

## 14 Cumulative effects with future phases of Northstowe

### Introduction

- 14.1 As set out in chapter 3, the proposed development will form an initial phase of the wider Northstowe new town development. In accordance with good practice and the statutory requirements, this chapter examines the potential for cumulative effects with the full Northstowe development. The 2007 EIA examined the potential effects of the wider new town development, so the significant residual effects identified in the 2007 ES have been used as the basis for the cumulative effects assessment. The assessment is therefore based on the 2007 master plan, as updated by the Northstowe Development Framework Document (2012) shown on figure 14.1, including consideration of an area of 'reserve land' to the north as part of the future Northstowe wider development.
- 14.2 The cumulative effects assessment has been based on the following design principles set out in the Northstowe Development Framework Document:
- Up to 10,000 dwellings, a proportion of which will be affordable, at a density of at least 40 dwellings per hectare at the centre, reducing towards the settlement edge
  - A range of employment uses (approximately 14 ha), including a business hub linked to the town centre to cater for office and high tech research and development firms
  - Town and local centres comprising retail, hotel, leisure and residential uses (approximately 23 ha)
  - Community and health facilities
  - Four sports hubs (35 ha)
  - Green separation between Longstanton and Oakington and the built development
  - Education facilities, from nurseries to adult education, including one secondary school and seven primary schools totalling 23 ha
  - Open spaces including informal open space and children's play space (approximately 145 ha)
  - Household recycling centre, sewage treatment pumping site and electricity sub-station
  - Allotments and community orchards
  - High quality public transport system serving the whole town
  - High levels of social infrastructure based on the principle of walkable neighbourhoods
  - Use of renewable energy sources, such as micro-generation, and minimisation of energy consumption through careful design
  - High-tech communication networks
  - An exemplar drainage strategy
- 14.3 Given the strategic level of detail available on the wider Northstowe proposals, the length of time over which the full scheme will be developed and the fact that the detailed breakdown of future phases of development has not

yet been determined, it was considered appropriate to undertake a qualitative cumulative effects assessment.

- 14.4 Cumulative effects can only arise where the Northstowe phase 1 scheme has a significant effect in its own right. Where the effects of phase 1 are not significant, any significant effects of the full Northstowe development would result solely from the future phases of development. These effects would need to be examined in any future applications for the wider development, which would then have to take account of the phase 1 scheme, and are not detailed in this chapter.
- 14.5 This chapter should be read alongside ES topic chapters 4 to 13, which provide baseline information and the assessment of the effects associated with the proposed phase 1 development.

### **Assessment of effects**

#### ***Landscape and visual***

- 14.6 As set out in chapter 4, several significant residual effects were identified in the landscape and visual assessment for the proposed phase 1 development, meaning that there is the potential for future phases of Northstowe to give rise to significant cumulative effects.
- 14.7 A substantial, significant adverse effect on the landscape resources of the application site was identified as a result of the phase 1 proposals. However, as the effect relates solely to the landscape of the phase 1 site, the additional development of future phases of Northstowe will not contribute further to this effect. No other significant residual effects were predicted on landscape character as a result of the proposed phase 1 development, so no significant cumulative landscape effects are predicted.
- 14.8 The proposed phase 1 development will lead to a substantial, significant adverse effect on views from viewpoints 6 and 7, both on Rampton Road near Rampton. The future phases of Northstowe will extend the amount of visible development compared with phase 1, but will be viewed from a similar distance. As a result, the magnitude of the cumulative change to the views will remain in the upper range of medium and there will be a substantial, significant adverse cumulative effect.
- 14.9 The proposed phase 1 development will lead to a moderate, significant adverse effect on views from viewpoint 8 on Rampton Road near Cottenham. As for viewpoints 6 and 7, the future phases of Northstowe will extend the amount of visible development compared with phase 1, but will be viewed from a similar distance. As a result, the magnitude of the cumulative change to the views will remain as medium and there will be a moderate, significant adverse cumulative effect.

