

12 Community, economic and social effects

Introduction

- 12.1 Terence O'Rourke Ltd was commissioned to evaluate the potential community, social and economic effects of the proposals. The data sources and references used in the assessment are shown in table 12.1. The assessment also refers to the findings of the lighting assessment undertaken by WSP (technical appendix J), the health impact assessment (HIA) undertaken by WSP and the retail capacity assessment (RCA) undertaken by Nathaniel Lichfield and Partners submitted in support of the planning application.

Table 12.1: References and data sources

2001 Census: www.ons.gov.uk
NOMIS website: www.nomisweb.co.uk
South Cambridgeshire District Council, 2007, Northstowe Area Action Plan
South Cambridgeshire District Council, 2007, Core Strategy Development Plan Document
South Cambridgeshire District Council, 2005, Audit and Assessment of Need for Outdoor Playspace and Informal Open Space in South Cambridgeshire
South Cambridgeshire District Council, 2010, Affordable Housing Supplementary Planning Document
South Cambridgeshire District Council, 2010, South Cambridgeshire Annual Monitoring Report 2009-2010
Cambridgeshire County Council, 2011, South Cambridgeshire Annual demographic and socio-economic report
Insight East, 2011, East of England Forecasting Model – Spring 2010 Economic Forecasts
MNK Boulos and GP Phillipps, 2004, Is NHS Dentistry in Crisis? Journal of Health Geographics 3:10
Cambridgeshire County Council website: www.cambridgeshire.gov.uk
www.edubase.gov.uk
www.longstantonvillage.org
Institute of Lighting Engineers, 2005, Guidance Notes for the Reduction of Obtrusive Light
BS5489:2003 Code of Practice for the Design of Road Lighting – Part 1: Lighting of Roads and Public Amenity Areas
BS13201:2003 Road Lighting – Part 2: Performance Requirements
BS1264-2:2007 Lighting of Work Places – Outdoor Work
Institute of Lighting Engineers, 2001, Technical Report 5 Brightness of Illuminated Advertisements
www.ciria.org.uk/complianceplus

Legislation and policy

National policy

- 12.2 The draft National Planning Policy Framework (July 2011) includes a number of relevant policy statements. These include:
- Paragraphs 9-19 (sustainable development), including the need for a strong economy and vibrant communities

- Paragraphs 71-80 (business and economic development), including planning proactively to meet the development needs of business, support an economy fit for the 21st century, promoting the vitality and viability of town centres and raising the quality of life and the environment in rural areas by promoting thriving, inclusive and locally distinctive rural economies
- Paragraphs 107-112 (housing), including increasing the supply of housing, delivering a wide choice of high quality homes and creating sustainable, inclusive and mixed communities
- Paragraphs 124-132 (sustainable communities), including creating a built environment that facilitates social interaction and inclusive communities, delivering the right community facilities, schools, hospitals and services to meet local needs and ensuring access to open spaces and recreational facilities that promote the health and well-being of the community

12.3 Relevant national planning policy includes planning policy guidance notes (PPGs) and planning policy statements. The most relevant to community, economic and social issues are:

- PPS1: Delivering Sustainable Development
- PPS3: Housing
- PPS4: Planning for Sustainable Economic Growth
- PPG17: Planning for Open Space, Sport and Recreation

Regional and local policy

12.4 The Localism Bill was enacted in November 2011, thereafter becoming the Localism Act. Different parts of the Act will, however, come into effect at different times over the coming months. The Act enables Regional Spatial Strategies, including the East of England Plan, to be abolished, but this will be undertaken by statutory order by the government in due course (it is currently understood that this will be around March / April 2012), subject to consultation. Whilst the East of England Plan remains part of the development plan until it is formally abolished, the government has advised that the proposed abolition of Regional Spatial Strategies should be regarded as a material consideration by local planning authorities when deciding planning applications. It should therefore be afforded limited weight in the determination of this planning application.

12.5 South Cambridgeshire District Council's adopted *Northstowe Area Action Plan* (2007) sets out planning controls to limit potential adverse community, economic and social effects of the new town and enhance the potential benefits. The relevant policies include:

- NS/6 Local centres: requires provision of local centres that include a primary school and provide for the day-to-day needs of local residents for convenience shopping and service provision. All residents should be within a 600 m walk of a local centre, and the majority within a 400 m walk

- NS/7 Northstowe housing: requires provision of a mix of house types, sizing and tenure (including affordable housing)
- NS/8 Northstowe employment: requires provision of small scale local B1 (business) employment within local centres and an area of approximately 5 ha for predominantly B1c (light industry), B2 (general industry) and B8 (storage and distribution) employment adjacent to the Longstanton park and ride site
- NS/9 Community services, facilities, leisure, arts and culture: requires provision of a full range of publicly provided services and facilities (e.g. schools, community uses and health facilities) and serviced land for facilities delivered by the community / voluntary sector (e.g. faith, social and sporting clubs)
- NS/19 Public open space and sports provision: requires provision of formal sports facilities, children's play areas and youth facilities (all homes are to be within 1,000 m of outdoor sports provision, a one minute walk of a local area of play, a five minute walk of a local equipped area of play and a 15 minute walk of a neighbourhood equipped area of play)

Methodology

Baseline

- 12.6 A desk-based study was carried out to examine the existing community, social and economic environment in Longstanton ward, surrounding villages and South Cambridgeshire district. The geographical scale of the study varied depending on the topic and at what level the effect would be primarily experienced, in accordance with standard practice. For example, effects on demography were assessed at the ward level, effects on housing provision were examined at the district level and effects on local businesses and facilities were examined at the village level. The references and data sources used are shown in table 12.1.
- 12.7 Community, social and economic receptors include the characteristics of the existing population, for example age and household composition, the local economy and employment rates, and the facilities that are required by the population, such as education, recreation and community spaces, healthcare and local businesses. The sensitivity of receptors is determined by their capacity to adjust to an increase in population and is assessed with reference to the categories shown in figure 12.1.

