or national function as a centre for AgriTech, with strong links to economic impacts in a wide range of supply chains and other companies and centres. An average multiplier of 1.6 has therefore been used, which equates to the regional level BIS figure for sector / cluster support projects. After allowing for additionality, therefore, the proposed development is estimated to generate 4,892 full-time equivalent jobs.
- 5.59 However, substitution also needs to be taken into account. The proposed development will change the land use on site from agriculture to a business park. This will have the effect of reducing agricultural production on the site. In Cambridgeshire, the agricultural industry employs 7,046 staff on 255,000 ha of land (Defra, 2013), suggesting a labour density of one employee per 36 ha. The loss of a net 71 ha of land at Hinxton to development will therefore reduce farm employment by approximately two full-time equivalent jobs in the local area. For each direct job in agriculture, Defra (2016) statistics show that there are a further 1.5 jobs in agricultural supply, food processing and food distribution. The loss of two full-time equivalent jobs in agriculture is therefore likely to lead to a further three full-time equivalent job losses in the wider economy. Subtracting this from the job creation figure above gives a total net job generation of 4,887. Full details of the calculations behind these figures are provided in technical appendix C.
- 5.60 Out of the total 4,887 net full-time equivalent jobs created, 2,147 are estimated to be filled by residents of South Cambridgeshire district, 2,203 by residents of the wider Hinxton sub-regional impact area and 537 by residents of the wider East of England. These figures represent a 2.7% increase in total employment in South Cambridgeshire, a 0.6% increase in total employment in the Hinxton sub-regional impact area and a 0.02% increase in total employment in the East of England.
- 5.61 The boost to employment within the AgriTech sector as a result of the proposed development will be significant at the district level. The addition of a net 2,147 jobs to the sector in South Cambridgeshire represents a 93.3% increase on existing numbers, which will be a change of large magnitude. Combined with the low sensitivity of employment in the district, this will lead to a moderate, significant beneficial effect. At the sub-regional level, the addition of 2,203 jobs to the AgriTech sector will be a 10.2% increase. This will be a change of small magnitude, leading to a slight beneficial effect that will not be significant.



### *Gross value added*

- 5.62 The predicted GVA generated by the proposed development has been estimated based on BIS data from 2012 updated to 2016 values. The proposed sectoral mix at Hinxtton ranges from research and development, with an average 2016 GVA of £41,012, to ICT and precision instruments (average 2016 GVA of £72,679). This suggests an average GVA per job of the type proposed at Hinxtton of £56,850.
- 5.63 Once it is complete and occupied, and taking into account the small loss in GVA as a result of the small job losses associated with the substitution impact, the proposed development is therefore predicted to generate GVA worth £122.10 million per year in South Cambridgeshire, £125.26 million per year in the Hinxtton sub-regional impact area and £30.55 million per year in the East of England. These figures represent a 3.0% increase in annual GVA at the district level, a 0.6% increase at the sub-regional level and a 0.02% increase at the regional level. As for employment, the contribution of the proposed development to GVA within the AgriTech sector will be a large change at the district level, leading to a moderate, significant beneficial effect. There will be a small change at the sub-regional level, leading to a slight beneficial effect that will not be significant.

### *Effects on agricultural productivity*

- 5.64 As a centre to commercialise new agricultural technologies, the proposed park for AgriTech will have impacts on productivity in the agrifood supply chain in the UK and, potentially, internationally. While the proposed development will lead to the loss of agricultural land, the 71 ha of land lost is 0.1% of the land dedicated to farming at the district level and less than 1/100<sup>th</sup> of a percent of the farmland in the region. Any reduction in agricultural production at Hinxtton would therefore be more than compensated for by even a very minor increase in agricultural production elsewhere as a result of the work conducted at the park for AgriTech.
- 5.65 It is too early to determine quantitatively the broader economic impact of the proposed development on regional, national or global agricultural productivity, as the technical focus of the tenants at Hinxtton, the markets they will target and how the global market for these technologies will develop in future decades are very uncertain. In addition, estimating impacts outside the UK is very speculative, given differences in climate and crops and livestock enterprises. However, based on other reviews of science parks and research centres in this sector, the proposed development could be expected to deliver additional benefits at the global level, both in terms of enhanced productivity and sustainability. This section therefore provides a brief overview of the market dynamics of the AgriTech sector and outlines the role the park could play in helping to drive UK and global change and growth. Further details are provided in technical appendix C.
- 5.66 The potential global impact that new UK AgriTech developments can have is illustrated by Brookdale Consulting's (2013) impact review of the John Innes Centre. This found that the centre's work has supported plant breeders in delivering £373-445 million of gross wheat yield benefits per year at the UK level, while gross productivity increases at the global level supported by the centre's research were estimated at £8.7 billion. The global impact was

therefore assessed as being approximately 20 times that delivered in the UK. With UK agriculture only worth approximately 1% of the value of global agriculture, it is reasonable to assume that agricultural technologies commercialised at the proposed development will have a global impact many times that seen in the UK.

