

Northstowe
Phase 1 Planning Application

Environmental Statement
Non-Technical Summary

February 2012

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Introduction

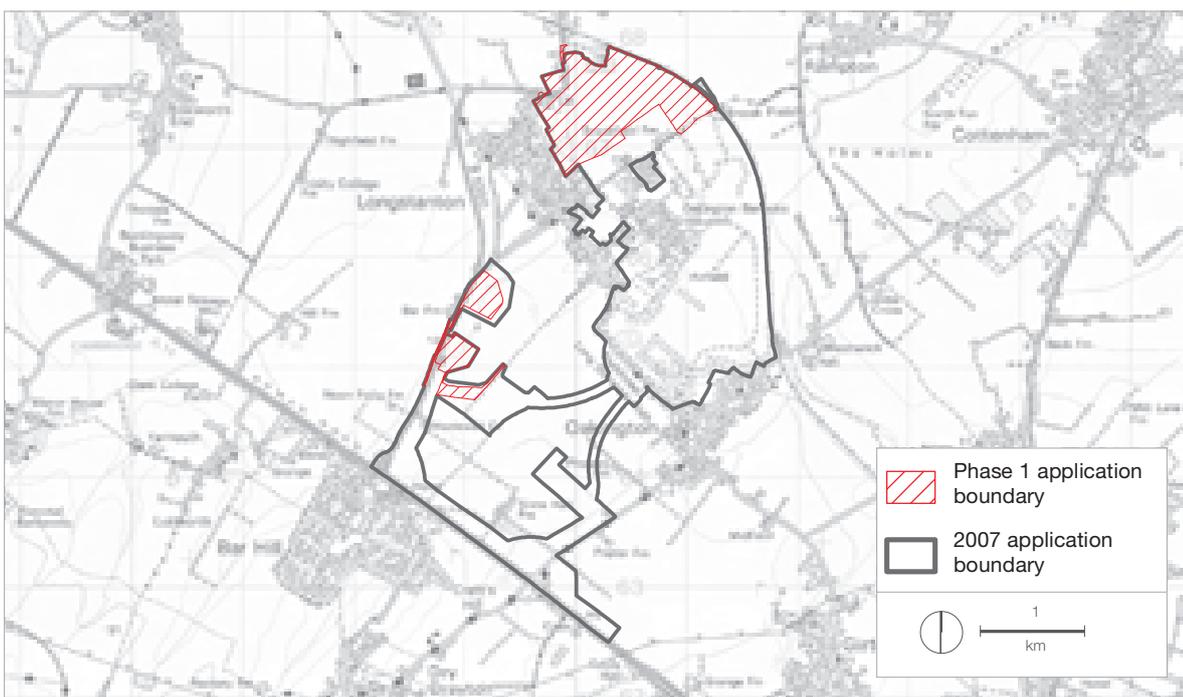
NTS.1 In 2007, Gallagher and English Partnerships (now the Homes and Communities Agency, HCA) submitted an outline planning application for the new town of Northstowe, located approximately 10 km to the north west of Cambridge. Three detailed infrastructure applications were also submitted. An environmental impact assessment (EIA) of the proposals was undertaken and an environmental statement (ES) was submitted with the applications.

NTS.2 The consultation and determination process for the 2007 applications is ongoing. The 2007 applications were consistent with the Highways Agency A14 Ellington to Fen Ditton scheme, which was withdrawn as a consequence of the government's spending review in October 2010. However, the government's Autumn Statement (HM Treasury, November 2011) now gives a commitment to increasing capacity and improving performance on the A14. For the short term, the government has made an immediate investment of £20 million

to reduce congestion on the A14, including measures to improve junctions and increase resilience.

NTS.3 In advance of any longer term measures being confirmed as coming forward in relation to the A14 improvement works, Gallagher, in consultation and with the full support of the HCA, is submitting a new outline planning application to South Cambridgeshire District Council for an initial phase of Northstowe, including approximately 1,500 dwellings, a primary school, local retail and community facilities, employment land, formal and informal open space and associated infrastructure. Figure NTS1 shows the location of the site in relation to the wider area, the 2007 Northstowe application boundaries and the current application boundary.

NTS.4 An EIA was required, in accordance with schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, due to the potential for significant environmental effects. An ES has been prepared to report the findings and its key elements are summarised in this non-technical summary.



NTS1 Phase 1 site in the context of the 2007 Northstowe application boundaries

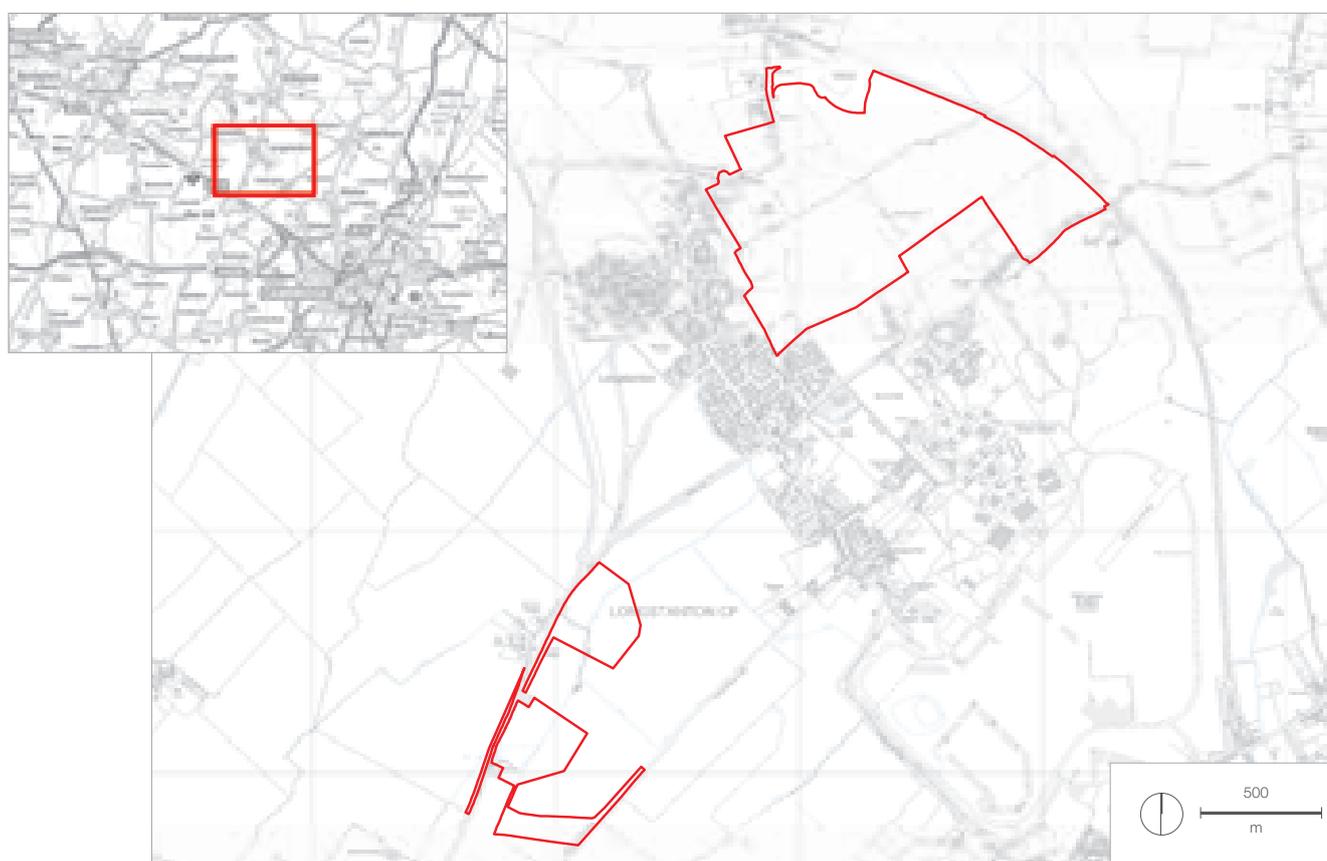
The proposed development site

NTS.5 The site is divided into two blocks: the primary development site that will accommodate the proposed dwellings, employment land, facilities and open space and the Hatton's Road attenuation ponds area (figure NTS2). The 97 ha primary development site comprises the 18-hole Cambridge Golf Course and driving range in the south and centre and agricultural fields in the north and south east.

NTS.6 There are several engineered ponds within the golf course, which largely consists of amenity grassland, and a number of fen drains that drain surface water from the course. There is an area of marshy grassland in the south west of the site. There are trees across the primary development site associated with the landscaping of the golf course and several hedgerows that run along the fen drains. Three public footpaths run through the west of the site and a byway runs through the south east.

NTS.7 The primary development site is bordered to the north and north east by the Longstanton Park and Ride and the route of the Cambridgeshire Guided Busway, beyond which are fields, and to the south and south east by the remainder of the wider Northstowe site, including an area of fields to the north of Rampton Road and the former Oakington Immigration Centre, barracks and airfield. The village of Longstanton forms the western site boundary.

