

NORTHSTOWE Phase 3A

Outline Planning Application
ES Non-Technical Summary

April 2020



Homes
England

NORTHSTOWE PHASE 3A

Environmental Statement Non-Technical Summary

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1 Introduction

1.1 Project Context

Homes England ('the Applicant') is seeking Outline Planning Consent for Northstowe Phase 3A ('the proposed Development'), the development of land at Northstowe within the administrative area of South Cambridgeshire District Council (SCDC). Northstowe Phases 1 and 2 have been consented and are currently under construction with Phase 1 partially occupied.

The proposed Development (Phase 3A) forms part of Northstowe Phase 3 which also includes Phase 3B. Phases 3A and 3B are located to the south and north of the planned Northstowe town centre respectively. Together, Phases 3A and 3B will deliver the remaining balance of up to 5,000 homes (approximately 4,000 in Phase 3A and 1,000 in Phase 3B) and complete the planned 10,000 homes within the new town of Northstowe.

Northstowe Phase 3B is being brought forward as a separate Outline Planning Application and therefore this document only covers the proposal for the construction and operation of Northstowe Phase 3A. Phase 3B is considered in the assessment in terms of cumulative effects.

The Outline Planning Application is for the development of Northstowe Phase 3A for up to 4,000 homes, two primary schools, a local centre (including employment, community, retail and associated services, food and drink, community, leisure, residential uses and other accommodation), secondary mixed use zones (including employment, community, retail and associated services, food and drink, community, leisure, residential uses), open space and landscaped areas, sports pitches, associated engineering and infrastructure works, including the retention of the existing military lake and creation of a new lake, with details of appearance, landscaping, layout, scale and access reserved.

1.2 Environmental Impact Assessment

An Environmental Impact Assessment (EIA) has been undertaken for the proposed Development as it comprises more than 150 dwellings and has the potential to have significant environmental effects. The aim of the EIA process is to:

- Understand how the proposed Development may affect the environment and how environmental constraints may affect the design.
- Identify measures to avoid or reduce predicted adverse effects.
- Enhance the environment where appropriate through environmental design.

The Environmental Statement (ES) documents the EIA process and provides the decision-makers (SCDC) with the environmental information they require to inform their decision about whether to grant consent for the proposed Development. The EIA has been prepared in accordance with the requirements of the Town and Country Planning (EIA) Regulations 2017 (SI 2017 No.571) (the 'EIA Regulations').

This Non-Technical Summary summarises the Environmental Statement in non-technical language.

1.3 Scoping the EIA

A Scoping Report was submitted to SCDC in November 2018 to request their opinion on the scope of the ES. The scoping opinion was received in March 2019 and the following technical topics were agreed to be included within the ES:

- Chapter 5: Agriculture and Soils

- Chapter 6: Air quality
- Chapter 7: Biodiversity
- Chapter 8: Climate
- Chapter 9: Cultural heritage
- Chapter 10: Ground conditions
- Chapter 11: Health
- Chapter 12: Landscape and visual impacts
- Chapter 13: Noise and vibration
- Chapter 14: Socioeconomics
- Chapter 15: Transport
- Chapter 16: Waste and resource management

In addition, whilst not scope into the ES at the time, a Flood Risk Assessment and Drainage Strategy has been prepared and submitted with the outline planning application. This is summarised as an appendix to the ES.

1.4 Consultation and Engagement

Throughout the preparation of the ES, consultation has been undertaken with a range of statutory and non-statutory bodies such as the local authorities, Environment Agency, Natural England and Historic England. This engagement has included the collation of relevant data, discussions about assessment methodologies and potential mitigation measures to reduce the potential environmental effects of the proposed Development.

Public consultation and engagement have also taken place at three key stages in developing the masterplan and application documents. This is reported in the Stakeholder and Community Engagement Report submitted with the outline planning application.

2 The Proposed Development and the Application Site

2.1 The Proposed Development

Please see the submitted Planning Statement and Design and Access Statement for full scheme details. The description of development is:

'Outline planning application for the development of Northstowe Phase 3A for up to 4,000 homes, two primary schools, a local centre (including employment, community, retail and associated services, food and drink, community, leisure, residential uses and other accommodation), secondary mixed use zones (including employment, community, retail and associated services, food and drink, community, leisure, residential uses), open space and landscaped areas, sports pitches, associated engineering and infrastructure works, including the retention of the existing military lake and creation of a new lake, with details of appearance, landscaping, layout, scale and access reserved. Application is accompanied by an Environmental Statement and involves works to/affecting existing Public Rights of Way'.

