

CRINGLEFORD NEIGHBOURHOOD PLAN

Strategic Environmental Assessment

June 2013

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1. Introduction

This report forms a Strategic Environmental Assessment (SEA) of the Cringleford Neighbourhood Development Plan. The Cringleford Neighbourhood Development Plan will allocate land for development to meet the minimum number of dwellings for Cringleford that is set out in the Joint Core Strategy (JCS) for Broadland, Norwich and South Norfolk, as well as providing policies for guiding future development across the parish of Cringleford as a whole.

Purpose of the Strategic Environment Assessment

Strategic Environmental Assessment (SEA) is a requirement of EC Directive 2001/42/EC (the SEA Directive) which requires the assessment of the effects of certain plans and programmes on the environment to ensure the proposals in that plan or programme contribute to the achievement of sustainable development. The Directive has been incorporated into UK law through the Environmental Assessment of Plans and Programmes Regulations 2004 which applies to plans with significant environmental effects.

A screening opinion was carried out on the Cringleford Neighbourhood Development Plan and it concluded that due to the level of development allocated in the Plan, there would be significant environmental effects and therefore an SEA would be required.

About Cringleford

Cringleford is a parish adjacent to Norwich and therefore has been greatly influenced by its close proximity, with the village separated only by the River Yare.

The parish is bisected by the A11 which links Norwich to London and bounded to its south-west by the A47 Norwich Southern Bypass. The intersection of the two at Thickthorn forms a gateway to Norwich for traffic approaching on the A11.

As a consequence of its proximity to Norwich, the village has experienced significant expansion over the twentieth century expanding from its historic core with some Victorian development along the old London road to include a number of suburban estate developments and is current experiencing further significant growth with the development of Round House Park, which was an allocation in the South Norfolk Local Plan 2003.

Context of Neighbourhood Plans

Neighbourhood Plans are a relatively new type of planning document that form a key part of the Government's localism agenda. They enable local communities to develop plans that reflect local aspirations

The Cringleford Neighbourhood Plan must be in general conformity with strategic policies. This means it must conform with national policy and strategic level local policy including the Joint Core Strategy and any strategic Development Management policies prepared by South Norfolk Council. The Joint Core Strategy was adopted in March 2011 and although subsequently subject of a legal challenge this did not affect the distribution of growth within South Norfolk, which includes at least 1,200 dwellings in Cringleford (set out in Policy 10 of the JCS).

The Cringleford Neighbourhood Plan is being used as the mechanism in which to allocate land for the 1,200 dwellings.

SEA Structure

This document is structured in the following way

- Chapter 2 summarises the recent consultation responses received in response to the SEA scoping letter
- Chapter 3 introduces the Cringleford Neighbourhood Development Plan objectives and the SEA framework
- Chapter 4 explains the constraints to development in Cringleford and outlines potential options for development in Cringleford and shortlists the most feasible of these options
- Chapter 5 appraises the shortlisted options and the policies contained within the Neighbourhood Plan against the SEA framework
- Chapter 6 outlines the selection of the preferred option for the Plan
- Chapter 7 concludes the SEA report and outlines the next steps in the Plan's development

2. Scoping report consultation

The Cringleford Neighbourhood Development Plan SEA scoping letter was available for consultation from 12 April to 17 May 2013. A total of 4 responses were received.

All the responses have been collated and incorporated within this document where relevant.

Anglian Water: the proposed inclusions for the SEA cover all the requirements of interest to Anglian Water.

Response: noted

English Heritage: undesignated archaeology should be included, which in this respect would involve consulting the county historic environment record. The setting of heritage assets, including the conservation area, should also be a consideration.

Response: undesignated archaeology is incorporated into objective 11. The impact on conservation areas was added to objective 13.

Natural England: support the areas identified for inclusion. They suggest that consideration should be given not just to the proximity of sites but also of pathways and receptors, such as air and water receptors, which can be affected by land use changes, abstraction and or changes to air quality through increased diffusion impacting on designated sites.

Response: consideration of water and air quality are already included in objectives 15 and 21 respectively

Norfolk County Council: issues that need to be addressed include access to schools, jobs and facilities in regard to transport and assessing the impacts on encouraging efficient patterns of movement to encourage economic growth and local parking issues.

Response: the need to increase accessibility, reduce severance from major traffic routes and reduce parking stress are were added to objective 20.

3. Neighbourhood Plan objectives and the SEA Framework

Neighbourhood Plan Objectives

The following are the objectives listed in the Neighbourhood Plan that aim to realise the vision for Cringleford in 2026.