NTS.8 The 25 ha Hatton's Road attenuation pond area lies adjacent to the B1050, to the south west of Longstanton and the north of New Close Farm (figure NTS2). It is in arable agricultural use and is bordered to the west by the B1050 and to the east, south and north by agricultural fields. Longstanton Brook runs through the west of the area.



NTS2 Application boundary

The proposed development

NTS.9 Figures NTS3a and NTS3b illustrate the distribution of proposed land uses across the site. The predominant land use will be residential development and this will accommodate up to 1,500 dwellings. It is proposed that up to 35% of these dwellings will comprise affordable housing units.

NTS.10 A 3 ha site for a three form entry, 630-place primary school and an interim community hub is proposed in the centre of the site. Approximately 5 ha of employment land is proposed in the north of the site, adjacent to the Park and Ride. It is proposed that this will accommodate up to 12,740 m² of employment floorspace, split into approximately 6,370 m² of B1 (business), approximately 5,096 m² of B2 (general industrial) and approximately 1,274 m² of B8 (storage and distribution) uses. This area will also include a 1.25 ha household recycling

centre and a foul water pumping station. A 1.22 ha mixed use local centre will be provided to the south of the proposed employment area, adjacent to the B1050. This area will include ground floor retail uses covering 1,500 m², a 900 m² community building, approximately 450 m² of other commercial / retail / food and drink / community uses and some of the dwellings discussed above.

NTS.11 Approximately 6.17 ha of formal recreation / sports pitches are proposed in the west of the site, adjacent to Longstanton, together with changing facilities. Approximately 1.57 ha of allotments are proposed to the north of the sports pitches, with smaller community gardens in the centre of the site. In addition, around 23 ha of informal open space will be provided across the site, much of which will be in the east adjacent to the Cambridgeshire Guided Busway. Equipped play areas will be distributed across the site within the informal open space.



Figure NTS3A Land use and open space: primary development site

Two green corridors will be provided running west-east through the site.

NTS.12 Existing tree groups in the west of the site will be retained and new structural planting is proposed along the western boundary. Some of the existing hedgerows along the site boundaries and along the field boundary in the south east of the site will also be retained. New habitat creation in the Hatton's Road attenuation ponds area will include species rich grassland, marshy grassland, structural planting and areas of scrub (figure NTS3b).

NTS.13 The proposed building heights have been designed with regard to the sensitivity of the location of Longstanton village at the site's western edge and the importance of the main roads through the site (figure NTS4 - overleaf). Residential buildings along the western edge of the proposed development will be up to two storeys in height, with a maximum ridge height of

9 m. Residential buildings along the main roads through the site will be up to four storeys, with a maximum ridge height of 14.5 m. The remainder of the residential buildings will be up to three storeys, with a maximum ridge height of 11 m.

NTS.14 The majority of buildings in the proposed local centre will have a maximum ridge height of up to 14.5 m, although a potential location for a landmark building or structure (up to 25 m) is identified on the edge of the local centre. The school will have a maximum height of up to 9 m, while the employment buildings and recycling centre will have a maximum height of up to 13 m. The changing facilities will have a maximum height of up to 8 m.

NTS.15 The site will be developed at a range of densities, from 30-34 dwellings per hectare (dph) along the western edge to 38-42 dph along the main roads through the site (figure NTS5 - overleaf).