Impact assessment methodology

- 12.8 Prior to assessing the effects of the proposed development on the community, social and economic 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 population and provision of housing, employment land, open space and local facilities associated with the proposed development.

- 12.9 The significance of 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 12.1 and 12.2. The sensitivity and magnitude criteria were combined to determine the degree of effect using the matrix shown in figure 12.3, which was then used to determine whether the effect was significant.

Lighting

- 12.10 As part of the assessment of effects on amenity, WSP undertook a baseline lighting survey in November 2011 to ascertain current lighting conditions and the types of lighting installations present on site and in the immediate vicinity. Readings of light spill were taken on site and at predetermined lighting monitoring locations considered to be representative of sensitive residential properties. These receptors were identified by a desk study and confirmed during the survey. In particular, properties close to the site were evaluated in terms of their direct and intermittent views towards the site and whether existing screening prevents views. Full details of the survey are provided in technical appendix J.

- 12.11 As for the main community, social and economic assessment, significance has been derived from measures of receptor sensitivity and magnitude of change. Residential receptors are considered to be of high sensitivity as a result of the potential for nuisance and health effects such as fatigue and stress to arise from increased light levels. To determine the magnitude of change in lighting levels at sensitive residential properties, the following criteria are evaluated using professional judgement:

- Type of lighting installations during and post-construction
- The duration of the lighting anticipated
- The distance between the proposed lighting installations and the sensitive residential property
- Type of view (eg direct, intermittent or restricted)
- Existing and proposed screening
- Potential change in the environmental zone, as defined in *Guidance Notes for the Reduction of Obtrusive Light* (Institute of Lighting Engineers, 2005)
- Potential for statutory nuisance

- 12.12 The sensitivity and magnitude criteria were combined to determine the degree of effect using the matrix shown in figure 12.4, which was then used to determine whether the effect was significant.

Baseline

Demography

- 12.13 The population of Longstanton ward was 1,701 at the time of the 2001 Census. The age breakdown of the ward's population differed slightly from the district, regional and national averages (table 12.2), with a higher percentage of working age residents and lower percentages of children under 16 years of age and retirement age residents.

Table 12.2: Population statistics (2001 Census)

Population	Longstanton ward	South Cambridgeshire	East of England	England
Total	1,701	130,108	5,388,140	49,138,831
<16 years old	16.3%	20.1%	20.1%	20.2%
16-64 years old	70.9%	65.2%	63.4%	64.0%
65+ years old	12.8%	14.7%	16.5%	15.8%

- 12.14 The population of Longstanton ward was estimated to have increased by 44% to 2,450 by 2009, while the population of South Cambridgeshire as a whole increased by 10% to 143,600 (Cambridgeshire County Council, 2010).
- 12.15 Longstanton ward has a lower proportion of households with dependent children and pensioner households than South Cambridgeshire, the East of England and England as a whole, and a higher proportion of single person households and couples with no children (table 12.3).

Table 12.3: Household composition (2001 Census)

Household	Longstanton ward	South Cambridgeshire	East of England	England
Total households	772	52,181	2,231,974	20,451,427
Average household size	No data	2.45	No data	2.32
Single person	20.2%	12.2%	14.1%	15.7%
Lone pensioner	8.8%	12.2%	14.1%	14.4%
Other pensioners	8.5%	10.0%	10.2%	8.9%
Couples with dependent children	19.0%	25.6%	22.3%	20.8%
Lone parents with dependent children	2.8%	3.7%	5.3%	6.4%
Couples with no children	30.3%	22.8%	19.5%	17.8%

- 12.16 The total number of households in the ward will have increased since 2001 as a result of development of new dwellings. The main residential development in the ward since 2001 is the 300 dwellings constructed to date (of 510 consented) at Home Farm, to the west of Longstanton.
- 12.17 Given that it differs in some respects from the district and regional averages, the demography of Longstanton ward is considered to be of medium sensitivity to change.

Housing

- 12.18 South Cambridgeshire District Council's adopted *Core Strategy Development Plan Document* (2007) states that the *Cambridgeshire and Peterborough Structure Plan* (2003) set a target of 20,000 homes to be built in South Cambridgeshire between 1999 and 2016. The *Core Strategy* highlights that land identified to date has a capacity of 19,000 dwellings over this period, although it should be noted that this includes the construction of 4,800 dwellings at Northstowe, which is unlikely to be undertaken by 2016. The housing trajectory set out in the council's *Annual Monitoring Report* (2009-2010) predicts that 14,541 dwellings are planned to be delivered between 1999 and 2016. This is 27.3% (5,459 dwellings) below the target. As a result of this shortfall, housing provision in the district is considered to be of high sensitivity.
- 12.19 South Cambridgeshire District Council's adopted *Affordable Housing Supplementary Planning Document* (2010) identifies an unmet need for affordable housing in the district of 1,966 units per year. The district's average annual supply of affordable housing is 341 dwellings, but 916 dwellings are required per year to stop the backlog increasing. Given this level of need, affordable housing provision is considered to be of high sensitivity.