The proposed Development comprises buildings predominantly of 2-3 storeys with some of 4-5 storeys or up to 18m above ground level depending on location and suitability within the proposed streetscape. Some marker buildings of up to 7 storeys have been considered in the south utilising proximity to the large existing Military Lake and conceived as a gateway to the development. Residential densities

are expected to range from circa 20-25 dwellings per hectare (dph) to 100-120 dph in higher density areas and the local centre.

The Northstowe Phase 3A development proposals are anticipated for the purposes of assessment to provide the following:

- Up to 4,000 homes of which it is estimated that the proportion of flats is 14% and houses 86% as a basis for the assessment. This is worst case given the generally higher impact, for example trips made by residents, of houses than flats).
- Provision for affordable homes (as set out in the Housing and Community Infrastructure Strategy) of up to 40% of the dwellings. The total amount of affordable housing delivered will depend upon a range of viability considerations consistent with the Local Plan and national planning policy. With respect to affordable tenure mix, the proposals for affordable housing will contain a variety of affordable tenure types to meet local needs. The precise tenure mix will be subject to agreement with SCDC.
- A local centre (including employment, community, retail and associated services, food and drink, community, leisure, residential uses and other accommodation) and two primary schools. The schools are anticipated (for the purpose of the assessment) to make provision for a total of 180 early years children and up to 1,470 primary age pupils (assumes two three form-entry schools with one capable of expanding into a four form-entry school).
- In addition to the local centre, a series of flexible 'secondary zones' are proposed within which the ground floor areas could be used for a variety of uses including employment, community, retail and associated services, food and drink, community, leisure, residential uses. The ground floor area within the secondary zones is included within the residential element for assessment purposes and comprises a total of 13,300m²
- Green and blue infrastructure, including public open space (comprising formal sports, informal recreation and play), sustainable drainage system features, allotments and community space.
- Provision for the SARE to create a connection between Dry Drayton Road and the A14 Local Access Road and Northstowe.

Health and secondary school provision will be within the Phase 2 Town Centre and Education Campus. The development quantum assessed in the EIA comprises the estimated floorspace presented in Table 1.

Table 1 Northstowe Phase 3A Development Quantum

Northstowe Phase 3A	Quantum	Units
HOMES		
Houses	3,435	Homes
Flats	565	Homes
EDUCATION¹		
Eastern Primary School – Primary Age	630	Pupils
Eastern Primary School – Early Years	90	Children

¹ Private Nurseries have been included within the Local Centre mixed use quantum.

Northstowe Phase 3A	Quantum	Units
Western Primary School – Primary Age	840	Pupils
Western Primary School – Early Years	90	Children
COMMUNITY FACILITIES		
Community space (within Local Centre)	TBD	GFA
Phase 3 Eastern Sports Hub Pavilion	245m ²	GFA
LOCAL CENTRE AND SECONDARY ZONES		
Convenience foodstore	615m ²	GFA
Local Shops / Services	2,530m ²	GFA
Offices (B1 Use)	5,882m ²	GFA
Secondary mixed-use zones	13,300m ^{2*}	GFA
OPEN SPACE		
Outdoor sport	13.55ha	GFA
Formal children's play space	4.14ha	GFA
Other children's play space	4.41ha	GFA
Allotments and community orchards	4.11ha	GFA
Other Informal open space	38.14ha	GFA
Water Bodies	3.29ha	GFA
Total Open Space	67.64ha	GFA

*This area includes the total quantum of space at ground floor within the secondary zones, which could be used for a variety of uses including employment, community, retail and associated services, food and drink, community, leisure, residential uses. It is assumed that 25% of this space is used for employment uses.

2.2 The Application Site

The Northstowe Phase 3A Application Site, hereafter referred to as the 'Application Site', is approximately 210ha of land that comprises the southern part of the former Oakington Airfield and Barracks and the proposed access route. The proposed access route, which is referred to as the Southern Access Road East (SARE), connects the south eastern extent of the Application Site to Dry Drayton Road.

The site topography is generally flat and occupied by the former military airfield and a mixture of open grassland with woodland and tree belts, small watercourses and the military lake to the south west (Figure 1). The area of land to the south east is dominated by arable land. Oakington Brook is situated to the south of the main Application Site, passing through the SARE flowing in a north easterly direction.