- 14.10 A moderate, significant adverse effect is predicted on views from viewpoint 9 (Rampton Drift) as a result of the proposed phase 1 development. The future phases of Northstowe will extend the amount of visible development compared with phase 1, and will be much closer to the viewpoint. This will lead to a large cumulative magnitude of change and a substantial, significant adverse cumulative effect.
- 14.11 The future phases of Northstowe will not result in an increase in the extent or amount of development visible from viewpoints 14 (B1050 near the Park and Ride), 15 (B1050), 16 (western side of the golf course) and 17 (public footpath through the golf course). There will therefore be no significant cumulative effects on these viewpoints in addition to the effects that will arise from phase 1. There will be a small increase in the extent and amount of visible development over and above that associated with phase 1 in views from viewpoint 18 (southern side of the golf course) as a result of future phases of Northstowe. The magnitude of the cumulative change to views will remain as large and there will be a substantial, significant adverse cumulative effect.
- 14.12 The future phases of Northstowe will lead to large increases in the extent and amount of visible development over and above that associated with phase 1 from viewpoints 19 (Magdalene Close), 20 to 22 (all on Rampton Road near the site), 23 (Reynolds Drove), 24 and 25 (both on the Cambridgeshire Guided Busway). However, whilst the overall amount of visible development will increase, the maximum magnitude threshold (i.e. large) has already been reached for phase 1, so the magnitude of the cumulative effect will also be large. As the sensitivity of the viewpoints will remain unchanged, the degree of the cumulative effect will also remain unchanged from that associated with phase 1. There will therefore be very substantial, significant adverse cumulative effects on viewpoints 19, 24 and 25 and substantial, significant adverse cumulative effects on viewpoints 20 to 23.
- 14.13 As no significant effects were predicted on views from viewpoints 1 (Aldreth), 2 (American Cemetery Memorial Chapel), 3 (farmland south of Boxworth), 4 (Tiplers Road), 5 (Iram Drove), 10 (Guns Lane), 11 (B1050 junction with A14), 12 and 13 (both on Ramper Road) as a result of phase 1, it is considered that there will not be any significant cumulative effects on these viewpoints with future phases of Northstowe. The potential for any significant effects solely associated with future phases, and associated requirements for mitigation, will be examined in the ES accompanying any future planning application.

### ***Cultural heritage***

- 14.14 As outlined in chapter 5, a number of significant residual effects were identified in the cultural heritage assessment for the proposed phase 1 development, indicating the potential for cumulative effects with future phases of Northstowe.
- 14.15 The phase 1 proposals give rise to a substantial, significant adverse effect to the known and suspected archaeological resource. These adverse effects,

except for the southern portion of S19, can be fully mitigated through appropriate and agreed levels of excavation and recording, as set out in technical appendix C3. The moderate, significant adverse effect envisaged for the bisection and two stage approach to excavating S19 would be reversed through the implementation of a further phase of Northstowe. It is expected that similar mitigation measures would be required for future development at Northstowe. This approach would again be in line with Northstowe Area Action Plan policies for the safeguarding and recording of the archaeological resource. However, as excavation by its nature is a destructive process, there are potential effects of the excavation of a large amount of the archaeological resource suspected to be present, based upon the results of previous schemes of evaluation. This large cumulative change on the below ground archaeological resource from future development phases at Northstowe will result in a substantial, significant cumulative effect.

- 14.16 The moderate to slight adverse effect of phase 1 on the conservation area at Longstanton, through changes to the approaches and agricultural context, will be compounded by the later phases of development directly adjoining the conservation area boundary to the east from Long Lane south to St Michaels. A large cumulative change from the future phases of Northstowe is predicted, which will be a substantial, significant cumulative adverse effect.