Employment

- 12.20 Longstanton ward (0.5%) and South Cambridgeshire (2.4%) both had lower levels of unemployment at the time of the 2001 Census than Great Britain as a whole (5.7%). Unemployment in South Cambridgeshire increased to 4.1% by September 2010, which was consistent with a national increase to 7.7% (NOMIS, 2011). No data were available at ward level in 2010.
- 12.21 In 2008, the largest employment sector in South Cambridgeshire as a whole was finance, IT and other business activities, and the district had a higher percentage of people employed in this sector than the regional and national averages (table 12.4).

Table 12.4: Employment by sector, 2008 (NOMIS, 2011)

Employment sector	South Cambridgeshire	East of England	Great Britain
Manufacturing	17.1%	10.3%	10.2%
Construction	5.2%	5.4%	4.8%
Distribution, hotels and restaurants	22.5%	25.0%	23.4%
Transport and communications	1.9%	6.0%	5.8%
Finance, IT and other business activities	27.1%	21.4%	22.0%
Public administration, education and health	20.1%	25.3%	27.0%
Other services	3.5%	4.8%	5.3%
Tourism-related	4.8%	7.7%	8.2%

- 12.22 As unemployment in South Cambridgeshire is below the national average, employment is considered to be of low sensitivity to change.

Local businesses

- 12.23 The RCA submitted in support of the application identifies primary and secondary local retail catchment areas for the site. These are based on ward boundaries and take into account the existing distribution of centres and foodstores in the local area and the road network. The primary catchment area comprises Longstanton ward and includes Longstanton village and the Northstowe site. The secondary catchment area consists of the Cottenham, Swavesey, Willingham and Over wards and includes the villages of Cottenham, Oakington, Rampton, Willingham, Over and Swavesey.
- 12.24 The existing retail provision in the catchment areas is typified by small scale convenience stores in the rural villages and slightly larger stores and services in the minor rural centres. The village retail provision is often characterised by a post office and newsagent, as is the case in Longstanton, Oakington, Over and Swavesey. The larger centres of Cottenham and Willingham are each served by a small convenience store, supported by a post office and newsagent amongst other small traders. The outlying centres of Histon / Impington and Bar Hill provide a much larger scale of convenience and comparison retailing to the area as a whole.
- 12.25 There are currently three foodstores within the Northstowe catchment areas: a Co-op Food and One Stop in Willingham, with 228 m² and 133 m² net sales floorspace respectively, and a Co-Op Food with 238 m² net sales floorspace in Cottenham. Outside the catchment areas, there is a large Tesco Extra store in Bar Hill, with 9,392 m² net sales floorspace, and a Tesco Express and Co-Op Food (202 m² and 185 m² net sales floorspace respectively) in Histon / Impington.
- 12.26 The stores and other small traders within the catchment areas are largely focused on meeting the needs of the local community, rather than serving tourists or shoppers from other areas. Therefore, they are considered to be of

medium sensitivity to changes in population and retail provision in the area. The stores outside the catchment area are considered to be of negligible to low sensitivity to changes in population and retail provision at Northstowe.

Education

- 12.27 The site falls within the catchment of Hatton Park Primary School and Swavesey Village College. As shown in table 12.5, the primary school is not currently close to capacity, so primary school provision in the area is considered to be of low sensitivity to changes in population. Swavesey Village College is currently over capacity (table 12.5), and secondary school provision in the area is therefore considered to be of high sensitivity to population change.

Table 12.5: Capacity of schools (www.edubase.gov.uk and www.cambridgeshire.gov.uk, July 2011)

School	Number on roll	Capacity	Spare capacity
Hatton Park Primary School	138	210	72
Swavesey Village College	1,209	1,200	-9

Health and healthcare

- 12.28 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. Health priorities in South Cambridgeshire include meeting the needs of an ageing population, addressing access to services and the health needs of Gypsies and Travellers.
- 12.29 There are four GP surgeries within 5 km of Longstanton. Maple Surgery, Bar Hill Health Centre has six GPs and 3,366 registered patients, Willingham Medical Practice has six GPs and 6,854 registered patients, The Surgery, Swavesey has one GP and 2,874 registered patients and The Surgery, Over has four GPs and 4,451 registered patients. Willingham Medical Practice also has a branch surgery in Longstanton. All four practices are currently accepting new patients (www.nhs.uk, viewed January 2012). GP surgeries are therefore considered to be of low sensitivity to changes in population.
- 12.30 There are two NHS dental practices within 5 km of Longstanton: Mr Gwain King and Mrs Antoinette King in Longstanton, which has three dental practitioners, and Bar Hill Dental Practice, which has two dental practitioners. Only the Longstanton practice is currently registering new NHS patients (www.nhs.uk, viewed January 2012), so dental services are considered to be of medium sensitivity to changes in population.

Community facilities

- 12.31 South Cambridgeshire District Council's *Audit and Assessment of Need for Outdoor Playspace and Informal Open Space in South Cambridgeshire* (2005) compared the availability of open space in Longstanton and other local

villages with the National Playing Fields Association (NPFA) standards, based on the villages' populations at the time of the 2001 Census. Table 12.6 shows that Longstanton currently has a small surplus of open space compared to the NPFA standards, although shortages are experienced in other nearby villages.