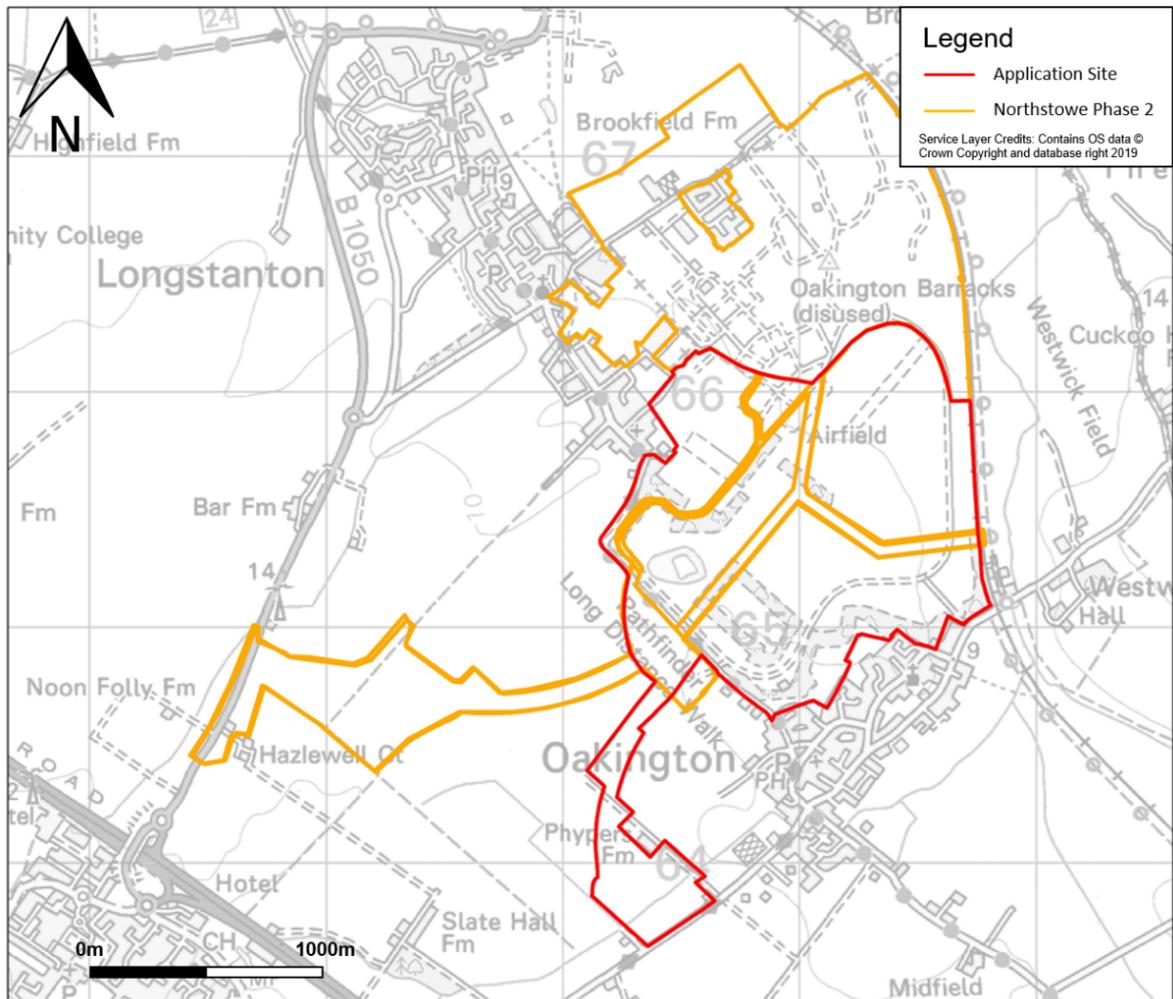
The village of Oakington lies immediately to the south of the Application Site with some tree cover and hedgerows at the existing interface. Oakington has a church, schools and recreation ground. Beyond this, lies farmland and Dry Drayton Road and the A14 road which runs approximately east-west to join the M11 motorway 2 kilometres (km) further to the south. Oakington Business Park is located adjacent to the south eastern site boundary.

Land to the east and north east of the Application Site is bounded by the Cambridgeshire Guided Busway (CGB), beyond which lies predominantly farmland and several associated farm holdings, and Beck Brook which continues to flow northward, and east of, the CGB.

Northstowe Phase 2 lies to the north of the Application Site and comprises a number of vacant buildings associated with the former Oakington Barracks, grazing land and fallow land awaiting redevelopment, a water tower, and arable farmland further to the north east. It also comprises the education campus with the secondary school and Special Education Needs school, regional office for Homes England, attenuation ponds and other site infrastructure, which have already been constructed or are under construction.

The B1050 runs in a north-south direction to the west of Northstowe and connects with the A14 approximately 500m south-west of the Application Site. The village of Longstanton bounds the north-west perimeter of the Application Site.

Figure 1 Application Site



3 Development Need and Consideration of Alternatives

3.1 The Need for the Proposed Development

The National Planning Policy Framework (NPPF) sets out the government's planning policies for England and how these are expected to be applied. The NPPF makes it clear that the overarching objective of the planning system in England is to deliver sustainable development, including to *“support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations”*.

The NPPF also explains that “the supply of large numbers of new homes can often be best achieved through planning for larger scale development, such as new settlements or significant extensions to existing villages and towns, provided they are well located and designed, and supported by the necessary infrastructure and facilities”.