- 5.67 The proposed development is intended to focus on technology areas such as the 'Internet of Things', sensors, data and automation, where demand is increasing quickly in the UK and globally. The Cambridge region also has existing capability in the business community and academic base in these areas. UKTI (2013) found that the market for AgriTech in 2011/12 was dominated by agri-engineering and sensors at 48% of the total £142 billion market. These were worth more than plant health and plant breeding (14% of the market) and animal health and animal breeding (29%). Recent reports in the UK and globally show a continued trend to more automation in the industry, enabled by advances in sensors and data processing capability and driven commercially by worldwide increases in wage costs and a reduction in labour supply in agriculture as urbanisation continues. The proposed development can therefore be expected to increase the global physical and economic output of agriculture through promoting increased agricultural production technologies and new methods of delivering more sustainable food chains by focusing on waste, resource use and production efficiency.

### ***Community and social effects***

#### *Community facilities and services*

- 5.68 The proposed development has the potential to increase demand for community facilities and services. However, the proposals include a mixed use centre that will contain facilities such as a café / takeaway, crèche / day nursery and gym / leisure uses. An outdoor natural pool / swimming lake with changing facility is also proposed, together with 48.5 ha of informal open space. These are likely to meet the majority of the needs of the site's employees, with only a small potential residual increase in demand for services not available on site, such as shops. The nature of the proposed development means that there is not likely to be an increase in demand for facilities such as play areas, sports fields or village halls. The potential small increase in use of local shops will be a slight beneficial effect that will not be significant.
- 5.69 The facilities in the proposed mixed use centre and the informal open space and outdoor natural pool / swimming lake will also be available for use by residents of the local area. This will lead to a small improvement in the facilities available in the area, which will be a slight beneficial effect that will not be significant.

#### *Health*

- 5.70 The HIA submitted in support of the application identified the potential for beneficial health and wellbeing effects on existing residents and new employees at the site post-construction. The scale of the effect will depend on how residents and employees make use of the recreational opportunities provided by the new public open space and outdoor natural pool / swimming lake, the active travel options by public transport, foot or cycle, and the facilities in the proposed mixed use centre. There is also the potential for beneficial effects associated

with the provision of employment and training opportunities. Limited potential was identified for adverse health and wellbeing effects associated with the increase in traffic in the vicinity of the site and the replacement of agricultural land with built development.

### *Amenity*

5.71 Post-construction, the proposed development is not predicted to lead to significant increases in noise that could alter local amenity (see chapter 11). In addition, chapter 12 shows that there will not be any significant adverse effects on pedestrian and cyclist amenity along local roads as a result of the proposals, and a significant beneficial effect is identified along the stretch of the A1301 adjacent to the site. While views of the site will change from agricultural land to built development, the proposed landscape planting and large areas of public open space will ensure that, long term, views from Hinxton and the surrounding area will not be significantly affected. Overall, while the proposed development will alter the site's character, a negligible change is predicted to the wider area's amenity that will not be significant.

### **Mitigation**

5.72 No specific mitigation measures are proposed for community, social and economic effects. However, many of the measures designed to mitigate adverse air quality, landscape and visual, noise and traffic effects will also reduce potential adverse effects on amenity in the vicinity of the site.

### **Residual effects**

5.73 The significant residual effects are summarised in table 5.11. As discussed in paragraphs 5.64 to 5.67, the proposed development is also likely to provide benefits by increasing the global physical and economic output of agriculture, but it is not possible to quantify this effect or assess it in detail at this stage.