Table 12.6: Analysis of open space provision in Longstanton and surrounding villages

Village	Type of open space	Provision	NPFA standard	Surplus
Longstanton	Sports pitches	3.0 ha	2.72 ha	0.28 ha
	Play space	1.41 ha	1.36 ha	0.05 ha
Oakington and Westwick	Sports pitches	2.91 ha	2.08 ha	0.83 ha
	Play space	0.03 ha	1.04 ha	-1.01 ha
Rampton	Sports pitches	1.38 ha	0.70 ha	0.68 ha
	Play space	0.22 ha	0.35 ha	-0.13 ha
Willingham	Sports pitches	4.17 ha	5.50 ha	-1.33 ha
	Play space	1.40 ha	2.75 ha	-1.35 ha

- 12.32 Formal open space in Longstanton is provided at the recreation ground, which includes two football pitches, a cricket pitch, a bowling ground and two floodlit hard tennis courts. There is a local equipped area of play (LEAP) at the recreation ground, a LEAP and a neighbourhood equipped area of play (NEAP) at Magdalene Close and a small play area in Rampton Drift.
- 12.33 Formal open space provision in the other nearby villages includes a football pitch, two tennis courts and a LEAP at the recreation ground in Oakington, a multi-use games area and a LEAP at the recreation ground in Rampton and a range of facilities in Willingham, including two football and two mini-soccer pitches, a hockey pitch, a cricket pitch, six bowls rinks and two LEAPS at and close to the recreation ground.
- 12.34 Other community facilities in Longstanton include the Village Institute and the Pavilion Sports and Social Centre. Other community facilities in the nearby villages include Rampton Village Hall and several halls in Willingham, including the Ploughman Hall, Willingham Social Club and church halls. The nearest libraries are in Bar Hill and Willingham, although a mobile library calls in Longstanton once a month. Given the variation in provision, community facilities in the area are considered to be of medium sensitivity to change.

Cambridge Golf Course

- 12.35 The Cambridge Golf Course on the application site is an 18-hole course where the general public can 'pay and play'. There are alternative golf facilities relatively close to the site, with 17 clubs within a 30 minute drive. These include Girton Golf Club (the nearest course to the site) and a relatively recently constructed 18 hole golf course in Cambourne (approximately 20 minutes drive from Longstanton). The Inspector's Report on the Northstowe Area Action Plan states that "there is a relatively good supply of golf facilities in the Northstowe area". As a result of the good supply of alternative golf courses, the Cambridge Golf Course is considered to be of low to medium sensitivity.

Public rights of way

- 12.36 There are four public rights of way within the primary development site, three public footpaths in the west of the site and one byway in the south east (figure 12.5). In addition, a bridleway runs along the south eastern edge of the Hatton's Road attenuation ponds area. A public right of way use survey undertaken by WSP for the 2007 Northstowe planning application found that rights of way 151/4 and 151/7 are well used and rights of way 151/5 and 151/6 are reasonably well used. Given the good levels of use of the public rights of way, and their rural location, they are considered to be receptors of medium to high sensitivity to change.

Lighting

- 12.37 The majority of the site is currently unlit; however, there are a number of significant floodlights as part of the Cambridge Golf Course and driving range and other lighting from parking provision associated with the driving range. The driving range is lit until approximately 20:00, seven days a week. In the wider area to the south and west, lighting is typical of levels anticipated in rural villages and small town centres. Throughout these areas, the residential zones have a range of lighting levels, from well-lit consistent lighting (largely associated with newer infill development) to inconsistent areas of lighting associated with sporadic installations implemented as part of the highway schemes of older developments. The B1050 and Longstanton Park and Ride are the greatest sources of lighting in the immediate surrounding area.
- 12.38 Table 12.7 summarises the existing sources of lighting at receptors surrounding the site that are considered to be representative of the most sensitive residential properties (figure 12.6), all of which are of high sensitivity. Whilst there are other sensitive residential properties in close proximity to the site, such as Striplands Farm and properties to the west of the High Street, these are screened by vegetation and existing buildings. The eastern frontages of the properties on Ladywalk were not accessible, but 24 Prentice Close and 60 Magdalene Close are considered to be representative of these properties.