Figure NTS3B Land use and open space: Hatton's Road attenuation ponds area

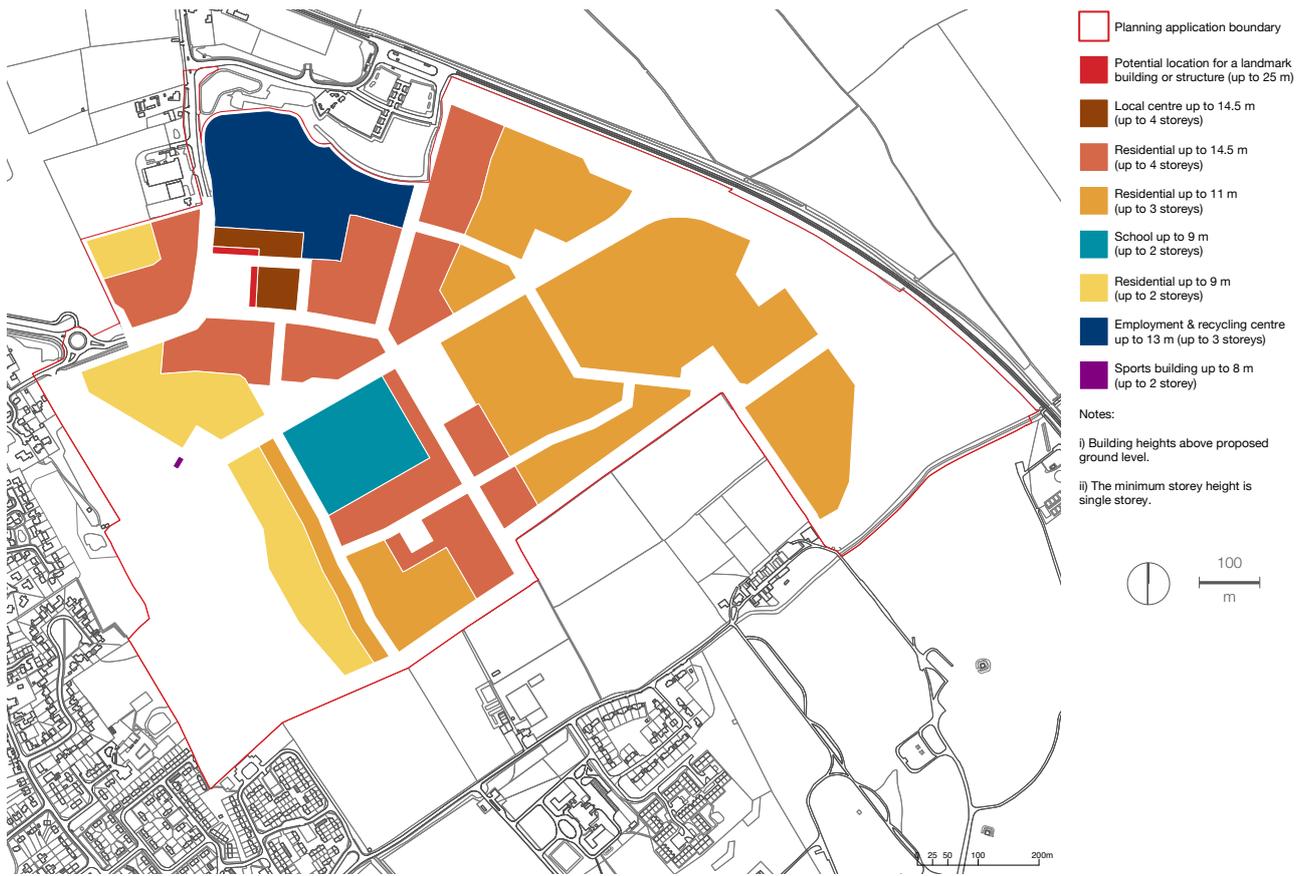


Figure NTS4 Building heights

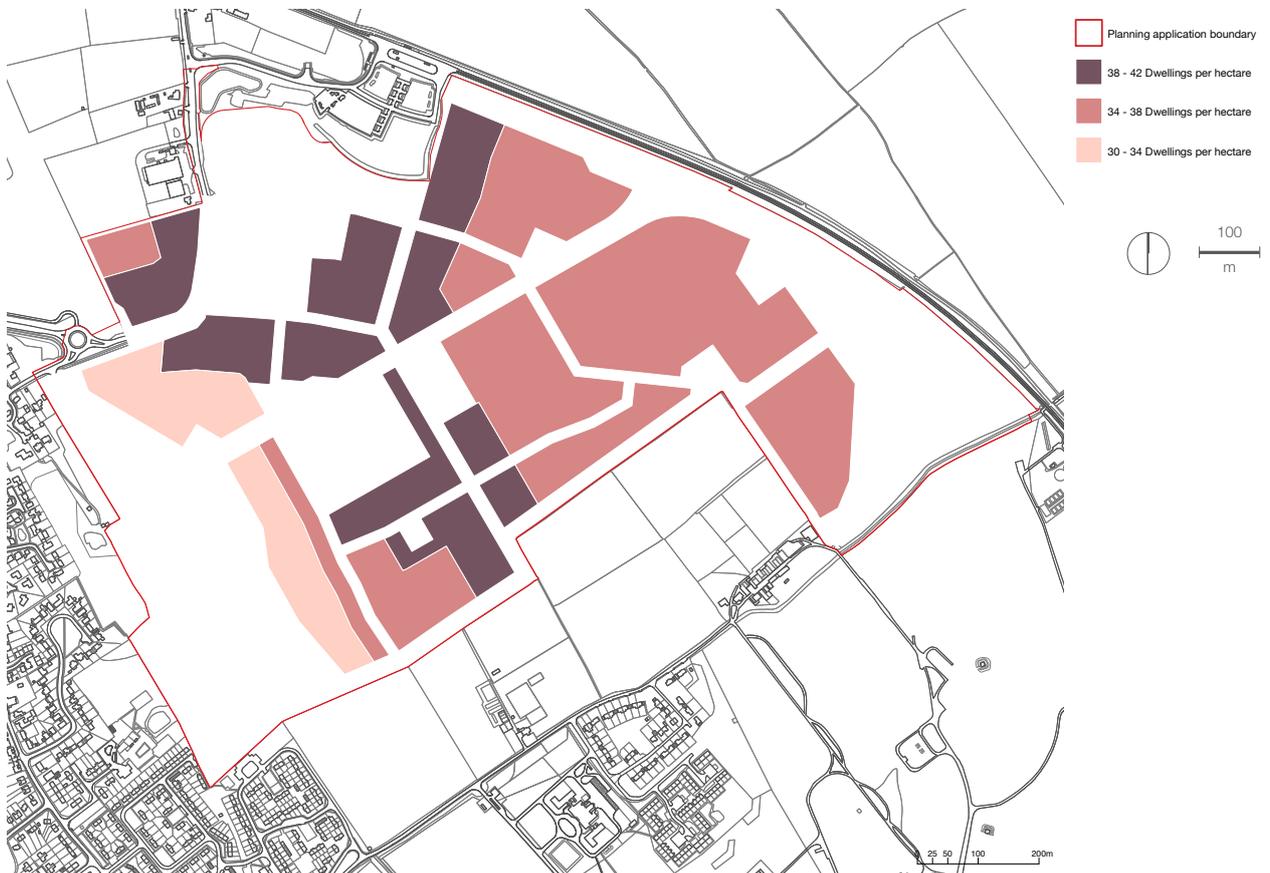


Figure NTS5 Density

NTS.16 The access and movement strategy is shown on figure NTS6. Vehicular access to the site will be via four new junctions with the B1050, one of which will be a dedicated access for the proposed employment land. The B1050 will be realigned where it passes through the north of the site. The existing public footpaths and byway on site will be retained and a new network of on and off road cycle and pedestrian routes will be created through the site. This will also link the proposed development with Longstanton to the west and connect into the existing off site public right of way network. A new pedestrian / cycle only crossing will be provided across the B1050 where it passes through the site, to connect the local centre with the proposed residential area to the west of the B1050. Land will be safeguarded through the centre of the site for the first length of an internal busway link for the Cambridgeshire Guided Bus.

NTS.17 The proposed surface water drainage strategy consists of an attenuation area in the east of the primary development site, adjacent to the Cambridgeshire Guided Bus route, which will contain two ponds designed as permanent water features. These will be designed to store all the runoff from the site in a 1 in 200 year plus climate change storm event, with additional capacity provided in the adjacent public open space to cater for extreme storm events or a second storm occurring while the area is draining down. The attenuation area will discharge into the Reynolds Drain, although in the event of flood conditions in Reynolds Drain and the Beck Brook all water will be stored on site until the watercourse levels subside. Discharges will be controlled using a telemetry system linked to downstream water level monitoring sensors.

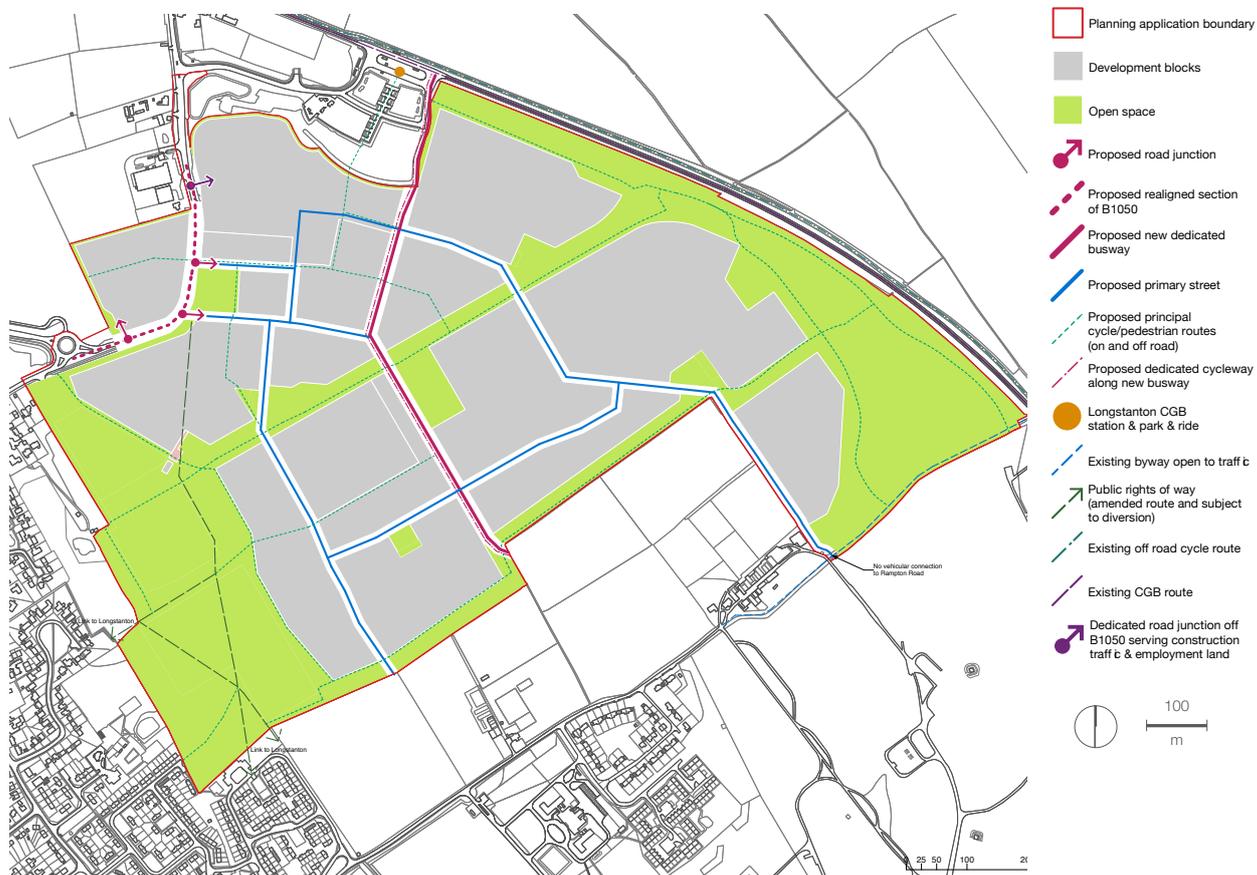


Figure NTS6 Access and movement

NTS.18 The proposed development will also include a range of sustainable drainage systems, such as 'living roofs' and porous paving. In addition to the attenuation ponds proposed on the primary development site, flood mitigation for existing flooding in Longstanton is proposed in the form of the Hatton's Road attenuation ponds to the south of the village. Two ponds of approximately 4.0 ha and 5.5 ha will be provided adjacent to Longstanton Brook. Normal flows will bypass the ponds, but flows will be diverted into the ponds in extreme flood events, which will reduce flood flows through Longstanton.

NTS.19 The main aim of the earthworks strategy is to lift ground levels above the floodplain to provide flood protection where necessary and to enable the development plots to be drained to the proposed attenuation ponds in the south east of the site. This will be achieved by a proposed earthworks strategy that will aim to minimise the movement of material within the development and the amount of material to be imported / exported to the proposed development by incorporating an allowance for construction arisings generated during the development of the plots. Excavated material from the proposed attenuation ponds and greenways will be spread over the remainder of the site. Topsoil will be stripped and stored separately for later re-use within the development and landscaped areas for Phase 1 and later phases.

Alternatives

NTS.20 The location of the wider Northstowe new town has been tested over several years through a range of studies undertaken by Cambridgeshire County Council and South Cambridgeshire District Council to inform their development plan process. The allocation of Northstowe for a new town was confirmed in the adopted Cambridgeshire and Peterborough Structure Plan (2003), and subsequently in the East of England Plan, the adopted South Cambridgeshire Core Strategy (2007) and the

adopted Northstowe Area Action Plan (2007). In light of the range of studies undertaken, and the allocation of Northstowe in adopted policy documents, it was not considered appropriate to investigate potential alternative sites further.