- To promote sustainable development within the Development Boundary delineated on the Proposals Map.
- To preserve and enhance the landscape setting and internal character of the village, both inside and outside the Development Boundary but within the defined Parish Boundary. The aims are to minimise the visual impact of new development when seen from the approach roads to Norwich and also to enhance the character of the village.
- To ensure integration of the various neighbourhood areas within the village through new and enhanced pedestrian and cycle links.
- To create lay-outs for new development in which groups of dwellings are arranged around open spaces interspersed with trees.
- To create a village that has minimum impact on the natural environment, promotes bio-diversity, encourages wildlife, works towards being carbon neutral and mitigates the expected effects of climate change.
- To sustain the vitality, health and safety of the community, and to allow disabled, elderly and infirm residents the opportunity of remaining part of it.
- To contribute towards the emergence of a sustainable economy and to meet local employment needs.
- To provide new housing which is high-quality in plan, size and materials, adapted to the expected results of climate change and suitable for the whole life needs of residents.
- To reduce the need to use private motor vehicles, to encourage alternative means of travel and to ensure that circulation within the village is appropriate and secure.

SEA Framework

SEA Objective	
1	The need to reduce greenhouse gas emissions
2	Increased risk of flooding from climate change
3	Ensuring new development is water efficient
4	The potential for renewable energy development
5	Impact on any nationally protected wildlife sites
6	Impact on any locally protected wildlife sites
7	Impact on biodiversity
8	Improving sustainable access to the countryside
9	Improving and implementing green infrastructure
10	Impact on protected landscape areas
11	Impact on Scheduled Ancient Monuments and undesignated archaeology
12	Impact on listed buildings
13	Impact on Conservation Areas
14	Impact on the existing settlement from noise, air and dust
15	Impact on water quality and supply
16	Loss of high quality soil resource
17	Impact on minerals resource
18	Reduce production of waste
19	Assessment of land contamination risks
20	Encourage modal shift away from the private car, including reducing severance by major traffic routes and reducing parking pressure
21	Impact on air quality
22	Noise impact, including from existing traffic on any occupants of any new development, particularly from the A11 and A47

The table below tests the Neighbourhood Development Plan objectives against the SEA Objectives.

- + Positively compatible
- 0 Neutral / not relevant
- Negatively compatible

NDP Objective	SEA Objective										
	1	2	3	4	5	6	7	8	9	10	11
Promote sustainable development in the development boundary	+	+	+	+	0	0	+	+	+	-	0
Preserve and enhance the landscape setting and character of the village	0	0	0	0	0	0	+	+	+	-	+
Ensure integration of various neighbourhoods through cycle and pedestrian links	0	0	0	0	0	0	0	0	+	0	0
Create lay-outs for new development around open spaces and trees	0	0	0	0	0	0	+	0	+	+	0
Minimum impact on the natural environment and biodiversity	+	0	+	+	+	+	+	+	+	0	0
To sustain the vitality, health and safety of the community	0	+	0	0	0	0	+	+	+	0	0
Contribute towards the emergence of a sustainable economy	+	+	0	+	0	0	+	0	0	0	0
To provide high quality housing capable of adapting to climate change and lifetime needs	+	+	+	+	0	0	+	0	0	0	0

To reduce the need to use private motor vehicles	+	0	0	0	0	0	0	0	+	+	0	0
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NDP Objective	SEA Objective										
	12	13	14	15	16	17	18	19	20	21	22
Promote sustainable development in the development boundary	0	0	0	+	+	0	+	0	+	+	0
Preserve and enhance the landscape setting and character of the village	+	+	+	0	0	0	0	0	0	+	0
Ensure integration of various neighbourhoods through cycle and pedestrian links	0	0	0	0	0	0	0	0	+	+	0
Create lay-outs for new development around open spaces and trees	0	0	+	0	+	0	0	0	0	+	0
Minimum impact on the natural environment and biodiversity	0	0	0	+	+	0	+	+	+	+	0
To sustain the vitality, health and safety of the community	0	0	+	+	+	0	0	+	+	+	+
Contribute towards the emergence of a sustainable economy	0	0	0	+	+	0	+	0	+	+	0
To provide high quality housing capable of adapting to climate change and lifetime needs	0	0	0	+	0	0	0	0	0	+	+
To reduce the need to use	0	0	0	0	0	0	0	0	+	+	0

private motor vehicles												
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The majority of the objectives of the Cringleford Neighbourhood Plan are positively compatible with or have a neutral effect on the SEA framework. Only in regard to the impact on the landscape areas designated in the current South Norfolk Local Plan is there a negative impact; however, it is accepted that the distribution of 1,200 dwellings in the JCS results in an unavoidable need to allocate land for development within the Norwich Southern Bypass Landscape Protection Zone.