Table 12.7: Baseline lighting at sensitive receptors			
Receptor	Typical sources of existing lighting	Existing screening	Zone¹
41 Station Road	<ul style="list-style-type: none"> There are no lighting installations on the section of the B1050 outside the property There is lighting associated with a junction to the north, but it is considered unlikely that this can be viewed from this property Lighting from headlamps of passing vehicles 	<ul style="list-style-type: none"> The bungalow windows are almost fully screened by hedgerows on both sides of Station Road. An intermittent glimpse of the lighting associated with the park and ride can be viewed due to a gap in one of the hedges 	E2
Ashby Bed and Breakfast	<ul style="list-style-type: none"> Lighting from highways lighting (reflector optic, flat glass, high pressure sodium on alternate sides approximately 15 m apart) Lighting from headlamps of passing vehicles 	<ul style="list-style-type: none"> There is some screening, but it is intermittent, and there are direct views from the single storey property towards the site and the park and ride 	E3
24 Prentice Close	<ul style="list-style-type: none"> Lighting from street lighting (reflector optic, low pressure sodium on alternative sides at sporadic locations) 	<ul style="list-style-type: none"> Although it was not possible to access the rear of the property, it has been assumed that there are direct views towards the site and at least intermittent views 	E2
60 Magdalene Close	<ul style="list-style-type: none"> Lighting from street lighting (reflector optic, low pressure sodium at an approximate distance of 40 m apart on the opposite side of the road) Lighting associated with Longstanton Park and Ride can be viewed to the north west Lighting associated with the driving range floodlights at the golf course can be viewed clearly, with significant sky glow from this source noted at this location 	<ul style="list-style-type: none"> Although there are a range of trees and boundary hedges between this property and the site, there are intermittent and direct views of the site from both storeys 	E3
Brookfield Farm	<ul style="list-style-type: none"> Inconsistent lighting from street lighting (a range of low pressure sodium installations at various distances; however, these were not adjacent to or in close proximity to the farm²) External lighting associated with Brookfield Farm Intermittent distant views of lighting associated with the park and ride 	<ul style="list-style-type: none"> Screening varies considerably, but there are direct views from the farm towards the site 	E2
New Close Farm Cottage	<ul style="list-style-type: none"> External lighting associated with Brookfield Farm Lighting from headlamps of passing vehicles and moving vehicles on the A14 (prominent in the mid-view) 	<ul style="list-style-type: none"> The windows are almost fully screened by 2-3 m high hedgerows on all sides. There are possible intermittent views to the north east 	E2

Notes:

1: The Institute of Lighting Engineers defines the following environmental zones in its *Guidance Notes for the Reduction of Obtrusive Light* (2005):

E1 – Intrinsically dark landscapes – national parks, areas of outstanding natural beauty or other dark landscapes

E2 – Low district brightness areas – rural, small villages or relatively dark urban locations

E3 – Medium district brightness areas – small town centres or urban locations

E4 – High district brightness areas – town / city centre with high levels of night time activity

2: A lighting replacement scheme was underway at the time of the survey

Future baseline

- 12.39 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. Cambridgeshire County Council's *South Cambridgeshire Annual demographic and socio-economic report* (2011) provides population growth estimates for the district to 2031. When these are adjusted to remove the influence of Northstowe, in order to identify the future baseline, the district's population is predicted to grow by 10.2% from the 2009 figure to 158,200.
- 12.40 Employment in the district is predicted to grow by 23,100 jobs (an increase of 29.2% from 2008 figures) by 2031 (Insight East, 2011).

Effects during construction

- 12.41 It is anticipated that approximately 200 to 250 people will be employed on site during the construction phase. This will be a temporary change of small magnitude, leading to a slight beneficial effect in employment numbers that will not be significant. At this stage, it is not possible to determine where construction workers will come from, although it is likely that there will be a mix of workers from the South Cambridgeshire area and those commuting on a daily or weekly basis from further afield, depending on the contractors used and the stage of construction. Any effect on the area's demography is therefore likely to be negligible and not significant. Any increase in demand for local businesses and services as a result of temporary in-migration during construction is likely to be of negligible to small magnitude, leading to a negligible to slight effect that will not be significant.
- 12.42 The site clearance and earthworks will result in the closure of the Cambridge Golf Course. This will mean that current members and members of the public wishing to 'pay and play' will need to use alternative courses in the area, with the potential for increased travel time. However, given the generally good provision of alternative golf courses within 20-30 minutes of Northstowe, it is considered that the loss of the Cambridge Golf Course will be a small change, leading to a slight adverse effect that will not be significant.
- 12.43 During site preparation, earthworks and the laying out of the proposed sports pitches, it is likely that temporary diversion of the three public footpaths in the west of the primary development site will be required. In addition, public footpath 151/5 may require temporary diversion during the construction of the residential area in phase 1-1. Any diversions will be undertaken in consultation with South Cambridgeshire District Council's rights of way officer. The byway in the south east of the primary development site and the bridleway adjacent to the Hatton's Road attenuation ponds area will not require diversion during construction.
- 12.44 The amenity of the public rights of way on site is likely to be reduced during construction, as a result of increased noise and dust, particularly during construction of phases 1-1 and 1-2. The public rights of way will be

temporarily bounded by security fencing associated with the construction works during these phases, to prevent access to the construction site. Overall, a short term change of medium to large magnitude is predicted to the public rights of way on site as a result of temporary diversions and changes to amenity during construction, which will be a substantial, adverse, significant effect.

12.45 It is anticipated that the key potential sources of lighting during the construction phase will include the following:

- Floodlighting and security lighting associated with temporary car parking for workers, the secure construction compound adjacent to the northern boundary and any perimeter fencing / hoarding
- Security and health and safety lighting associated with working areas (eg where equipment is stored and safety hazards may be present), temporary haul routes and emergency escape routes
- The potential for fugitive light spill and glare from internal lighting associated with site offices and welfare facilities
- Lighting required for construction operations when working during the late afternoon in winter (including light from headlamps of vehicles). This may be particularly applicable when material is transferred from the Hatton's Road attenuation ponds to the primary development site

12.46 It is likely that the above sources of light will be predominant in the winter months, when some construction working hours will fall within the hours of darkness. However, it is assumed that a level of security lighting will be required at all times during the hours of darkness. The key sensitive receptors will be those with direct views towards the site that will be within a 25 m radius of the sources of construction lighting.