The Northstowe site was first allocated as a location for a new town in the 2003 Cambridgeshire and Peterborough Structure Plan, which previously formed part of the Development Plan for the Cambridgeshire and Peterborough area. Northstowe was subsequently allocated as a major development site within the South Cambridgeshire Core Strategy (2007).

SCDC adopted the Northstowe Area Action Plan (NAAP) in 2007, which identifies Northstowe for the creation of a new town of 10,000 homes together with associated facilities and infrastructure.

The South Cambridgeshire District Council Local Plan was adopted in September 2018. The Local Plan states that development will be required to meet the objectively assessed need in the district for 19,500 homes over the period 2011-2031, including affordable housing.

Northstowe as a whole is expected to provide 10,000 homes within the current Local Plan period and beyond, of which the proposed Development will deliver up to 4,000 homes. The proposed Development is therefore needed to contribute towards meeting the established need for homes, including affordable homes, in accordance with both national and local policy.

3.2 Alternatives to the Proposed Development

Alternative Sites

In November 2000, the Regional Planning Guidance for the East of England (RPG 6) first identified the need for a new settlement to serve growth in the Cambridge Sub-Region. Following an extensive search for the most sustainable sites, the Northstowe site was selected and allocated as a location for a new town in the 2003 Cambridgeshire Peterborough Structure Plan. Northstowe was subsequently allocated as a major development site within the South Cambridgeshire Core Strategy (2007).

The current South Cambridgeshire Local Plan (2018) sets out the development strategy for South Cambridgeshire through to 2031. The strategy includes a number of major site allocations, including Northstowe which is intended to provide 10,000 new homes together with associated facilities and infrastructure throughout and beyond the current Local Plan period. The proposed Development is located wholly within the Local Plan site allocation.

Outline planning consent for Northstowe Phases 1 and 2 has been granted and development is well underway. The proposed Development comprises part of Phase 3 of the town and will deliver up to 4,000 of the 10,000 homes required at Northstowe, together with a local centre and a range of associated facilities and infrastructure.

It is clear that the location of Northstowe for a new town, as well as the inclusion of the Application Site as part of the town, has been properly assessed through the statutory plan-making process and is firmly established in planning policy. It was therefore not considered to be appropriate or relevant to

consider alternative sites for the proposed Development. Equally, the alternative of not developing the Application Site would result in the new town being incomplete and leave a shortfall of 4,000 homes required to achieve the Local Plan target.

Alternative Masterplan Options

The layout and design of the proposed Development has been informed by environmental influences, technical considerations and feedback from a series of community and stakeholder engagement events, discussion with statutory and non-statutory bodies, as well as presentations to design review panels.

Initially, two masterplan design concepts were prepared for the proposed Development that each explored a different design intent, but both informed by environmental influences:

- The first concept explored the history of the Application Site and how this could be acknowledged in the design of the masterplan.
- The second concept explored the surrounding fen landscape pattern of the Application Site and opportunities for reflecting this in the masterplan.

The first concept acknowledged the airfield history of the Application Site by emphasising the former runways and creating routes, spaces and green corridors along these axes. The key principles of this concept were:

- A main axis route would run through the centre of the development, changing in function and character along its route;
- A diagonal green axis would traverse the Application Site and link into the water park to the north;
- A main entrance defined by a primary street at the centre of the development, dividing further north to connect into the primary streets within Phase 2;
- A development block pattern that would maximise linkages to the Local Centre; and
- The drainage strategy would focus on large ponds at the periphery.

The second concept adopted a formal development grid that related to the arable field parcels of the Cambridgeshire countryside with organic green corridors traversing the development. The key principles of this concept were:

- A series of green corridors would soften the formal development grid and connect into the green spaces around the periphery of the site;
- A series of smaller attenuation ponds and streams would be incorporated into these green corridors, reflecting the Fen landscape, creating visual amenity;
- Confident development edges would reflect the town wide urban design strategy; and
- A regular block pattern would be adopted that would reflect the historic field patterns and design approaches in Phases 1 and 2.

Community and stakeholder feedback received on the two initial concept options was used to create a single masterplan. Community and stakeholder feedback highlighted a desire to reflect the cultural heritage of the Application Site in the design, including restoring the pillboxes and reinstating Mill Road as a movement corridor. Feedback also supported the introduction of organic green spaces and waterbodies into the main body of the development as opposed to having predominantly peripheral open space.

Preparation of the single masterplan was also informed by technical inputs from ecology, heritage and landscape specialists to draw on the intrinsic characteristics of the Application Site, retaining woodland

blocks and the military lake and providing the opportunity to enhance biodiversity across the Application Site.