NTS.21 The master plan for the proposed Phase 1 development has evolved through consultation with South Cambridgeshire District and Cambridgeshire County Councils, the Parish Forum and wider public consultation, including an exhibition of the draft proposals. The main aspects of the master plan that were revised as a result of these consultations are as follows:

- The street network was strengthened to provide additional cycle and pedestrian connections to Longstanton
- Connections with the Cambridgeshire Guided Busway, cycle path and Longstanton were improved
- Commuter and strategic cycle routes were incorporated through the scheme, linking with the wider strategic network and surrounding settlements
- The guided bus will run on the central dedicated carriageway through the proposed development, with a dedicated cycleway running parallel. Within this corridor, local traffic is only permitted along defined stretches of the route
- The junction arrangements off the B1050 were revised to improve pedestrian and cycle links and optimise the distribution of traffic
- The location and configuration of the local centre, primary school and sports hub evolved over several potential layouts to strengthen connectivity between these key amenity and social infrastructure facilities and facilitate their delivery and long term management
- The employment zone was moved westwards, closer to the B1050 and the park and ride. The interface between employment, retail and residential land uses was considered further to ensure scale, building heights and massing harmonised and so that the layout responded to key routes

- The proposed drainage ditches were made more linear to reflect the characteristics of fen edge drainage
- The proposed greenways were widened to improve amenity and ecological value and enhance opportunities for informal play
- The layout of parking was reviewed to minimise courtyard parking
- The character of the principal routes into the site, including the B1050 and access from the Cambridgeshire Guided Busway, were explored further, with the objective of establishing attractive urban corridors into the settlement and a strong sense of arrival
- The proposed housing parcels were refined to increase variety and strengthen the open space and landscape structure

Assessment methodology

NTS.22 The initial stage of the EIA was the production of a scoping report that identified the potential environmental effects to be addressed during the process. This was issued to a range of consultees for comment and a number of additional issues were identified.

NTS.23 The various specialist assessments, discussed in more detail below, followed generally similar methodologies. Baseline desk and / or field studies were undertaken to establish the existing situation at the site. The effects of the proposed development were evaluated using a method that compares the sensitivity and importance of receptors with the likely magnitude of change from the baseline situation to establish the degree of the effects. If the degree of effect is moderate or above, then the effect is considered to be significant. Slight or negligible effects are not considered to be significant.

NTS.24 The degree of an effect determines the resources that should be put in place to avoid or reduce (mitigate) an adverse effect and identifies the actual value of a positive effect.

NTS.25 The proposed development will form an initial phase of the wider Northstowe new town development. The potential for cumulative effects with the full Northstowe development has therefore been assessed for each environmental aspect, and is reported in the topic sections below. The assessment was based on the 2007 master plan, as updated by the 2012 Development Framework Document, including consideration of an area of 'reserve land' to the north as part of the future Northstowe wider development. Full details of the cumulative scheme considered can be found in chapter 14 of the ES.

NTS.26 Cumulative effects with future phases 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 reported in this non-technical summary.

Environmental effects

Landscape and visual effects

NTS.27 Desk and field studies were undertaken to evaluate the landscape in and around the site, and to identify potential views and visual receptors. Several were selected to provide representative viewpoints from various locations, which were agreed with South Cambridgeshire District Council.

NTS.28 The site and surrounding area fall within the Bedfordshire and Cambridgeshire Clay Lands National Character Area, which is characterised by gently undulating topography, an open and intensive arable landscape and a diversity of

building materials. The main settlements are clustered around major road and rail corridors, with smaller dispersed settlements across the area. At a more local level, the site lies within the Lowland Village Farmlands Character Area. Other local character areas in the vicinity include Wooded Village Farmlands, Planned Peat Fen and Valley Meadowlands.

NTS.29 The proposed development will lead to a substantial, adverse, significant effect on the landscape character of the site as a result of the replacement of the existing golf course and fields with built development. No significant effects are predicted on the wider landscape character areas as a result of the proposed development, as it will only affect a very small proportion of these character areas.

NTS.30 The potential for effects on the landscape resources and visual receptors was a key consideration in the design of the proposed development. The majority of the hedgerows and trees of higher value will be retained on site. Boundary vegetation will be retained and strategic planting will be provided on the western boundary. The proposed development includes a buffer of public open space between the new built development and Longstanton, and proposed building heights and densities will be lower on the western edge of the development.

NTS.31 The introduction of built development will change views of the site from the surrounding area, with the most significant effects on receptors closest to the site. Very substantial, significant adverse effects are predicted on views from the Cambridgeshire Guided Busway adjacent to the site and from Magdalene Close, while substantial, significant adverse effects are predicted on views from the public rights of way on the golf course, Rampton Road adjacent to the site and near Rampton, and Reynolds Drove. Moderate, significant adverse effects are predicted on views from Rampton Road near Cottenham, Rampton Drift, the B1050 junction

with the Park and Ride and Station Road.

NTS.32 Slight effects that will not be significant are predicted on views from viewpoints further away from the site, including at Aldreth, the American Cemetery, farmland south of Boxworth, Tipplers Road, Iram Drove, Guns Lane, Ramper Road and the B1050 / A14 junction at Bar Hill.

NTS.33 As set out above, several significant residual effects are identified in the landscape and visual assessment of the proposed Phase 1 development, indicating the potential for cumulative effects with future phases of Northstowe. 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.

NTS.34 Very substantial, significant adverse cumulative effects are predicted on views from Magdalene Close and the Cambridgeshire Guided Busway, as future phases of Northstowe would result in a large increase in the extent and amount of visible development over and above that associated with Phase 1. Substantial, significant adverse cumulative effects are predicted on views from Rampton Road near the site and near Rampton, Rampton Drift, Reynolds Drove and the public footpath on the southern side of the golf course as a result of the increased extent of visible development and / or closer proximity of development to the viewpoints associated with future phases of Northstowe. Moderate, significant adverse cumulative effects are predicted on views from Rampton Road near Cottenham.

NTS.35 The future phases of Northstowe will not result in an increase in the extent or amount of development visible from the B1050 near the Park and Ride, Station Road, the western side of the

golf course and the 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.

NTS.36 As no significant effects were predicted on views from Aldreth, the American Cemetery, farmland south of Boxworth, Tipplers Road, Iram Drove, Guns Lane, the B1050 / A14 junction and 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 environmental statement submitted in support of any future planning application.

Cultural heritage

NTS.37 A range of archaeological investigations was undertaken on site between 2004 and 2007, including trial trenching, and an updated desk-based study has also been produced. The studies revealed evidence for settlements from as early as the Bronze Age. There are more than 15 Iron Age settlement enclosures within the 3 km study area, reflecting the primary colonisation period. Two of the enclosures are of significant scale, one of which falls within the primary development site.

NTS.38 The Romano-British sites recorded in the study area are of significant size and scale. The main concentration of settlement appears to have occurred along the spine of the gravel ridge running north-south through the application site and airfield. One site recorded within Oakington Airfield, to the south of the primary development site, is approximately three times the size of Roman Cambridge.

NTS.39 Four graves were revealed during excavations of the Romano-British sites on the primary development site, and a rich concentration of Roman metalwork was found

in close proximity. These discoveries indicate a possible cemetery site. At least three major farmsteads / villa sites are inferred in the study area. One of these, in the west of the primary development site, comprises a major building complex.

NTS.40 The majority of the medieval archaeology sites recorded in the study area are remnants of medieval agriculture, in the form of ridge and furrow lines. The most well-defined series of ridge and furrow lies to the south of Rampton Road, to the south east of the church, and further extensive earthworks are present in the vicinity of The Manor and Grove Cottage. English Heritage recently rejected a request to add these series of earthworks, referred to as Longstanton shrunken medieval village, to the schedule of monuments. The earthworks are therefore considered to be of local significance.

NTS.41 There is the potential for damage to below ground archaeological remains on site during construction, and a detailed programme of mitigation measures will be put in place to prevent this and ensure that there will be no significant adverse effects. Six different zones have been identified for these works and different levels of mitigation are proposed for each zone, in proportion to the nature, significance and extent of the archaeological remains in each zone. For example, several areas of remains will be preserved in situ, while others will be subject to extensive excavation to reveal the settlement organisation and evolution of the complex prehistoric landscape north of Rampton Road. Additional evaluation will be undertaken of areas outside the known archaeological sites in the primary development site to determine the extent of excavation required in these areas. The written scheme of investigation for these works has been agreed and endorsed by the Cambridge Historic Environment Team.

NTS.42 Areas of remains that are to be preserved in situ will be fenced during construction and detailed measures to protect

these areas during construction will be set out in a construction environmental management plan for each phase of development, which will be agreed with the Cambridge Historic Environment Team. In the unlikely event that features of archaeological interest are uncovered during construction outside of investigation areas, further appropriate surveys and investigations will be undertaken. All these measures will ensure that there will be no significant adverse effects on the majority of the archaeology during construction. However, the southern portion of the Romano-British settlement site extends beyond the boundary of the Phase 1 application site. As it stands, approximately 7.6 ha of the suspected 11 ha of the settlement is proposed for full detailed excavation. The bisection of the site will be a temporary moderate, significant adverse effect, with the opportunity to investigate the southern portion coming forward in a future phase of Northstowe.

NTS.43 The excavated archaeological resource will be preserved by record under the approved scheme of investigation. A range of strategies will be used to disseminate information to the local population, such as excavation open days, an online excavation diary / blog, monthly information leaflets / pamphlets / newsletter, temporary displays produced in association with the local history society and schools, talks / lectures by academic advisors and the site director, and training in excavation and finds processing for schools, local society members and other interested members of the community. The knowledge gained through the excavation process and the dissemination of this to the local and academic communities will be a substantial, beneficial, significant effect.