4. Developing the Neighbourhood Plan options

A key part of developing a Plan such as the Cringleford Neighbourhood Development Plan is developing a range of options for growth and testing these, so that a preferred way forward can be selected. Whilst the Plan is not just about the growth set out in the Joint Core Strategy, the allocation of land for 1,200 new dwellings forms the key part of the plan and is the focus of the options.

The process of developing and assessing the options is described in this chapter.

Constraints on development

There are a number of spatial constraints that affect where development could be located in Cringleford. They include the following:

- The A47 Norwich Southern Bypass. This is a dual carriageway trunk road on which all junctions are grade separated with no at-grade crossing for pedestrians in the vicinity. The by-pass was landscaped at the time of its construction to ensure a non-urban feel and therefore acts as a major line of severance.
- The A11. Like the A47, above, the A11 is dual carriageway throughout the parish. However, north of Thickthorn interchange the A11 is not a trunk road and whilst the road has historically cut the village in two, some attempts have been made recently to reduce its severing effect through the construction of an traffic light controlled pedestrian crossing. However, there is a perceived safety concern about using the crossing.
- The Norwich Southern Bypass Landscape Protection Zone and Strategic Gap are designated protected landscaping areas in the South Norfolk Local Plan 2003. It is proposed in the emerging Development Management DPD within the new Local Plan that versions of them will be retained. Some erosion of these areas will therefore inevitably be necessary to deliver 1,200 homes in Cringleford.
- The Yare river valley. Protected in existing Local Plan policies, the Yare defines the southern boundary of the city of Norwich and therefore has an important role in the historic setting of the city as well as providing an important amenity area both for residents of Cringleford and the southern part of Norwich.

- Cringleford Conservation Area. This covers the historic core of the village and contains a number of listed buildings.

The Options

A number of options have been considered for providing the level of growth set out in the JCS for Cringleford, maps of which are shown in Appendix 1. These include a number of different sites, but also consider the possibility of differing levels of development as the JCS sets a minimum of 1200 dwellings allocated for Cringleford but provides no upper cap, with an expectation that all settlements within the Norwich Policy Area should be considered as potential locations to accommodate some of the floating 1800 dwellings that the JCS does not allocate to any specific settlement.

Option 1: Development concentrated at Newfound Farm

In this scenario, the Neighbourhood Plan would allocate all residential development on land to the south of Newfound Farm and the north-west of Round House Park. In order to achieve the 1,200 homes allocated in the JCS, density levels would need to be not too dissimilar to Round House Park (30??), although density levels could be reduced a little depending on how close to the A47 that the allocation extended.

Option 2: Development dispersed across sites along the existing fringe of development

Development in this scenario would be spread partly on land to the south of Newfound Farm, partly along the southern side of Round House Way and partly on land between Cantley Lane and the A11. Allocating 1200 homes over this amount of land could allow for a relatively low density and the provision of a considerable buffer strip between development and the A47.

Option 3: Development concentrated at Cantley Lane and south of Round House Park

Development here would be focused on land between the A11 and Cantley Lane and south of Round House Way. In order to accommodate all 1,200 homes in any such allocation, a relatively high density of development would be required.

Option 4: Development to the south-west of the A47

This involves developing land on the opposite side of the A47 from the main village and which would therefore in effect be an entirely separate settlement. This would involve building at relatively high densities in close proximity to the A47.

Option 5: Development dispersed across all of the land in Options 1 and 3

This option involves considerably exceeding the minimum 1,200 homes set out in the JCS. This could result in a development in excess of 1,500 homes.

Option 6: Development on all land in Options 1, 2 and 4

Development of all the sites available could lead to development of around 2,000 homes.

Shortlisting Options for Appraisal

Some of the above options are clearly deficient in comparison to the others and therefore can be discounted as unrealistic, whilst the more feasible options are shortlisted to be measured against the SEA Framework.

Development on land on the opposite side of the A47 is unlikely to result in a satisfactory form of development. It would be severed from the rest of the settlement by the A47 and would also greatly erode the strategic gap between Cringleford and Hethersett and potentially setting a precedent for further development on this side of the A47 in adjoining parishes. Options 4 and 6 are therefore discounted for including development in this land.