The initial Masterplan was presented to stakeholders and the public in the consultation in November 2018. The masterplan was further developed and shaped in response to continued stakeholder engagement sessions, including presentations to the Design Council Review Panel and Cambridgeshire Quality Panel, as well as technical assessments and inputs.

The resultant Masterplan has therefore been arrived at following a thorough iterative process and design evolution that considered alternatives in order to ensure that negative environmental effects could be minimised, and positive environmental effects maximised.

4 Technical Assessments Summary

4.1 Overview

This section provides a summary of the technical assessment chapters in the ES. This includes a summary of the methodology, baseline and anticipated 'residual' environmental effects of the proposed Development after ways to reduce and mitigate impacts have been taken into account.

4.2 Agriculture and Soils

An assessment has been undertaken on the effects of the proposed Development on agriculture and soils during both the construction and operational phases.

Baseline data for this assessment included detailed soil information as well as the agricultural value of soils within the site. Agricultural value was determined using the Agricultural Land Classification (ALC), which grades soils according to their versatility and productivity.

Agricultural land within the Application Site is under a mix of arable production (predominantly combinable crops) and pasture, with small areas of woodland and some areas of cover crops. The results of historic and current agricultural land classification surveys show that there is a mix of grades of soils in the Application Site, including soil that is considered to be the Best and Most Versatile (BMV) grade (i.e. highly valuable agricultural soils).

During construction the soils would be handled in accordance with published best practice guidelines to ensure they are suitable for their intended use. The construction phase would be expected to result in the loss of 162ha of agricultural soils, including 77.63ha of BMV soils. This is considered to be a **Major Adverse** effect which is **Significant** in terms of the EIA Regulations. However, this effect is unavoidable if the site is to be developed for housing as allocated in the Local Plan.

Residual effects on agriculture and soils occur during the operation phase would be minimal, although a **Negligible Adverse** effect relating to fly-tipping on agricultural premises is anticipated which is considered to be **Not Significant** in terms of the EIA Regulations.

4.3 Air Quality

An assessment has been undertaken on the effects of the proposed Development on air quality during both the construction and operational phases.

SCDC and Cambridgeshire County Council (CCC) monitors nitrogen dioxide (NO₂) and particulate matter (PM) at various locations in proximity to the Application Site. SCDC's monitoring data suggests that the area in the vicinity of the proposed Development is generally of a good air quality and demonstrates that there have been no exceedances of the annual mean or short-term air quality objectives in the past five years.

Potential construction phase air quality impacts from dust have been assessed as a result of earthworks, construction and trackout activities. It is considered that the use of good practice control measures, which would be included in a CEMP (Construction Environmental Management Plan) would provide suitable mitigation for a development of this size and nature.

Potential operational phase impacts from vehicle exhaust emissions have been assessed by predicting air quality conditions at sensitive locations both with and without the proposed Development in place. Results were subsequently verified using local air quality monitoring data. Computer modelling was also undertaken in order to predict pollutant concentrations across the Application Site as a result of emissions from the highway network.

The proposed Development design includes a number of features that promote good air quality and minimise exposure to pollutants. Taking into account these measures, residual effects on air quality from the construction and operation phases are likely to be **Negligible Adverse** which is **Not Significant** in terms of the EIA Regulations.

4.4 Biodiversity

An assessment has been undertaken on the effects of the proposed Development on biodiversity during both the construction and operational phases.

Baseline data was identified following a review of designated sites in the vicinity of the Application Site, as well as habitats and species present within the Application Site identified through ecological surveys.

There are five Sites of Special Scientific Information (SSSIs) within 5km of the Application Site. Habitats present within the Application Site are varied. Improved grassland is considered to account for half (49.8%) of the site, with broadleaved woodland accounting for 10.7%. The remainder of the Application Site is comprised of coniferous and mixed woodland, scrub, parkland, neutral, marshy and semi-improved grassland, tall fern, standing water, hardstanding, arable land, amenity grassland, buildings and bare ground. The Application Site also benefits from approximately 506m length of species poor intact hedgerow and 513m of species poor hedgerow with trees.

Species recorded at the Application Site include breeding birds, farmland birds, owl, kingfisher, bats, water vole, badger, reptiles, great crested newts, otter, fish, brown hare, common toad, hedgehog, terrestrial invertebrates and non-native invasive plants.

Avoidance and reduction of impacts on biodiversity has been integrated into the design of the proposed Development. The biodiversity value of the green infrastructure has been maximised, such as using sustainable urban drainage systems treatment areas to be designed as replacement habitat for amphibians, water vole and bats. Key wildlife corridors within the Application Site are being retained or created with tunnels and other connective measures adopted to avoid or minimise fragmentation of habitats. Throughout the Application Site, habitats have been retained, buffered, created and/or enhanced.