#### *Natural heritage*

- 14.17 Chapter 6 concluded that the proposed phase 1 development would result in two moderate significant adverse effects arising from the loss of amenity grassland associated with development on the golf course and the loss of arable land associated with the proposed attenuation ponds. Both these habitats are considered to be receptors of low importance. The other identified significant adverse effects on the majority of ecological receptors associated with phase 1 have been adequately mitigated. Development on areas of greenfield land will always result in the net loss of habitats to new development and these effects cannot be mitigated.
- 14.18 Phase 1 habitat information collected by WSP in 2007 for the further phases of Northstowe shows that further areas of amenity grassland and arable land will be lost as later stages of the development come forward. Both habitats within the wider development area are also likely to be considered receptors of low importance. Therefore a large cumulative magnitude of change will occur, which will result in a moderate, significant adverse cumulative effect in the absence of mitigation.
- 14.19 The works associated with the phase 1 attenuation ponds will potentially lead to the loss of three pairs of skylark. This was considered to be a moderate, significant adverse effect. It is likely that more pairs of skylark will breed widely across the wider Northstowe area and further pairs will be lost during later stages of development. In the absence of mitigation this could lead to a cumulative effect on breeding skylark that is greater than the moderate, significant adverse effect associated with phase 1.

- 14.20 A moderate, significant beneficial effect was predicted to arise from the creation of new linear waterbodies and the enhancement of Longstanton Brook as a result of the proposed phase 1 development. There is the potential that creation of additional waterbodies and works to Oakington Brook associated with future phases of Northstowe could lead to a beneficial cumulative effect greater than the effect associated with phase 1 alone.

#### ***Traffic and transport***

- 14.21 Chapter 7 has identified that there will be no significant residual traffic and transport effects as a result of the proposed phase 1 development. It is therefore considered that there will not be any significant cumulative effects with the remaining phases of Northstowe. Requirements for any mitigation to prevent significant adverse effects arising from increased traffic associated with future phases of development will be examined in the ES accompanying any future planning application.

#### ***Air quality***

- 14.22 Chapter 8 identified the potential for moderate, significant adverse residual effects arising from the generation of dust and PM<sub>10</sub> during construction of the proposed phase 1 development. There would only be the potential for significant cumulative effects with a future phase of Northstowe if the construction period overlapped with that of phase 1, which is not considered likely at this stage. No significant residual post-construction air quality effects were identified in chapter 8 and it is therefore considered that there will not be any significant cumulative effects with the remaining phases of Northstowe. Requirements for any mitigation to prevent significant adverse effects arising from future phases of development will be examined in the ES accompanying any future planning application.

#### ***Noise and vibration***

- 14.23 Chapter 9 has identified that, with appropriate mitigation measures in place, there will be no significant residual noise and vibration effects as a result of the proposed phase 1 development. It is therefore considered that there will not be any significant cumulative effects with the remaining phases of Northstowe. Requirements for any further mitigation to prevent significant adverse effects arising from future phases of development will be examined in the ES accompanying any future planning application.

#### ***Geology, hydrogeology and contamination***

- 14.24 Chapter 10 has identified that, with appropriate mitigation measures in place, there will be no significant residual geology, hydrogeology and contamination effects as a result of the proposed phase 1 development. It is therefore considered that there will not be any significant cumulative effects with the remaining phases of Northstowe. Requirements for any remediation to prevent significant adverse effects arising from contamination associated with future

phases of development will be examined in the ES accompanying any future planning application.

***Water resources, flooding and drainage***

- 14.25 Chapter 11 has identified that a moderate, significant beneficial effect will arise through the reduction in existing flood risk post-construction on site and in Longstanton as a result of the proposed phase 1 development. The flood risk assessment in technical appendix H states that the proposed drainage system for phase 1 is designed to form part of a wider drainage strategy for future phases of Northstowe when these come forward. The future phases will also include additional attenuation ponds to mitigate existing flood risk in Oakington. The additional reduction in flood risk associated with future phases of development, combined with the reduction arising from phase 1, is considered to be a moderate, significant beneficial cumulative effect.
- 14.26 No significant adverse residual water resources, flooding and drainage effects are identified in chapter 11 as a result of the proposed phase 1 development. It is therefore considered that there will not be any significant adverse cumulative effects with the remaining phases of Northstowe. Requirements for any mitigation to prevent significant adverse effects arising from future phases of development will be examined in the ES accompanying any future planning application.