12.47 A number of standard measures have been taken into account in the assessment, as follows:

- Procedures will be implemented to ensure effective liaison with neighbouring properties, adjacent residents and the local community through newsletters, letter drops (when construction activities are likely to affect local residents) and information boards
- The site will be registered to the Considerate Constructor's Scheme to ensure the construction process is audited and monitored with the aim of maintaining the highest possible standards
- Temporary lighting will be kept to the minimum required for particular activities (meeting health and safety requirements) and lighting will be located and directed away from residential properties

12.48 It is assumed that sensitive receptors further than 25 m from the sources of construction lighting are unlikely to experience a noticeable change in light spill and / or glare. These include 24 Prentice Close, 60 Magdalene Close and New Close Farm Cottage. 60 Magdalene Close may actually experience a decrease in glare as a result of the closure of the driving range. 41 Station

Road, Ashby Bed and Breakfast and Brookfield Farm will be within 25 m of sources of construction lighting. 41 Station Road will be largely screened, as there are only intermittent glimpses of the site from this location. There are direct and intermittent views from Ashby Bed and Breakfast and Brookfield Farm. However, Ashby Bed and Breakfast is already brightly lit and will be less susceptible to an increase in light levels.

- 12.49 The magnitude of change is predicted to be small to negligible for Ashby Bed and Breakfast, leading to a slight, adverse, temporary effect that will not be significant. The impact magnitude will be small to medium for 41 Station Road and Brookfield Farm, leading to a moderate, significant, adverse, temporary effect.

Effects post-construction

Demography

- 12.50 As set out in chapter 2, the predicted increase in population arising from the proposed development has been calculated by Cambridge Econometrics. The proposed development will lead to an estimated increase in the population of Longstanton ward of 4,089 people.
- 12.51 An additional 4,089 people represents an increase of approximately 240% to the population of Longstanton ward, which is a change of large magnitude. As discussed in the Cambridge Econometrics 2007 *Northstowe Demographic Report*, the new population is initially likely to have a higher proportion of young adults and children than the wider Longstanton and South Cambridgeshire population. However, the characteristics of Northstowe's population will change over time to become more like those of South Cambridgeshire as a whole (Cambridge Econometrics, 2007). Any change to the area's average age structure and household composition is therefore likely to be temporary.
- 12.52 Overall, given the medium sensitivity of the area's demography to change, the proposed development is predicted to have a substantial effect on demography in Longstanton ward, due to the increase in population, which will be significant.

Housing

- 12.53 The proposed development will provide a selection of dwellings to the residents of South Cambridgeshire district and other people moving into the area. There were 772 households in Longstanton ward in 2001, with an additional 300 dwellings recently constructed and a further 210 consented and likely to be constructed in the near future. The 1,500 dwellings therefore represent a 117% increase in housing provision in the ward. Given the high sensitivity of housing provision in South Cambridgeshire, this large change will be a very substantial, beneficial, significant effect.

- 12.54 South Cambridgeshire District Council's policy on affordable housing set out in its adopted *Development Control Policies Development Plan Document* (2007), *Northstowe Area Action Plan* (2007) and *Affordable Housing Supplementary Planning Document* (SPD; 2010) states that the council will seek 40% of proposed dwellings as affordable housing, but that account will be taken of any particular costs associated with a proposed development and other viability considerations. It is considered that there is a strong case at Northstowe to provide a level of affordable housing below that stated in the SPD, as a result of the considerable physical and community infrastructure requirements at Northstowe. This proposal will be supported by viability assessment work and subsequent discussions in relation to the section 106 legal agreement, which will also help to define the tenure mix of affordable housing within the proposed development. It is proposed that, subject to general market conditions, affordable housing will be delivered in parallel with market housing units. This is in accordance with the SPD. Further details on affordable housing policy and viability are provided in the Planning Supporting Statement submitted in support of the application.
- 12.55 In light of the above, approximately 525 (35%) of the proposed dwellings will be affordable housing. Given the estimated eight-year construction period, approximately 66 affordable dwellings will be constructed on average per year, which represents a 19% increase on current annual rates of affordable housing completion in South Cambridgeshire. This is a small magnitude of change, which will lead to a moderate, beneficial, significant effect.

Employment

- 12.56 As set out in chapter 2, it is estimated that the proposed development will generate approximately 666 jobs post-construction in a range of employment sectors. This is a medium to large magnitude of change and will be a moderate, significant, beneficial effect.

Local businesses

- 12.57 The RCA determined the size of the proposed retail area, with the aim of enabling the phase 1 local centre to provide a viable retail destination that will help the development to be as self-sufficient as possible. It is therefore considered unlikely that there will be significant effects on local businesses in the surrounding area, either as a result of increased demand from the new population or as a result of diversion of trade from existing local businesses.

Education

- 12.58 As set out in chapter 2, it is estimated that the new residents of the proposed development will include 421 primary school age children and 256 secondary school age children. It is assumed that all children of primary school age will be educated within the catchment area, but that a proportion (7%) of children of secondary school age will be educated in private or faith-based schools (Cambridge Econometrics, 2007). The proposed development will therefore

generate demand for an additional 421 primary school places and 215 secondary school places.