NTS.44 There are no nationally designated scheduled monuments on site. The wider study area includes one scheduled monument, the motte castle with earlier medieval settlement at Giant's Hill. There is no direct intervisibility between the scheduled monument and the

proposed development site, and the intervening Cambridgeshire Guided Busway provides a strong visual separation. As a result, no significant effects are predicted on the scheduled monument or its setting as a result of the proposed development.

NTS.45 There are numerous listed buildings in Longstanton, Oakington and Rampton, many of which date from the 17th century. Few later buildings in the study area are listed, although there are two late 19th century listed water pumps in Longstanton. The village of Westwick is almost all 19th century in date and includes the listed Westwick Hall.

NTS.46 The Longstanton conservation area includes the listed buildings concentrated in two areas at the churches of All Saints and St Michael and extends south to include the house and grounds at St Michaels Mount. Much of the conservation area is the significant landscape setting, including woodland and the large areas of ridge and furrow bounded by the old route of Long Lane. The Oakington conservation area is smaller and more tightly drawn around the historic core at the church, but includes the area of medieval earthworks on Water Lane. The conservation areas at Rampton and Westwick include the areas of parkland landscape at the former castle at Giant's Hill and the designed landscape at Westwick Hall.

NTS.47 The flat landscape and lack of elevated vantage points mean there are few views of the site from long distances. For much of the study area to the south, including Oakington and Westwick, the site is not predicted to be visible. The Cambridgeshire Guided Busway provides a strong visual separation between the site and Rampton. As a result of these factors, no significant effects are predicted on the listed buildings or conservation areas in Oakington, Westwick or Rampton as a result of the proposed development.

NTS.48 Within Longstanton, the two churches are the only buildings of high status and with prominence above the domestic scale. All Saints church is enclosed within recent development, with no open vistas or strong relationship to the agricultural land of the parish. However, the church spire has a landmark role in the wider area and the proposed development could result in a reduction to this landmark role through additional development to the north east. This will be a change to a single and small element of the significance of this building and will be a slight effect on the setting that will not be significant.

NTS.49 Visual presence is not a major element of the significance of the church of St Michael, and its setting is based on the immediate curtilage and the contribution of the close group of associated buildings and the street layout. As a result, no significant effects are predicted on the setting of the church. In addition to a number of very small structures, such as a water pump, churchyard cross and well, the other listed structures in Longstanton are of domestic scale, grouped round the churches, and are now set within areas of new development. For these buildings, there is no expectation of wider setting relationships extending to the site area to the north. No significant effects are predicted on these listed buildings from the proposed development.

NTS.50 The key characteristics of the relationship of the Longstanton conservation area to the surrounding land are the value of the remaining agricultural character and of vistas across the open fields. Most of the land that is of value to the conservation area is within it, and the key vistas do not extend outwards beyond the area's boundary. The contribution of the golf course to the setting of the conservation area is minimal, as it diverges from the agricultural pattern. The site also does not feature in the main approaches of value to the conservation area.

NTS.51 However, the proposed development will result in change to the setting of the conservation area from several sources: the combined effect of the increased presence of development and divergence of character of the northern part of Longstanton, minor changes to views, including of the spire of All Saints church, to approaches and main routes and to the overall agricultural context. The change in the balance between built development and fields will result in a moderate to slight, significant adverse effect on the setting of the conservation area.

NTS.52 Oakington Airfield, to the south of the primary development site, was operational from July 1940 and was retained by the RAF after the war, transferring to the army in 1973. The main surviving element of the airfield is the layout to the south of Rampton Road, with the core of administrative and technical buildings and pillboxes dispersed around the periphery. The nearest pillboxes to the primary development site are immediately adjacent to the site's south eastern corner, at the eastern end of Rampton Road, and to the south of the site, at the western end of Rampton Road. Nine of the pillboxes have recently been listed at grade II.

NTS.53 The principal element of the closest listed pillboxes to the site is the functional relationship to the airfield and the rest of the group of pillboxes that served to defend the airfield. Modern development is already a significant presence in the setting, and no significant effects are predicted as a result of the proposed development.

NTS.54 The significant adverse effect on archaeology identified above as a result of the severance of the southern portion of the Romano-British settlement site will be reversed with the implementation of future phases of Northstowe, as the excavation of the settlement will be completed. It is expected that similar archaeological mitigation measures will be required for future development at Northstowe

as are proposed for Phase 1. However, as excavation by its nature is a destructive process, there is the potential for a substantial, significant cumulative effect as a result of the excavation of a large amount of the archaeological resource suspected to be present on the wider site.

NTS.55 The moderate to slight adverse effect on Longstanton conservation area as a result of Phase 1 will be compounded by future phases of development directly adjoining the conservation area boundary to the east, from Long Lane south to St Michaels. This is predicted to be a substantial, significant adverse cumulative effect.

Natural heritage

NTS.56 The majority of the primary development site consists of amenity grassland, which is subject to intensive management and irrigation. Improved grassland, which is currently grazed and cut for hay, is present in fields to the north of the golf course. There is an area of wet grassland in the south of the golf course. The Hatton's Road attenuation ponds area comprises intensively managed arable fields, with unmanaged field margins. Semi-improved grassland is present on the golf course, the Hatton's Road attenuation ponds area and along roadsides.

NTS.57 There are small patches of woodland on the golf course and scattered trees across the primary development site, including mature oak and ash. Young trees have been planted throughout the golf course and scrub habitat is present across the site. The hedgerows on site are mainly species-poor and dominated by hawthorn and blackthorn. Wet and dry ditches are present across the site and Longstanton Brook runs through the Hatton's Road attenuation ponds area. There are 27 ponds within the golf course, the majority of which have steep-sided banks.

NTS.58 A range of protected species surveys was undertaken. Potential foraging habitat for

badgers was recorded across the site, but no evidence of badgers was found. Bat surveys of the club house revealed it is used by common pipistrelles. Six bat species were recorded commuting and foraging across the golf course and four species were recorded foraging within the Hatton's Road attenuation ponds area. Important habitat areas for these bats include the northern, eastern and western tree and hedge boundaries on the primary development site, the hedgerow north of the club house, the dense areas of scattered trees in the centre of the site and over the lake and several ponds.

NTS.59 Nesting and foraging habitat for birds is present across the site. A total of 40 bird species was recorded on the primary development site, 13 of which were confirmed as breeding species on the golf course. Three of these (song thrush, linnet and starling) are UK Biodiversity Action Plan species. A total of 24 bird species was recorded on the Hatton's Road attenuation ponds area, 13 of which were confirmed as breeding species. Six of these (yellowhammer, dunnoek, reed bunting, yellow wagtail, skylark and linnet) are UK Biodiversity Action Plan species.

NTS.60 Invertebrate surveys recorded two nationally scarce water beetles and two nationally scarce weevils in the ponds on site. Fourteen species of butterfly were recorded on the primary development site and 11 on the Hatton's Road attenuation ponds area.

NTS.61 Common lizards were recorded across the site and a grass snake was recorded on the golf course. No great crested newts were recorded in any of the ponds surveyed.

NTS.62 Potential habitat for water vole and otter is present across the site. However, no evidence of these species was recorded on the golf course. A water vole burrow, latrine and feeding station was recorded within the Hatton's Road attenuation ponds area along Longstanton Brook.

NTS.63 The proposed development will lead to the loss of the arable and grassland habitats on site, which will be a moderate, significant adverse effect. The proposed development will incorporate a range of new habitats to mitigate effects on other habitat types, including hedgerows, scrub, copses, scattered trees, ponds and ditches. In addition, new meadow and wet grassland will be planted. The new habitats will be subject to an ecological management plan to enhance their value. The creation and management of these new habitats will ensure that there will be no other significant adverse effects as a result of habitat loss. A programme of best practice mitigation measures will be put in place through the Construction Management Strategy to prevent significant adverse effects on retained habitats during construction.

NTS.64 The diverted section of Longstanton Brook and newly created linear waterbodies will be enhanced once the excavation and infilling works are complete. They will be profiled to incorporate shelves for marginal planting and to maximise potential burrowing habitat for species such as water and bank vole. A range of native species will be planted on the profiled shelves in set proportions. The diverted section of the brook and the new waterbodies will also be subject to a rotational management regime, which will aim to create a varied structure of vegetation, prevent drying from siltation and manage levels of litter and other debris. This habitat creation and enhancement will be a moderate, beneficial, significant effect.

NTS.65 A range of mitigation measures will be implemented during construction to prevent significant adverse effects on species using the site. These include translocation of reptiles, a temporary artificial badger sett, a compensatory bat roost to replace the summer pipistrelle roost in the golf course club house, timing clearance works to avoid the bird breeding season where possible, supervising clearance works within the bird breeding season, and relocation of water

voles from along the stretch of Longstanton Brook that is to be diverted. Post-construction, the proposed lighting has been designed to minimise light spill to prevent adverse effects on bats and birds.