Given the constraints at Thickthorn, along with the fact that high school capacity and other constraints were not considered for numbers that considerably exceed the 1,200 figure listed in the JCS, it is not felt appropriate to proceed with the allocation of land for figures that considerably exceed 1,200 dwellings. As such, the option of allocating land for a number of dwellings that greatly exceeds 1,200 dwellings are discounted and therefore option 5 is also discounted.

The shortlisted options are therefore options 1, 2 and 3.

5. Appraisal of the policies and shortlisted options

A key part of preparing an SEA is looking at alternative approaches so that the effects of different options can be understood, leading to informed choices about the preferred way forward. In this instance, the three shortlisted options were appraised as the alternative approaches for delivering the minimum growth in Cringleford that is set out in the JCS.

The impact over time is assessed for short, medium and long term. These are defined as follows:

- Short term (ST) – the initial phases of implementing the Plan i.e. not all development in place but policies within the Plan starting to be implemented (2013-2016)
- Medium term (MT) – the effects when all development has been built (assumed to be up to the end of the Plan period, 2016-2026)
- Long term (LT) – the impact the Cringleford Neighbourhood Plan will have on the village after the Plan period (beyond 2026).

Positive		Negative		Mixed	No effect	Uncertain
++	+	--	-	-/+	0	?
Significant positive effect on the objective	Positive effect on the objective	Significant adverse effect on the objective	Negative effect on the objective	Some positive and some negative effects on the objective	No effect on the objective	Uncertain effect on the objective

Appraisal of NDP policies

NDP Policy	SEA Objective										
	1	2	3	4	5	6	7	8	9	10	11
GEN1 – co-ordinated approach	0	0	0	0	0	0	0	0	+	0	0

GEN2 – Conservation Area	0	0	0	0	0	0	0	0	0	0	0
GEN3 – listed and other significant buildings	0	0	0	0	0	0	0	0	0	0	0
GEN4 – infrastructure delivery	0	0	0	0	0	0	0	0	+	0	0
ENV1 – landscape buffer on A47	0	0	0	0	0	0	+	+	+	+	0
ENV2 – tree belt on A11	0	0	0	0	0	0	+	0	+	+	0
ENV3 – hedgerows	0	0	0	0	0	0	+	0	+	+	0
ENV4 – other protected areas	0	+	0	0	0	+	+	+	+	+	0
ENV5 - sustainable drainage schemes and bio-diversity	0	+	0	0	0	0	+	0	+	0	0
ENV6 – provision of open spaces and community woodland	0	0	0	0	0	0	+	0	+	+	0
ENV7 – backland development	0	0	0	0	0	0	+	0	0	0	0
HOU1 – allocation of 1,200 homes	0/+	0	+	+	+	0/-	-/+	-/+	+	-	0/?
HOU2 – layout of development	0	0	0	0	0	0	0/+	0	0	0	0
HOU3 – building densities	0	0	0	0	0	0	0	0	0	0	0
HOU4 – size of housing	0	0	0	0	0	0	0	0	0	0	0
HOU5 – sheltered housing and care home	0	0	0	0	0	0	0	0	0	0	0
HOU6 – water and energy	+	0	+	+	0	0	0	0	0	0	0
HOU7 – space standards	0	0	0	0	0	0	0	0	0	0	0
HOU8 – provision of	0	0	0	0	0	0	0	0	0	0	0

garages											
HOU9 – dispersal of affordable housing	0	0	0	0	0	0	0	0	0	0	0
HOU10 – heritage assets	0	0	0	0	0	0	0	0	0	0	+
ECN1 – new employment development	+	0	0	0	0	0	0	0	0	0	0
ECN2 – small scale retail	0	0	0	0	0	0	0	0	0	0	0
ECN3 – loss of employment premises	0	0	0	0	0	0	0	0	0	0	0
ECN4 – live / work units	+	0	0	0	0	0	0	0	0	0	0
ECN5 – loss of retail	0	0	0	0	0	0	0	0	0	0	0
SCC1 – provision of primary school	+	0	0	0	0	0	0	0	0	0	0/?
SCC2 – medical facilities	+	0	0	0	0	?	?	?	?	?	?
SCC3 – safe public spaces	+	0	0	0	0	0	0	+	+	0	0
SCC4 – community buildings energy efficiency	+	0	+	+	0	0	0	0	0	0	0
SCC5 - provision of sporting facilities and pavilion	0	?	0	0	0	?	?	?	?	?	?
SCC6 – broadband	0	0	0	0	0	0	0	0	0	0	0
SCC7 – library facilities	0	?	0	0	0	?	?	?	?	?	?
SCC8 – provision of allotments and a community orchard	0	0	0	0	0	0	+	0/+	0/+	+	0/?
TRA1 – estate roads	-	0	0	0	0	0	-	0	0	0	0/?
TRA2 – pedestrian and cycle links	+	0	0	0	0	0	0	+	+	0	0/?