- 12.59 The proposed development includes a 630-place primary school, which will accommodate the predicted increase in demand for primary school places associated with the proposed residential development and will provide an estimated 209 additional primary school places for children from future phases of Northstowe. There will therefore be no significant adverse effects on primary school capacity in Longstanton or surrounding villages as a result of the proposed development.
- 12.60 The addition of 215 children to Swavesey Village College represents an increase of 18% on the number of children on the roll. The increase would push the school further over capacity and would be a moderate, adverse, significant effect. However, it should be noted that there is the potential to provide secondary school education on site by utilising the spare capacity in the proposed primary school during the early years, prior to a secondary school being provided in a future phase of Northstowe. This has the potential to reduce or remove the significant adverse effect on capacity at Swavesey Village College.

Health and healthcare

- 12.61 The HIA submitted in support of the application assesses the potential for effects on health as a result of the proposed development in detail, including effects relating to the mix of land uses, travel, access to services, safety and security, open and green space, affordable and energy efficient housing, access to food, air quality and noise, access to employment, and social capital. The HIA concludes that the proposed development will contribute beneficially to factors that influence physical and mental health and will avoid adverse effects. The report identifies that the proposed development will have beneficial effects in relation to all the topics examined, particularly by providing a viable neighbourhood that includes affordable housing, energy efficient dwellings, open space and employment opportunities.
- 12.62 The Department of Health standard for GP provision is 1,800 patients per GP. Therefore, the predicted increase in population of 4,089 represents an increase in demand of approximately two and a quarter new GPs, which equates to 17% of existing GP provision in the area and is a change of small magnitude. However, it should be noted that this equates to 56% of existing GP provision in Longstanton itself, which is a change of medium to large magnitude. Overall, a medium magnitude of change is predicted. Combined with the low sensitivity of GP provision in the area, this will lead to a slight adverse effect that will not be significant.
- 12.63 No set standards exist for NHS dental provision. However, a study undertaken by the University of Bath School of Health in 2004 suggested a standard of 2,000 patients per dentist. Using this standard as a guide, the predicted increase in population of 4,089 represents an increase in demand of approximately two new dentists, which equates to 40% of existing NHS

dentist provision in the area and is a change of medium magnitude. However, it should be noted that this equates to 67% of existing dentist provision in Longstanton itself, which is a change of large magnitude. Overall, a medium to large magnitude of change is predicted. Combined with the medium sensitivity of NHS dental provision in the area, this will lead to a moderate, significant adverse effect.

Community facilities

12.64 The increase in population will increase demand for community facilities. The proposed development includes equipped children's play areas, sports pitches served by changing facilities, allotments, community gardens and informal open space, as well as a community centre. As a result, only a small residual increase in demand for the community facilities not provided on site, such as libraries, is predicted. This will be a slight adverse effect that will not be significant.

Public rights of way

12.65 There will be new connections to the existing public rights of way post-construction, and permanent diversion of the three public footpaths in the west of the primary development site will be required where they cross the proposed sports pitches. In addition, public footpath 151/5 will require diversion where it passes through the proposed residential area. All diversions will be undertaken in consultation with South Cambridgeshire District Council's rights of way officer. The routes of the existing bridleway and byway will remain unchanged. The public rights of way will largely be retained within areas of public open space, although the northern end of footpath 151/5 will run through a residential area. Overall, it is considered that there will be a small change to the amenity of public rights of way on site post-construction, which will lead to a slight adverse effect that will not be significant. Potential changes to views from these routes are discussed in the landscape and visual assessment in chapter 4.

Lighting

12.66 A comprehensive lighting design and specification for the proposed development will be prepared by a specialist lighting contractor at the detailed design stage, with due regard to the sensitivities of surrounding receptors, and agreed with South Cambridgeshire District Council. The lighting specification will include the appropriate selection of column heights, light fittings and luminaire design to ensure that the intensity and direction of the lighting are controlled through retaining tilting angles close to the horizontal to ensure the effects of light spill and glare are minimised. It is assumed that lighting will be associated with the following elements:

- Primary, secondary and residential streets
- Principal cycle / pedestrian routes (on and off road), the dedicated cycleway along the primary street and the existing byway and public rights of way

- Key public amenity areas
- Car parking areas and service yards associated with the proposed employment and mixed use areas and the primary school / community centre
- Sports pitches
- Decorative lighting associated with some of the key buildings and illuminated advertisements

- 12.67 It is assumed that the Hatton's Road attenuation ponds area will be unlit post-construction and there will be no changes to the lighting of Hatton's Road. The closest of the sensitive receptors to potential floodlighting associated with the proposed sports pitches will be 60 Magdalene Close, approximately 65-70 m away. It is assumed that the majority of lighting will consist of high pressure sodium lamps, which provide a better overall performance than other types of lighting. The lighting will be designed to comply with guidance contained within BS5489:2003 *Code of Practice for the Design of Road Lighting – Part 1: Lighting of Roads and Public Amenity Areas*, BS13201:2003 *Road Lighting – Part 2: Performance Requirements* and BS1264-2: 2007 *Lighting of Work Places – Outdoor Work*.
- 12.68 The key new sources of lighting for 41 Station Road and Ashby Bed and Breakfast will be associated with the adjacent highway and service yards and car parks within the proposed employment area. 41 Station Road will be largely screened from the new light sources, but currently experiences relatively low levels of lighting. Ashby Bed and Breakfast will have direct and intermittent views of the proposed service yards and car parks, but these will be within a brightly lit environment due to the lighting associated with the existing park and ride. A small to negligible magnitude of change is predicted at both receptors, which will lead to a slight adverse effect that will not be significant.
- 12.69 As set out above, the effects of lighting associated with the proposed sports pitches will be greatest at 60 Magdalene Close, which also provides a worst case scenario for 24 Prentice Close. 60 Magdalene Close has intermittent and direct views of the site and currently experiences relatively high light levels from its close proximity to street lighting. The lighting associated with the proposed sports pitches is likely to be asymmetric beam horizontal cut-off floodlights or simple asymmetric beam floodlights. Either of these options will ensure that light spill is unlikely to be greater than 10 m from the source. Potential glare from these installations may cause nuisance up to 50 m from the source, but this will be greatly reduced by the retention of the existing screening. As set out above, 60 Magdalene Close is approximately 65-70 m from the proposed sports pitches, so an increase in light spill and glare is considered unlikely. Overall, a small to negligible change is predicted for this receptor, which will be a slight adverse effect that will not be significant.
- 12.70 The key new source of lighting for Brookfield Farm will be associated with the proposed primary streets. The farm has intermittent and direct views of the site, and currently experiences low levels of lighting. It is therefore more susceptible to an increase in light spill and glare from the proposed adjacent