Topic	Significant residual effect	Receptor sensitivity	Impact magnitude	Nature	Duration	Degree of effect	Level of certainty
Community, social and economic effects	Reduction in amenity in the vicinity of the site during construction	Medium	Small to medium	Adverse	Short term	Slight to moderate	Reasonable
	Generation of employment in the district post-construction	Low	Large	Beneficial	Long term	Moderate	Reasonable
	Contribution to the local economy post-construction	Low	Large	Beneficial	Long term	Moderate	Reasonable

**Table 5.11: Significant residual effects**

### **Cumulative effects**

5.74 As set out in chapter 3, the potential for cumulative effects with a number of consented and proposed developments in the area needs to be assessed.

### ***Economic effects***

- 5.75 The economic effects associated with the construction of the electricity supply connection and possible off site wastewater rising main were included in the construction assessment above, so there will be no further cumulative economic effects associated with these elements.
- 5.76 The scale and timescale of the other developments are currently uncertain and it is not possible to quantify their potential cumulative economic effects. However, it can be assumed that they will also generate additional jobs and contributions to the local economy. Combined with the proposed development, these will be large changes, leading to moderate, significant, beneficial cumulative effects on employment and the economy at the district level. The construction of all the developments will create additional short to medium term demand for construction services, which will have negligible, beneficial cumulative effects on employment and the local economy that will not be significant.
- 5.77 Given the specialised nature of the employment proposed, focused on the global AgriTech market, it is not expected that the proposed development will compete directly for tenants with other commercial developments that are focused on other sectors of the economy. The need for access to field trials and similar specialist facilities, which will only be provided at the proposed park for AgriTech, will make other sites less attractive for AgriTech companies. Some of the other business parks in the area, such as the Wellcome Trust Genome Campus, operate a rigorous policy to ensure that their tenants are in specific sectors. Where these policies are applied locally, this does not include facilities for AgriTech companies. The proposed development will therefore be complementary to, rather than competitive with, the other developments.
- 5.78 The amenity building at Granta Park and the ancillary hub at the Sawston Trade Park will create facilities similar to those proposed at the park for AgriTech. However, as these will only be for tenants of Granta Park and Sawston Trade Park, these will not compete with the proposed development.

### ***Community and social effects***

#### *Community facilities and services*

- 5.79 The Babraham Research Campus and Chesterford Research Park sites are not within the parishes covered by the assessment of effects on community facilities and services, so it is considered that there is no potential for significant cumulative effects on community facilities and services with these schemes. The electricity supply connection and possible off site wastewater rising main also do not have the potential to lead to significant cumulative effects on community facilities and services.
- 5.80 The Granta Park developments include a new amenity building containing recreational uses to enhance the existing uses available on site. Similarly, the Sawston Trade Park development includes an ancillary hub that could include a café, a gym and a crèche. These are likely to accommodate any increase in demand associated with the additional employment floorspace, so no significant cumulative effects are predicted with these schemes. While no additional community facilities and services are proposed as part of the Wellcome Trust

Genome Campus development, the campus already provides a wide range of facilities, including cafés, a restaurant, a nursery, a gym, a tennis court, a cricket pitch and informal open space. Given the relatively small additional floorspace consented, it is considered that these facilities will accommodate any new demand without significant adverse cumulative effects on services and facilities outside the campus.

- 5.81 The former Spicer site scheme does not include any community facilities and services. However, as this is a relatively small employment scheme on a site that was previously occupied by industrial development, it is considered that there is unlikely to be a significant cumulative effect on demand for community facilities and services in the area.
- 5.82 The 8 Greenacres, Duxford scheme includes new public open space and the section 106 agreement includes contributions towards off site children's play space, sports space and community space. The Lion Works, Whittlesford application for residential development has not yet been determined, but it is likely that it will be required to make similar contributions as the 8 Greenacres scheme if it is approved. Therefore, no significant cumulative effects on community facilities and services are predicted with these residential developments.

#### *Health*

- 5.83 The findings of the HIA submitted in support of the application took into account the other consented and proposed developments in the area and no additional cumulative health impacts are predicted.

#### *Amenity*

- 5.84 The distance of most of the other developments from the site means that there is no potential for significant cumulative effects on amenity during or post-construction. The electricity supply connection and possible off site wastewater rising main will run into the application site, but will be subject to the same measures discussed above for the proposed development to prevent adverse effects on amenity during construction. The Lion Works, Whittlesford site is approximately 100 m west of the bus / cycle interchange site, while the Sawston Trade Park site is adjacent to the northernmost extent of the bus / cycle interchange site where it extends along the A1301. If consented, it is likely that these schemes would also be required to implement good practice construction methods to minimise adverse amenity effects. No significant cumulative effects are therefore predicted on amenity during construction.
- 5.85 The traffic modelling included the committed developments in the area and did not predict any significant cumulative effects from increased noise or traffic on the local road network that could adversely affect the area's amenity. The landscape and visual assessment identified the potential for limited cumulative visual effects with the Lion Works development, but these will be reduced over time as the existing vegetation and proposed landscape planting mature. The proposed electricity supply connection and possible off site wastewater rising main will be below ground and will not affect views. Overall, therefore, no significant cumulative effects are predicted on the area's amenity post-construction.