NTS.66 The above measures, together with the new habitat creation, will ensure that there will be no significant effects on the majority of species using the site. The only exception is skylark, which will experience a moderate, significant adverse effect as a result of the loss of arable breeding habitat.

NTS.67 There are no designated nature conservation sites within the proposed development site, although there are several in the vicinity. These include Mare Fen Local Nature Reserve and County Wildlife Site, Madingley Brick Pits County Wildlife Site and the RSPB reserve at Fen Drayton. Other sites of nature conservation interest in the area include Wicken Fen and Coton Country Park. The potential for effects on these sites as a result of increased recreational activity associated with the proposed development was considered. However, as a result of a number of factors, including the distance of these areas from the site and the availability of good visitor facilities and waymarked trails, it was concluded that there will be no significant adverse effects on these sites as a result of the proposed development.

NTS.68 As the proposed Phase 1 development will lead to a moderate significant adverse effect due to habitat loss, there is the potential for a cumulative effect with future phases of Northstowe. The future phases will lead to further loss of these habitats, which will be a large change and a moderate, significant adverse cumulative effect. There is also the potential for a significant cumulative effect on skylarks as a result of the further loss of arable breeding habitat in future phases. In the absence of mitigation, this could lead to a cumulative effect on breeding skylark that is greater than the

moderate, significant adverse effect identified for Phase 1. There is the potential that the creation of additional waterbodies and works to Oakington Brook associated with future phases of Northstowe could lead to a beneficial effect greater than that arising from the creation of new linear waterbodies and enhancement of Longstanton Brook as part of Phase 1.

Traffic and transport

NTS.69 The traffic and transport assessment deals with the effect of the increased traffic associated with the proposed development on traffic flows and sensitive receptors in the vicinity of the site.

NTS.70 It is estimated that there will be an average of 19 HGV movements per day, rising to a maximum of 39 HGV movements per day during the peak of construction activity in 2017 / 2018. Construction traffic will be routed to and from the site via the A14 Bar Hill Interchange, along the B1050 to the site accesses. HGV traffic from the aggregate works to the north of Willingham will be subject to agreement with the district and county councils, which will reflect existing restrictions. No significant effects are predicted on traffic flows on local roads as a result of the construction traffic.

NTS.71 Traffic modelling undertaken for the transport assessment showed that traffic flow increases associated with the proposed development will typically be within the capacity limits of existing roads and junctions. A few junctions will operate at or above capacity, but the changes arising from the proposed development will be marginal. The A14 is currently operating close to capacity and few material changes are predicted to traffic flows on the A14 and in the local area as a result of the proposed development. Generally, where changes do occur they will be relatively small, with some existing inter-urban trips on local roads redistributing onto other roads.

NTS.72 The assessment focused on the community as a sensitive receptor and addressed the traffic and transport effects in terms of the severance (for example, being unable to cross the road), driver delay and effects on pedestrian amenity that may result from an increase in traffic volumes in close proximity to sensitive receptors, such as residences, post-construction.

NTS.73 Existing levels of severance in surrounding villages are generally slight to moderate, with crossing facilities available to reduce severance in most villages. Footways are typically present along roads within the limits of each village, although these are discontinuous in places, and existing pedestrian / cycle amenity is generally adequate or poor. The areas with highest existing levels of driver stress occur on and close to the A14. Accident rates in the area are generally below national trends.

NTS.74 The assessment concluded that the existing traffic environment will be maintained within the study area and the proposed development will result in negligible changes to severance, amenity, driver delay and accident rates that will not be significant.

NTS.75 The site will include a network of footways and cycleways that will link to external routes and avoid existing roads. A series of pedestrian crossings will be provided across the B1050 to link development east and west of the road. This will improve severance and pedestrian / cycle amenity in this area. The site is adjacent to the route of the Cambridgeshire Guided Bus, which provides bus services between Huntingdon and Cambridge. In addition, the existing 'Citi 5' bus service, which currently runs between Bar Hill and Cambridge, will be extended to Longstanton and into the site. In combination with the Cambridgeshire Guided Bus, this will ensure that all the proposed properties will be within 400 m of a bus service offering at least a 20 minute frequency of service

to Cambridge city centre. Rigorous resident, workplace and school travel plans will be put in place at the proposed development to promote sustainable travel.

NTS.76 As the proposed Phase 1 development will not have any significant residual traffic and transport effects in its own right, there is no potential for significant cumulative effects 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 environmental statement prepared in support of any future planning application.

Air quality

NTS.77 The traffic-related pollutants nitrogen dioxide and fine particulate matter were the main focus of the air quality assessment, although construction dust was also addressed.

NTS.78 Current air quality around the site was established from measurements made by South Cambridgeshire District Council and modelled data provided by DEFRA. This showed that the national air quality objectives for the traffic pollutants are being achieved in the vicinity of the site, but exceeded along the A14. In line with these findings, South Cambridgeshire District Council has declared an air quality management area along the A14 between Bar Hill and Milton for nitrogen dioxide and particulate matter.

NTS.79 During the construction process, there is the potential for increased dust and particulate generation from activities such as site preparation, earthworks and transport and storage of materials. A range of best practice mitigation measures will be put in place through the Construction Management Strategy to minimise the potential for adverse effects on local sensitive receptors from increased dust and particulate generation. These measures will include sheeting of lorries, wheel-washing,

covering or screening stockpiles, having regard to wind direction during dust-generation activities and covering / vegetating completed earthworks as soon as possible.

NTS.80 There will still be the potential for a moderate, adverse, significant effect on receptors within 200 m of the site as a result of dust and particulate generation during construction, but it should be noted that these effects will be temporary and will not be constant throughout the construction period. It is likely that the most significant dust generating activities will take place during the early years of construction, while earthworks are in progress. Once the bulk of these works is completed, the proposed allotments and sports pitches will create a buffer between existing receptors and Longstanton, which will help to reduce the potential for dust nuisance during later stages of the construction process.

NTS.81 The modelling undertaken to predict emissions related to post-construction traffic activities showed that there will be no significant increase in the concentrations of the traffic pollutants as a result of the proposed development. No significant effects are predicted on sensitive receptors or on the air quality management area.

NTS.82 As there will be a moderate, significant adverse residual effect arising from the generation of dust and particulate matter during construction of the proposed Phase 1 development, the potential for cumulative effects with future phases of Northstowe has been considered. 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. As no significant residual post-construction air quality effects were identified for Phase 1, there is no potential for significant cumulative effects 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 environmental statement prepared in support of any future planning application.

Noise and vibration

NTS.83 Noise monitoring was undertaken to establish the existing noise environment in the vicinity of the site. The most significant noise sources around the site are the B1050 and the Cambridgeshire Guided Busway.

NTS.84 During the construction process, there is the potential for increased noise from demolition of buildings associated with the golf course, site preparation, earthworks and building activities. A range of best practice mitigation measures will be put in place through the Construction Management Strategy to ensure that there will be no significant effects on local sensitive receptors from increased noise during construction. These include all plant items on site being properly maintained, provided with effective silencers and operated in a manner to avoid causing excessive noise, shutting down items of plant between use, conducting noisy works within core hours to be agreed with South Cambridgeshire District Council, and locating stationary items of plant as far as possible from occupied dwellings. It is recommended that site preparation works immediately adjacent to Hatton Park Primary School have regard to effective operation of the school and that restricted hours of working and the use of quieter plant should be adopted wherever practicable.

NTS.85 The potential for increased vibration during construction was also examined. No significant effects are predicted on existing sensitive receptors and no mitigation measures are required.

NTS.86 Modelling of post-construction traffic flows has shown that there will be no significant

increases in traffic noise and local sensitive receptors. The potential for noise associated with other elements of the proposed development was also considered. Noise limits have been identified for fixed plant associated with the proposed employment area and household recycling centre and plant items will be selected at the detailed design stage to comply with these limits and ensure there will not be significant adverse effects. In addition, plant will be located as far as possible from residential areas, and screened where necessary, no plant will operate in the evenings or at night and the operating hours of the household recycling centre will be set to minimise the potential for noise effects. Measures will also be put in place to minimise the potential for noise effects associated with the proposed sports pitches, such as restrictions on the time of use and consideration of the need for boundary fencing.

NTS.87 The potential for existing noise sources to affect the proposed development was also examined and mitigation measures specified to ensure that the internal and external noise levels meet relevant standards. These include the use of specified double glazing, consideration at the detailed design stage of site and internal building layouts to maximise screening from noise sources and the potential for use of acoustic barriers in some areas if required.

NTS.88 As the proposed Phase 1 development will not have any significant residual noise and vibration effects in its own right, there is no potential for significant cumulative effects 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 environmental statement prepared in support of any future planning application.

Geology, hydrogeology and contamination

NTS.89 A desk-based study and intrusive investigations were undertaken to establish the potential for existing contamination at the site. The primary development site supported agricultural land prior to the development of the golf course, while the Hatton's Road attenuation ponds area has supported arable farmland to the present day. The adjacent former Oakington Airfield and barracks represent a potential source of off site contamination.