***Community, economic and social effects***

- 14.27 Several significant residual effects were identified in the community, economic and social assessment of the proposed phase 1 development (chapter 12), indicating the potential for cumulative effects with future phases of Northstowe.
- 14.28 The assessment of the residual effects of phase 1 identified the potential for a substantial, adverse significant effect on the public rights of way network on site during construction. There are no public rights of way on the remainder of the Northstowe site, so there is no potential for significant cumulative effects on public rights of way as a result of the full scheme.
- 14.29 The large increase in the population of Longstanton ward as a result of the proposed phase 1 development, leading to a substantial, significant effect, will be compounded by the population increase associated with the future phases of Northstowe. Part of the future development will fall within Cottenham ward to the south, but the additional residential development in Longstanton ward will lead to a large cumulative increase in population in the ward, which will be a substantial, significant cumulative effect.
- 14.30 The large increase in provision of housing as a result of the proposed phase 1 development, leading to a very substantial, beneficial, significant effect, will be compounded by the addition of up to a further 8,500 dwellings associated with the remainder of Northstowe. This will lead to a large cumulative

increase in provision of housing in the area, which will be a very substantial, beneficial, significant cumulative effect.

- 14.31 The proportion of the remaining dwellings that will be affordable is yet to be confirmed. However, based on a similar proportion to phase 1, there will be a large cumulative increase in provision of affordable housing in the area, which will lead to a very substantial, beneficial, significant cumulative effect.
- 14.32 The medium to large increase in employment generation post-construction as a result of the proposed phase 1 development, leading to a moderate, beneficial, significant effect, will be compounded by the addition of a further 10 ha of employment uses, plus additional retail, hotel, leisure and education uses that will also generate employment. This will lead to a large cumulative increase in employment generation, which will be a moderate, beneficial, significant cumulative effect.
- 14.33 The assessment of the residual effects of phase 1 identified the potential for a moderate, adverse, significant effect on NHS dental services as a result of increased demand associated with the increased population. However, it is envisaged that a new dental practice will be provided as part of the health facilities proposed in the wider Northstowe scheme. Therefore, there will be no significant adverse cumulative effects on NHS dental services with the full scheme in place.
- 14.34 The nature of light spill means that it is only significant within approximately 25 m of a proposed development, so the potential for cumulative lighting effects is limited to sensitive receptors that are within 25 m of both phase 1 and future phases of Northstowe. The only receptor assessed as part of phase 1 that could also be subject to a significant residual cumulative effect in relation to light spill and glare is Brookfield Farm.
- 14.35 There would only be the potential for significant cumulative construction lighting effects with a future phase of Northstowe if the construction period overlapped with that of phase 1, which is not considered likely at this stage. Assuming that post-construction light sources associated with future phases of Northstowe would be present at the perimeter of the scheme, immediately to the south east of Rampton Road, there is the potential for a significant cumulative effect at Brookfield Farm, although the degree of this effect cannot be confirmed at this stage.

#### ***Agriculture and soil resources***

- 14.36 The interaction and combination of damage to soil resources associated with the proposed phase 1 development and future phases of Northstowe is unlikely to result in a significant cumulative effect, assuming that the mitigation measures outline in paragraphs 13.75 and 13.76 of chapter 13 are applied to both phase 1 and future phases. These measures would reduce the cumulative magnitude of change to small and the cumulative effect will be slight and not significant.

- 14.37 The increased loss of best and most versatile agricultural land associated with future phases of Northstowe, together with the proposed phase 1 development, will increase the magnitude of change from medium to large. This will result in a substantial, significant, cumulative adverse effect. It should, however, be noted that the wider Northstowe site is committed for development in the approved planning strategy for the area and much of the site is previously developed land.