Measures have also been incorporated into the proposed Development to avoid and minimise effects on species, such as through the retention and planting of new trees, retaining, buffering and enhancing valuable water features and retaining and buffering multiple small woodlands. An off-site area of farmland to off-set impacts on farmland birds will also be provided.

Following the adoption of the broad range of mitigation measures, residual adverse effects on habitats and species at the Application Site as a result of both the construction and operation of the proposed Development would be **Not Significant** in terms of the EIA Regulations. The creation and enhancement of habitats incorporated into the proposed Development and including off-site mitigation for farmland birds would deliver an overall net gain for biodiversity.

4.5 Climate

An assessment has been undertaken on the effects of the proposed Development on climate during both the construction and operational phases. The assessment is divided into two separate assessments:

- The effects on the climate from greenhouse gas emissions arising from the proposed Development.
- Vulnerability of the proposed Development to climate change.

A desktop study has established existing greenhouse gas emissions and extreme climate events (and frequency) that occurs within the study area.

The CEMP would set out the procedures for the minimisation of greenhouse gas emissions during construction, including the implementation of energy efficient measures. Mitigation measures have also been embedded into the design of the proposed Development to ensure it minimises the overall carbon footprint where possible. For example, the proposed homes would be as energy efficient as possible through the use of energy efficient lighting and high levels of insulation.

The assessment for the effect on climate concludes that the amount of greenhouse gas emissions predicted to be generated by the proposed Development during construction and operation would not affect the ability of the UK Government to meet its carbon reduction targets and as such would be **Not Significant** in terms of the EIA Regulations.

The design of the proposed Development will be optimised to reduce its vulnerability to the potential impacts of climate change (e.g. changes in extreme weather patterns, flood risk). The assessment concluded that effects on the proposed Development generated by climate change would be **Not Significant** in terms of the EIA Regulations.

4.6 Cultural Heritage

An assessment has been undertaken on the effects of the proposed Development on cultural heritage during both the construction and operational phases.

There are a wide range of heritage assets including designated archaeological remains, non-designated archaeological remains, designated Listed Buildings and Conservation Areas within the Application Site and surrounding area.

The assessment has determined the significance of effects on these assets through consideration of their value/importance and the magnitude impacts.

Impacts on heritage assets would be avoided or minimised wherever possible. This would involve trial trenching, excavation and preservation of the assets in situ. Temporary effects on heritage assets would also be reduced during the construction phase through the use of hoarding and bunding, damping down of the construction area, and control of vehicle movement through site speed limits and defined routes.

Taking into consideration the above mitigation measures, residual effects on heritage assets would range from **Slight Adverse** for non-designated heritage assets to **Moderate Adverse** for four cantilevered pill boxes within the Application Site. The moderate adverse effects are considered to be **Significant** in terms of the EIA Regulations.

The proposed Development has incorporated heritage assets into the design in order to minimise adverse operational effects. Measures such as screening by vegetation, maintaining open space and enhancing the accessibility and potential appreciation of the assets have been adopted to minimise

adverse effects and, for some heritage assets, would be expected to result in net beneficial effects as a result of the proposed Development.

The residual effects on a series of pill boxes during the operation phases on the topic of cultural heritage are considered to be **Moderate Beneficial** which is **Significant** in terms of the EIA Regulations.

4.7 Ground Conditions, Contamination and Hydrogeology

An assessment has been undertaken on the effects of the proposed Development on ground conditions, contamination and hydrogeology during both the construction and operational phases.

A desktop study and site investigations have been carried out to determine and analyse the Application Site's geology and ground conditions, including contamination, geodiversity, minerals, hydrology, ground gas, hydrogeology and unexploded ordnance.

Whilst widespread contamination has not been encountered at the Application Site, localised areas of contamination have been recorded in areas of former infrastructure such as tanks, workshops and aircraft dispersal areas. These areas will require further investigation to delineate the contaminated areas and determine appropriate remedial action.

During construction measures included in the CEMP and the Site Waste Management Plan (SWMP), would ensure that adverse as a result of ground conditions are minimised.

During the operational stage the proposed Development would utilise Sustainable Urban Drainage Systems to manage surface water. It also avoids abstracting groundwater or including deep basements and structures in the design.

The residual adverse effects during the construction and operation phases on the topic of ground conditions, contamination and hydrogeology specifically on human receptors are considered to be **Slight Adverse** which is **Not Significant** in terms of the EIA Regulations.

4.8 Health

An assessment has been undertaken on the effects of the proposed Development on health during both the construction and operational phases.

Baseline data evaluated in the assessment relate to the themes of population, employment and economy, deprivation, health profile, diet and nutrition, physical activity and mental health and wellbeing for South Cambridgeshire.