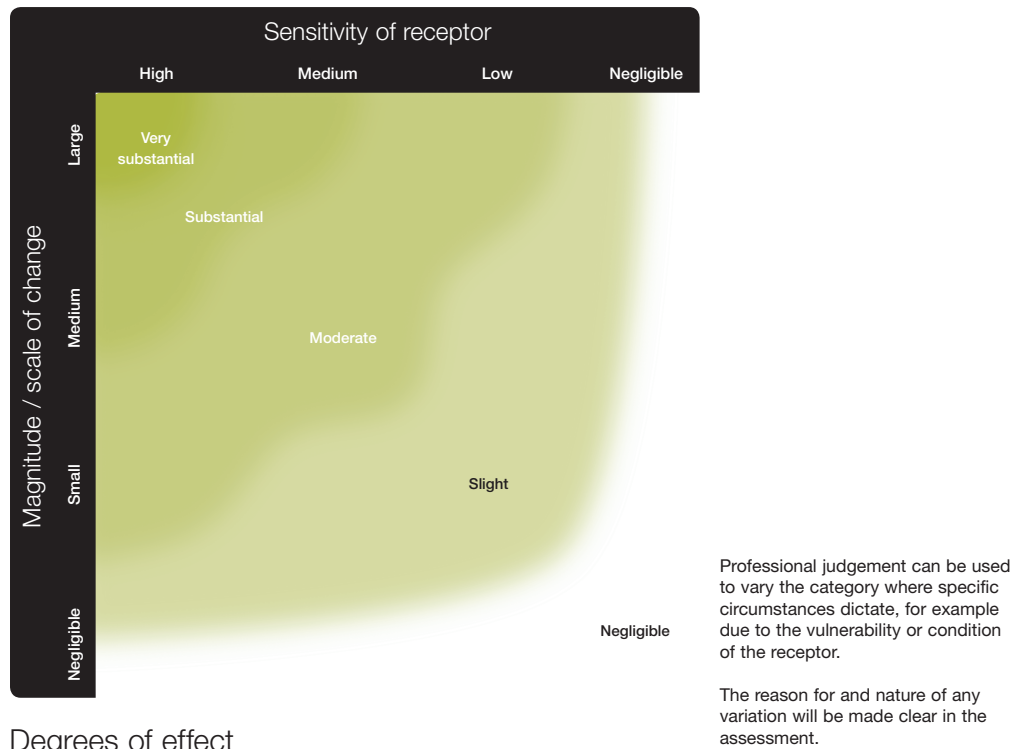
# Sensitivity of receptor – Community, social and economic



## Magnitude of change – Community, social and economic



## Determination of significance matrix – Community, social and economic



### Degrees of effect

#### Very substantial:

Large changes in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with high unemployment or below average GVA, or where the demand for existing services is exceeding capacity, or amenity is poor.

#### Substantial:

A large change in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with medium unemployment, or average GVA, or where the demand for / supply of existing services is at / approaching capacity, or amenity is medium.

#### Moderate:

A large change in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with low unemployment, or above average GVA, spare capacity for demand for existing services or high amenity.

A medium change in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with medium unemployment, or average GVA or where the demand for / supply of existing services is at / approaching capacity or amenity is medium.

A small change in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with high unemployment, or below average GVA or where the demand for existing services is exceeding capacity, or amenity is poor.

#### Slight:

A medium change in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with low unemployment or above average GVA / spare capacity for demand for existing services or high amenity.

A small change in demand for / supply of local services / facilities / jobs for local people / GVA / amenity; in areas with low to medium unemployment or average to above average GVA / spare capacity for demand for existing services or where this demand is at / approaching capacity, or amenity is average to high.

#### Negligible:

Negligible changes to employment / GVA / demand for / supply of local services / facilities or amenity; or an area that can cope with changes to employment or amenity, or demand for / supply of services.

### Significance

If the degree of effect is moderate or above, then the effect is considered to be significant.