primary street, particularly in the absence of screening. A small to medium change is predicted, which will be a moderate, significant, adverse effect. As no post-construction lighting is proposed in the Hatton's Road attenuation ponds area, there will be no significant changes to lighting levels at New Close Farm Cottage.

Mitigation

- 12.71 In order to mitigate some of the potential adverse effects above, financial contributions to existing and developing services will be made through a section 106 legal agreement with South Cambridgeshire District and Cambridgeshire County Councils, including towards a secondary school and community / sports facilities. These contributions will ensure that there will be no significant adverse effects on education provision as a result of the increase in population associated with the proposed development.
- 12.72 The following measures will be put in place during construction to minimise amenity effects associated with increased lighting:
- Adherence to best practice measures recommended by the Institute of Lighting Engineers, CIRIA and the Health and Safety Executive
 - Regular consultation with South Cambridgeshire District Council and feedback from any nuisance issues arising from the public liaison activities
 - Glare caused by poorly directed security lighting and floodlighting will be minimised by ensuring that light fittings are mounted close to the horizontal and directed into the centre of the site. Temporary light fittings should be designed to provide full cut-off, or should be directionally shielded to ensure that artificial light is controlled and substantially confined to the defined area intended to be illuminated
 - The location of residents with intermittent and / or direct views within a 25 m radius of the site should be evaluated prior to the installation of lighting
- 12.73 Post-construction, the proposed lighting specification and / or strategy should be designed to use current best practice and best available technology, conform to planning policy and be agreed with South Cambridgeshire District Council. Additional care should be taken to minimise light spill and glare from any lighting installed by ensuring the correct luminaire is selected and installed correctly. The following recommendations from the Institute of Lighting Engineers *Guidance Notes for the Reduction of Obtrusive Light* (2005) should be strictly adhered to:
- Lights should be switched off when not required for safety, security or enhancement of the night time scene. The introduction of a curfew with further limitations in lighting levels between agreed hours should be investigated
 - Lights should direct downwards wherever possible to illuminate the target, not upwards. If there is no alternative to the installation of

upward lighting, then use of shields and baffles will help to reduce light spill to a minimum. These should also be considered adjacent to sensitive areas where darker environments are currently experienced (particularly relevant for Brookfield Farm)

- Lighting equipment should minimise the spread of light near to or above the horizontal
- Glare should be kept to a minimum, ensuring that the main beam angle of all lights directed towards a potential observer is kept below 70 degrees. It should be noted that the higher the mounting height, the lower the main beam angle can be, although columns in excess of 10 m in height should be avoided
- Wherever possible, floodlights with asymmetric beams should be adopted. These permit the front glazing to be kept at or near parallel to the surfaces being lit
- 'Over lighting' should be minimised. It is recommended that reference is made to lighting standards for individual work tasks
- Any architectural or decorative lighting within the proposed development should comply with best practice

12.74 Should any illuminated advertisement be installed on any element of the proposed development, the signage will be designed to minimise glare and follow best practice guidance in the Institute of Lighting Engineers (2001) *Technical Report 5: Brightness of Illuminated Advertisements*. Following a review of the detailed sports lighting specification, consideration will be given to the potential for light spill and glare, and floodlight modelling will be undertaken if nuisance at receptors is considered to be a possibility.

Residual effects

12.75 The significant residual effects are set out in table 12.8.

Table 12.8: Residual effects

Topic	Significant residual effect	Receptor sensitivity	Impact magnitude	Nature	Duration	Degree of effect	Level of certainty
Community, social and economic effects	Effects on public rights of way network during construction	Medium to high	Medium to large	Adverse	Short term	Substantial	Reasonable
	Increase in light spill and glare during construction at 41 Station Road and Brookfield Farm	High	Small to medium	Adverse	Short to medium term	Moderate	Reasonable
	Increased population in Longstanton ward	Medium	Large	N/A	Long term	Substantial	Absolute
	Provision of new housing	High	Large	Beneficial	Long term	Very substantial	Absolute
	Provision of new affordable housing	High	Small	Beneficial	Long term	Moderate	Absolute
	Increased employment generation post-construction	Low	Medium to large	Beneficial	Long term	Moderate	Reasonable
	Increased pressure on NHS dental services	Medium	Medium to large	Adverse	Long term	Moderate	Reasonable
	Increase in light spill and glare at Brookfield Farm post-construction	High	Small to medium	Adverse	Long term	Moderate	Reasonable