Residual adverse effects as a result of the construction phase are limited. The construction site could potentially reduce the quality of the living environment for those living in proximity to the construction. It could also attract security issues at the construction site (when compared with the Application Site's current use) or, due to the influx of construction workers, place slightly more pressure on the capacity of local health services, transport infrastructure and open spaces. However, these effects are all considered to be **Not Significant** in terms of the EIA Regulations. The construction phase would also result in **Moderate Beneficial** effects associated with access to work and training, which is **Significant** in terms of the EIA Regulations.

During the operation phase of the proposed Development there would be health benefits to existing local residents as well as residents of the proposed Development. These would include benefits related to the quality and mix of housing (particularly through the provision of affordable housing); access to healthcare services and open spaces; active travel opportunities; access to healthy food; crime reduction; access to work and training; social cohesion; minimising the consumption of

resources; and climate change related effects. A number of these effects are considered to be **Moderate** or **Major Beneficial** which are **Significant** in terms of the EIA Regulations.

4.9 Landscape and Visual Impact

An assessment has been undertaken on the effects of the proposed Development on landscape and visual impact during both the construction and operational phases.

The assessment gathered baseline data for the Application Site, including data on:

- Landscape character, which included data at local, regional and county scales, the historic environment, vegetation, land-use, tranquillity and site-features; and
- Visual amenity, which considers the theoretical visibility of the proposed Development from 21 different viewpoints and considers the potential impacts on visual amenity for different groups of people (e.g. road users, local residents or users of nearby Public Rights of Way).

The proposed Development incorporates various measures designed to ensure that impacts of the construction phase on landscape character and visual amenity are avoided or minimised, including screening (such as through strategically retained or planted vegetation) and managing the risk of light pollution (such as through reducing light levels outside of working hours and utilising shields).

Residual effects on landscape character and visual amenity during the construction phase range from **Minor Adverse** to **Minor Beneficial** which are **Not Significant** in terms of the EIA Regulations.

The proposed Development would include integrated greenways, interconnected and multifunctional green and blue spaces, walking and cycling routes, outdoor playing spaces and sensitive management of heritage assets and Conservation Areas. As such, during the operation phase residual effects on landscape character and visual amenity would range from **Minor Adverse** to **Minor Beneficial** which are **Not Significant** in terms of the EIA Regulations.

4.10 Noise and Vibration

An assessment has been undertaken on the effects of the proposed Development on noise and vibration during both the construction and operational phases.

Desk studies identified the sources of noise in the local environment. Consultation with the Local Planning Authority was then carried out to establish an appropriate baseline noise survey scheme. Site surveys were then used to monitor the noise environment over a range of time periods.

Noise generated during the construction phase would be minimised through measures set out in the CEMP and controlled through active measures including detailed complaint procedure, community liaison and compliance monitoring. The assessment concludes that noise and vibration associated with the construction phase would be **Minor Adverse** which is **Not Significant** in terms of the EIA Regulations.

The design of the proposed Development is such that noise is minimised during the operation phase. This includes a considerate layout of the proposed Development and provision for acoustic screening where necessary. Noise associated with retail or commercial activities would be mitigated through various measures, including a careful layout and acoustic fencing of noise generating activities. The layout and orientation of residential properties, schools and community buildings incorporated into the proposed Development would be designed to minimise adverse effects.

The assessment concludes that noise and vibration associated with the operation phase would be **Minor Adverse** which is **Not Significant** in terms of the EIA Regulations.

4.11 Socio-economics

An assessment has been undertaken on the effects of the proposed Development on socio-economics during both the construction and operational phases.

The assessment gathered baseline data related to population, housing, employment, economy, deprivation, health care and health determinants, community facilities, education, recreation and travel modes.

Embedded within the proposed Development are various elements that would help to ensure that adverse effects on the socio-economics are avoided or minimised whilst beneficial effects are enhanced through the provision of two new primary schools, community facilities, open space, sports and play provision in addition to greenways.

The construction phase of the proposed Development would generate jobs and provide opportunities for local skills development which is considered to be **Moderate Beneficial** and **Significant** in terms of the EIA Regulations. Ensuring the construction areas are cordoned off from the public, implementing a range of health and safety measures, screening, controlling work hours and managing street lighting would ensure that adverse effects on local residential amenity and public safety would be limited to **Minor Adverse** which is **Not Significant** in terms of the EIA Regulations.

During the operation phase, the provision of new homes (including affordable homes), new employment opportunities, new community spaces and facilities as well as new schools would deliver **Major Beneficial** effects in relation to local housing needs, and **Moderate Beneficial** effects on the local labour force, users of primary schools and community facilities. All of these effects are considered to be **Significant** in terms of the EIA Regulations.

4.12 Transport

An assessment has been undertaken on the effects of the proposed Development on transport during both the construction and operational phases.