NTS.90 Soil samples from the site were analysed for a range of commonly occurring contaminants. Elevated concentrations of arsenic were recorded at three locations, two on the primary development site and one on the Hatton's Road attenuation ponds area. These were considered likely to be naturally occurring, as they were found in natural soils and no potential sources have been identified. Elevated concentrations of hydrocarbons were recorded in three locations on the primary development site. These were considered likely to be associated with localised spillages of fuels or oils and were not considered to be evidence of widespread significant contamination.

NTS.91 Given the likely age of current site buildings, the presence of asbestos-containing materials within the building fabrics is considered likely and detailed surveys will be required prior to demolition. Ground gas monitoring recorded generally low flows and low concentrations of carbon dioxide and methane, and no gas protection measures are considered necessary for the proposed buildings. However, there is the potential for clay material used in fill beneath the proposed development to present a short term risk of carbon dioxide generation due to oxidation.

NTS.92 The farmland in the south east of the primary development site has been surveyed for

potential unexploded ordnance risks associated with the use of the adjacent airfield during World War II. Buried ordnance was discovered during earlier archaeological and ground investigations on the airfield, although this was considered to have been buried by British servicemen, rather than dropped during bombing raids. Ordnance assessment work is ongoing and the results will be considered as part of the detailed design of the proposed earthworks.

NTS.93 Groundwater was mainly encountered in exploratory holes across the western part of the primary development site, which is underlain by a secondary aquifer. Groundwater level monitoring confirmed that the groundwater flows to the north and north east of the site, in line with the flow of local surface water features and drainage. Groundwater was also encountered in the parts of the Hatton's Road attenuation ponds area that are underlain by a secondary aquifer. Groundwater flow across the site is influenced by local surface water features, with flow parallel to drains and Longstanton Brook.

NTS.94 Groundwater samples were also analysed for a range of contaminants. Elevated concentrations of hydrocarbons were recorded in six locations, four on the primary development site, one on the Hatton's Road attenuation ponds area and one adjacent to this area. As for the soil samples, these were considered to be representative of localised sources such as adjacent roads or farming activities, and were not considered to be evidence of widespread significant contamination.

NTS.95 A range of mitigation measures will be put in place to ensure that there will be no significant effects on human health or the water environment as a result of the contamination identified above. Supplementary ground investigations will be undertaken to define known contamination hotspots, and the results will be used to complete an appropriate risk assessment and inform a remediation strategy, if required.

NTS.96 Detailed asbestos surveys will be undertaken prior to demolition, and appropriate measures to remove any asbestos-containing materials will be undertaken by a specialist contractor. This will ensure there will be no significant risk to human health. The potential for effects on the health of construction workers from contamination will be mitigated through the use of personal protective equipment, such as gloves and overalls, combined with general site best practice. These measures will be implemented through the Construction Management Strategy submitted in support of the application, and will ensure there will be no significant adverse effects.

NTS.97 Ordnance surveys and related risk assessments will be completed to inform the earthworks proposed at the site. Any potential ordnance targets will be excavated by a specialist contractor and any ordnance will be removed or mitigated as appropriate prior to construction. With these measures in place, there will be no significant risk to human health.

NTS.98 The above measures will also prevent any significant effects on human health post-construction from the potential for contact with contaminants arising from the use of gardens and public open space. In order to ensure that there is no risk from ground gas, a post-earthworks ground gas assessment will be undertaken on any parts of the site where fill depths are over 1 m and comprise clays more than 0.5 m below ground.

NTS.99 A programme of mitigation measures will be put in place during construction to prevent pollution of the water environment from spillages. These will include adequate bunding and containment of fuels, oils and chemicals, regular maintenance of vehicles and equipment, which will be washed before leaving the site, and adequate protection of drains and watercourses through the use of temporary covers or bunds. These measures are set out in full in the

Construction Management Strategy submitted in support of the application, and no significant effects on the water environment are envisaged with these measures in place.

NTS.100 To prevent significant effects on the water environment from pollution post-construction, the balancing ponds will be designed with liners and / or petrol interceptors to contain any hydrocarbons should spillages occur. Drainage of roads and pavements will be designed in accordance with best practice to prevent pollution from surface water runoff.

NTS.101 As the proposed Phase 1 development will not have any significant residual geology, hydrogeology and contamination effects in its own right, there is no potential for significant cumulative effects with future phases of Northstowe. The potential for any significant effects solely associated with future phases, and associated requirements for mitigation and remediation, will be examined in the environmental statement prepared in support of any future planning application.

Water resources, flooding and drainage

NTS.102 The water resources, flooding and drainage assessment focused on the physical quality and hydrology of surface water and the potential flood risk at the site. The issues addressed included potential contamination from increased sediment loading during and post-construction, the need for a drainage system that could accommodate the increase in runoff associated with increasing the impermeable area of the site by the construction of roads and buildings, and the potential for reduced recharge of groundwater post-construction. The effects on drinking water resources and wastewater treatment capacity as a result of increased demand associated with the proposed development were also examined.

NTS.103 The main surface water bodies considered in the assessment included Longstanton Brook, Swavesey Drain (one catchment) and those in the Cottenham Lode catchment, including Beck Brook, Oakington Brook and Reynolds Drain. These catchments eventually discharge into the River Great Ouse. The existing pond in the west of the primary development site that is to be retained was also considered.

NTS.104 The existing wastewater from Longstanton, Oakington and the surrounding area is pumped to Over or Uttons Drove Sewage Treatment Works (STW) for treatment. The Over STW discharges into the Great Ouse, while the Uttons Drove STW discharges into the Swavesey Drain system. Drinking water for the area around the site is supplied from Cherry Hinton reservoir to the south east of Cambridge. The area is classified by the Environment Agency as subject to serious water stress due to low rainfall and high demand.

NTS.105 A range of mitigation measures will be implemented through the Construction Management Strategy to ensure there will be no significant adverse effects on surface water quality from increased sediment loading during construction. These will include the use of a temporary drainage system, with additional stilling ponds if required, good environmental site practices such as dust suppression, coverage of materials storage areas and use of silt traps, and undertaking works in accordance with Environment Agency guidelines. The control of runoff during construction, together with monitoring of groundwater levels during excavations and the preparation of contingency plans, will prevent significant effects on construction activities and workers from flooding and increased runoff.

NTS.106 The proposed surface water drainage scheme includes the use of measures such as interceptors to minimise sediment levels in runoff

and ensure that there will be no significant effects on surface water quality post-construction. The drainage system has been designed to enable infiltration of runoff from impermeable areas into the ground, where ground conditions allow, and subsequently into groundwater. This will ensure that there will be no significant reduction in groundwater recharge rates.

NTS.107 The proposed drainage and earthworks strategies discussed in paragraphs NTS.17 to NTS.19 will ensure that the proposed development will not be at risk from flooding post-construction, as the proposed attenuation ponds will manage surface water runoff associated with the site and the proposed buildings will be raised above the potential flood level. The proposed attenuation ponds and restrictions on discharge from the site during flooding events in adjacent watercourses will ensure that the proposed development will not increase flood risk elsewhere in the catchment.

NTS.108 The proposed Hatton's Road attenuation ponds will reduce peak flood flows through Longstanton and will therefore lead to a reduction in existing flood risk in the village. This will be a moderate, significant beneficial effect.

NTS.109 Cambridge Water has confirmed that it has adequate resources to supply drinking water to the proposed development, and that this can be delivered through planned reinforcements. The Water Conservation Strategy submitted in support of the application sets out a range of measures that will be implemented to reduce water demand from the proposed dwellings, employment buildings and school. These will include demand reduction measures (such as low flow taps and dual flush toilets) and rainwater harvesting. With these measures in place, there will be a slight increase in demand for drinking water as a result of the proposed development, which will not be significant.

NTS.110 Anglian Water has identified Uttons Drove STW, where capacity exists, as the treatment facility best suited for improvement in order to receive the increased effluent associated with new development in the area. Anglian Water has confirmed that it can provide capacity for the proposed development through implementation of its upgrade plans. A land drainage scheme has been agreed in principle with the Swavesey Internal Drainage Board, Environment Agency, Anglian Water and South Cambridgeshire District Council to ensure that there will be no significant increase in flood risk downstream of the STW as a result of increased effluent discharges. A slight increase in demand for treatment capacity is predicted as a result of the proposed development, which will not be significant.

NTS.111 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 discussed above, is considered to be a moderate, significant, beneficial cumulative effect.

NTS.112 As the proposed Phase 1 development will not have any significant residual adverse water resources, flooding and drainage effects in its own right, there is no potential for significant cumulative adverse effects with future phases of Northstowe. The potential for any significant adverse effects solely associated with future phases, and associated requirements for mitigation, will be examined in the environmental statement prepared in support of any future planning application.

Community, social and economic effects

NTS.113 The provision of new dwellings, employment land and community facilities has

the potential to have effects on the existing local community, economy and services in the surrounding area. In order to assess these effects, current conditions in Longstanton ward, in which the site is situated, Longstanton and surrounding villages, and South Cambridgeshire district as a whole have been analysed.

NTS.114 Longstanton ward's demography differs from the district, regional and national averages, with higher proportions of working age residents and lower proportions of children under 16 years of age and retirement age residents. There is an existing shortage of affordable housing in the district as a whole and provision of new housing in the district is behind target levels.

NTS.115 Unemployment in Longstanton ward and South Cambridgeshire as a whole is below the national average. The largest employment sector in the district is finance, IT and other business activities, with a higher proportion of people employed in this sector than the regional and national averages. There are several local businesses in Longstanton and the surrounding villages, which are largely focused on meeting the needs of the local community.

NTS.116 The Phase 1 site falls within the catchment of Hatton Park Primary School and Swavesey Village College. Hatton Park is not currently close to capacity, but Swavesey Village College is over capacity. There are four GP surgeries within 5 km of Longstanton, and a branch surgery in the village itself. All are currently accepting new patients (www.nhs.uk, viewed January 2012). There are two NHS dental practices within 5 km of Longstanton, one in the village itself and one in Bar Hill. Only the Longstanton practice is currently registering new NHS patients (www.nhs.uk, viewed January 2012).

NTS.117 Longstanton currently has a small surplus of public open space compared to national standards, but there are shortages in other nearby villages. The main provision

of formal open space in Longstanton is at the recreation ground. The Cambridge Golf Course on the application site is an 18-hole course where the general public can 'pay and play'. Other community facilities in Longstanton include the Village Institute and the Pavilion Sports and Social Centre. 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. In addition, a bridleway runs along the south eastern edge of the Hatton's Road attenuation ponds area.

NTS.118 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. In the wider area to the south and west, lighting is typical of levels anticipated in rural villages and small town centres. The B1050 and Longstanton Park and Ride are the greatest sources of lighting in the immediate area. The lighting assessment focused on six representative sensitive receptors surrounding the site: 41 Station Road, Ashby Bed and Breakfast, 24 Prentice Close, 60 Magdalene Close, Brookfield Farm and New Close Farm Cottage.

NTS.119 It is anticipated that approximately 200 to 250 people will be employed on site during the construction phase. This will be a temporary, beneficial, slight effect that will not be significant. The site clearance and earthworks will result in the closure of the Cambridge Golf Course. Given the generally good provision of alternative golf courses in the area, it is considered that this will be a slight adverse effect that will not be significant. During site preparation, earthworks and construction, there will be effects on the amenity of the public rights of way on site as a result of increased noise and dust and the potential need for temporary diversion. Overall, a substantial, significant adverse effect is predicted, which will be temporary.

NTS.120 The construction phase will be a temporary source of increased lighting, including

from floodlighting or security lighting of car parks, the construction compound, perimeter fencing and haul roads, and lighting required for construction operations when working during the late afternoon in winter. Properties more than 25 m from the sources of construction lighting are unlikely to experience a notable change in light spill and / or glare. These include 24 Prentice Close, 60 Magdalene Close and New Close Farm Cottage.

NTS.121 A number of best practice measures will be put in place to minimise the potential for significant effects on surrounding residential receptors, including locating and directing lighting away from properties, shielding temporary light fittings, regular consultation with South Cambridgeshire District Council and evaluating the location of residences with views of the site within a radius of 25 m of the boundary prior to installation of lighting. There will only be a slight increase in light levels at Ashby Bed and Breakfast, which will not be significant, as this receptor is already brightly lit. There will be a moderate, significant, adverse temporary effect at 41 Station Road and Brookfield Farm as a result of increased light during construction, as both these properties currently experience relatively lower light levels.

NTS.122 There will be a long term increase in population when the site is occupied, which will lead to a substantial, significant change to the demography of the area. The proposals will lead to an increase in housing provision in the area, which will be a very substantial, beneficial, significant effect. There will also be an increase in the provision of affordable housing, which will be a moderate, beneficial, significant effect.

NTS.123 The proposed development will lead to the generation of employment post-construction, which will be a moderate, beneficial, significant effect. The retail capacity assessment determined the size of the proposed retail area, with the aim of enabling the proposed 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.

NTS.124 The new primary school will accommodate the predicted demand for primary school places associated with the proposed development. There is the potential to provide secondary school education on site by using the spare capacity in the primary school during the early years, prior to a secondary school being provided in a future phase of Northstowe. It is envisaged that a financial contribution will be made through a legal agreement with Cambridgeshire County Council to mitigate the increased demand for secondary school places. As a result, no significant residual effects are predicted on education provision.

NTS.125 The increase in population will increase demand for other local services, including healthcare and community facilities. The increase in demand for GP surgeries is predicted to be slight and not significant, while a moderate, adverse, significant increase in demand for NHS dental provision is predicted. The proposed development includes 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 slight increase in demand for community facilities is predicted, which will not be significant.

NTS.126 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 proposed sports pitches. In addition, one of the footpaths 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 byway and

bridleway will remain unchanged. The public rights of way will largely be retained within areas of public open space, although the northern end of one footpath will run through a residential area. Overall, a slight adverse effect is predicted on the amenity of public rights of way post-construction, which will not be significant.

NTS.127 The proposed post-construction lighting strategy will be designed to use current best practice and best available technology, including directing lighting downwards wherever possible, using shields and baffles to reduce light spill, angling light beams to reduce glare and using floodlights with asymmetric beams for the lit sports pitches. A slight adverse effect from increased lighting that will not be significant is predicted post-construction at Ashby Bed and Breakfast, 60 Magdalene Close, 24 Prentice Close and 41 Station Road. A moderate, significant adverse effect is predicted at Brookfield Farm as a result of increased lighting associated with the primary streets through the proposed development. No post-construction lighting is proposed in the Hatton's Road attenuation ponds area, so there will be no significant changes to lighting levels at New Close Farm Cottage.

NTS.128 As set out above, several significant residual effects are identified in the community, economic and social assessment of the proposed Phase 1 development, indicating the potential for cumulative effects with future phases of Northstowe. No significant cumulative effects are predicted on public rights of way during construction, as there are no public rights of way on the wider Northstowe site.

NTS.129 A substantial, significant cumulative effect is predicted on the demography of Longstanton ward as a result of the additional increase in population, while very substantial, beneficial, significant cumulative effects are predicted on the provision of housing and affordable housing in the area as a result of the

additional units proposed in the remainder of Northstowe. A moderate, beneficial, significant cumulative effect on employment is predicted as a result of the additional employment associated with the subsequent phases of Northstowe. It is envisaged that a new dental practice will be provided as part of the health facilities proposed in the wider Northstowe scheme, so there will be no significant adverse cumulative effects on NHS dental services with the full scheme in place.

NTS.130 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. 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

NTS.131 Detailed surveys of the agricultural land on site were undertaken in 2004 and 2005. There are 0.68 ha of grade 2 (very good quality), 15.01 ha of grade 3a (good quality) and 20.35 ha of grade 3b (moderate quality) agricultural land on the site. Grades 1 to 3a are collectively classified as 'best and most versatile' agricultural land. The proposed development will result in the loss of 15.69 ha of best and most versatile agricultural land, which will be a moderate, significant adverse effect. However, it should be noted that the site is committed for development in the approved planning strategy for the area and the majority of the site is previously developed land.

NTS.132 Mitigation measures will be put in place to minimise the potential for an associated significant effect on soil resources through damage during construction. These will include the stripping and storage of soil for later reuse within the site. A Soil Management Plan will also be put in place to ensure that the soil resources of greatest quality will be transferred to areas where the end use will be of most value. Therefore, the high quality soil resource should be used within the proposed allotments / community gardens, while the good quality soil resource should be used in residential gardens and the lower quality soil should be used in landscaping and amenity grassland. These measures will ensure there will be no significant effects on the site's soil resource.

NTS.133 There will be a substantial, adverse, significant cumulative effect on agricultural land resources with the future phases of Northstowe as a result of the increased loss of best and most versatile agricultural land. No significant cumulative effects are envisaged on soil resources, as it is assumed that similar soil management mitigation measures will be put in place for future phases as are required for Phase 1.

Conclusion

NTS.134 This non-technical summary has outlined the findings of the EIA of the proposed development. The proposed development will result in a number of changes to the local environment, but a range of measures will be put in place to minimise potential significant adverse effects and enhance beneficial effects. The proposed mitigation measures and the residual effects of the proposals that are predicted to remain after mitigation are summarised in more detail in chapter 15 of the ES.

NTS.135 Copies of the full ES and its technical appendices have been distributed to South Cambridgeshire District Council and the statutory consultees. The full documents are available for public inspection during the consultation period at South Cambridgeshire District Council offices at the address below:

South Cambridgeshire District Council
South Cambridgeshire Hall
Cambourne Business Park
Cambourne
Cambridge
CB23 6EA

NTS.136 Copies of the ES on CD can be purchased from Terence O'Rourke Ltd at a price that reflects the time and production costs.

Paper copies may also be available (at printing cost) from Terence O'Rourke Ltd at the following address:

Terence O'Rourke Ltd
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