The assessment gathered data related to the walking and cycling environment, designated cycling routes, planned walking and cycling improvements, public transport, the highway network, traffic flows and accidents and safety.

During the construction phase of the proposed Development a Construction Traffic Management Plan (CTMP) would be implemented to minimise the effects of construction traffic on local transport. The CTMP would be likely to incorporate various measures, such as identifying safe routes for construction traffic; identifying local sources of construction materials to reduce distances travelled; encouraging car sharing, walking and cycling amongst construction employees; providing full staff welfare facilities on-site; regular sweeping of roads and adequate on-site parking spaces.

Residual effects of the construction phase on transport include effects on pedestrian amenity as well as fear and intimidation; an increase in pedestrian and driver delay to due additional vehicles on the highway network; and a reduction in road safety, particularly for vulnerable road users, due to the introduction of large vehicle types on the network. Mitigation measures, such as those included within the CEMP and CTMP for development phases, would be expected to help ensure that effects would be limited to **Minor Adverse** and **Not Significant** in terms of the EIA Regulations.

During the operation phase, the nature of the proposed Development is such that it would minimise the need for residents to travel due to the provision of necessary services, such as primary schools, health facilities and community spaces. Moreover, substantial opportunities for the use of sustainable travel modes will be provided and the Framework Travel Plan will provide additional mitigation.

During operation the proposed Development would result in a permanent increase in local traffic, including some degree of change in local pedestrian amenity, driver and pedestrian delay, fear and intimidation and accidents and safety. These effects are considered to be **Minor Adverse** and **Not Significant** in terms of the EIA Regulations. The proposed Development would also deliver **Moderate Beneficial** effects on the Public Rights of Way network which is **Significant** in terms of the EIA Regulations.

4.13 Waste and Resource Management

An assessment has been undertaken on the effects of the proposed Development on waste and resource management during both the construction and operational phases.

The assessment calculated the likely construction, demolition and excavation waste as well as the likely waste generated during operation of the proposed Development, including household, commercial and industrial waste. The assessment also identified the existing rates of waste arisings and the proportion of this that is recycled.

During the operation phase, the proposed Development recycling and waste collection would be provided by SCDC, achieving a recycling rate of 55-60% of household waste, and 88% of commercial and industrial waste. Taking this into account, the proposed Development would have a **Slight Adverse** effect on the capacity of waste management and land fill facilities, which is considered to be **Not Significant** in terms of the EIA Regulations.

The proposed Development has been designed to minimise waste arisings during the construction phase by adopting key principles including reusing and recovering materials; off-site manufacture; optimisation of materials; efficient delivery systems; and flexibility and adaptation for potential future uses. A SWMP would be implemented to monitor and review waste minimisation and management on construction sites.

The total quantity of demolition, excavation and construction waste during the construction phase would have a **Slight Adverse** effect on the capacity of waste management and land fill facilities, which is considered to be **Not Significant** in terms of the EIA Regulations.

4.14 Cumulative Effects

The assessment has considered the potential for intra and inter-project cumulative effects. Intra-cumulative effects arise when multiple different types of effects (e.g. air quality and noise) combine to have an increased effect on a receptor (e.g. local residents). Inter-project cumulative effects cover the potential for combined effects between the proposed Development and other off-site developments that are expected to occur (e.g. Northstowe Phase 3B).

The assessment identified all the receptors that would be subject to intra-project cumulative effects and considered the extent to which these effects could interact with one another resulting in residual effects of a greater significance than those already identified.

Intra-project cumulative effects would arise on existing residents, early occupants of the proposed Development whilst construction is ongoing, construction workers and local businesses as a result of various adverse effects (i.e. dust; noise; visual amenity; traffic) interacting with one another. The assessment concluded that any cumulative effects on these receptors would be temporary, very limited in scale and not raise any residual effects above **Minor Adverse** which is considered to be **Not Significant** in terms of the EIA Regulations.

The potential for inter-project cumulative effects during the operation phase resulting from the combination of adverse effects with those from other developments relating to visual amenity and traffic on local residents, residents of completed properties, local businesses and users of the local

PRoW network were identified. The assessment concluded that these cumulative adverse effects would not raise residual effects above **Minor Adverse** which is considered **Not Significant** in terms of the EIA Regulations. During operation there would also be **Moderate Beneficial** cumulative effects relating to socio-economics (related to the provision of housing, community facilities and school places) and **Moderate** and **Major Beneficial** health effects (related to housing, social infrastructure, open space, access to work, social cohesion, accessibility, crime, healthy food and resources). These beneficial effects are considered to be **Significant** in terms of the EIA Regulations.

4.15 Mitigation and Monitoring

As a result of the assessments, requirements for mitigation have been identified as well as ongoing requirements to monitor impacts. These are set out in the summary chapters of the ES.

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