TRA3 – minimise use of private cars	+	0	0	0	0	0	0	0	+	+	0	0
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NDP Policy	SEA Objective										
	12	13	14	15	16	17	18	19	20	21	22
GEN1 – co-ordinated approach	0	0	+	0	0	+	+	0	+	+	0
GEN2 – conservation area	+	+	0	0	0	0	0	0	0	0	0
GEN3 – listed and other significant buildings	0	+	0	0	0	0	0	0	0	0	0
GEN4 – infrastructure delivery	0	0	0	+	0	0	0	0	+	0	0
ENV1 – landscape buffer on A47	0	0	0	0	0	?	0	0	0	+	+
ENV2 – tree belt on A11	0	0	0	0	0	?	0	0	-	+	+
ENV3 – hedgerows	0	0	0	0	0	?	0	0	0	+	+
ENV4 – other protected areas	0	0	0	0	0	?	0	0	0	0	0
ENV5 – sustainable drainage schemes and bio-diversity	0	0	0	+	0	0	+	0	0	0	0
ENV6 - provision of open spaces and community woodland	0	0	0	0	0	?	0	0	0	+	0
ENV7 – backland development	0	0	0	0	0	0	0	0	0	0	0
HOU1 – allocation of 1,200 homes	-/+	0/-	0/-	0	+	?	0	0	-/+	-	0/+
HOU2 – layout of development	0	0	0	0	0	0	+	0	+	0	0
HOU3 – building densities	0	0	0	0	0	?	0	0	0	0	0

HOU4 – size of housing	0	0	0	0	0	0	0	0	0	0	0
HOU5 – sheltered housing and care home	0	0	0	0	0	?	0	0	0	0	0
HOU6 – water and energy	0	0	0	+	0	0	+	0	0	+	0
HOU7 – space standards	0	0	0	0	0	0	0	0	0	0	0
HOU8 – provision of garages	0	0	0	0	0	0	0	0	0/+	0	0
HOU9 – dispersal of affordable housing	0	0	0	0	0	0	0	0	0	0	0
HOU10 – heritage assets	+	+	0	0	0	0	0	0	0	0	0
ECN1 – new employment development	0	0	+	0	0	?	0	0	+	+	0
ECN2 – small scale retail	0	0	0	0	0	0	0	0	0	0	0
ECN3 – loss of employment premises	0	0	0	0	0	0	0	0	0	0	0
ECN4 – live / work units	0	0	0	0	0	0	0	0	+	0	0
ECN5 – loss of retail	0	0	0	0	0	0	0	0	+	0	0
SCC1 – provision of primary school	0	0	0	0	0	?	0	0	+	0	0
SCC2 – medical facilities	?	?	?	0	0	?	0	?	+	0	?
SCC3 – safe public spaces	0	0	0	0	0	0	0	0	+	+	0
SCC4 - community buildings energy efficiency	0	0	0	+	0	0	0	0	0	0	0
SCC5 – provision of sporting facilities and pavilion	?	?	?	0	0	?	0	0	0	0	?
SCC6 – broadband	0	0	0	0	0	0	0	0	0	0	0
SCC7 – library facilities	?	?	?	0	0	?	0	0	0	0	?

SCC8 - provision of allotments and a community orchard	0	0	0	0	0	?	0	0	0	0	0
TRA1 – estate roads	0	0	-	0	0	?	0	0	-	-	0
TRA2 – pedestrian and cycle links	0	0	+	0	0	?	0	0	++	+	+
TRA3 – minimise use of private cars	0	0	+	0	0	0	0	0	++	+	+

Summary

The policies largely score as neutral or positive against the SEA objectives. The few exceptions are policy ENV2 against SEA objective 20 due to the potential for a tree belt along the A11 to increase severance for new and existing development on either side of the A11, potential environmental impacts of new access roads and a number of minor impacts from the allocation such as the impact on protected landscape areas (specifically the erosion of the Norwich Southern Bypass Landscape Protection Zone and the Strategic Gap, although it should be noted that some erosion of these areas is inevitable in order to deliver the 1,200 homes set out in the JCS), plus a possible minor impact on additional traffic through the conservation area and impact from construction on the existing development. There are respectively, possible positive or negative impacts in regard to the biodiversity and sustainable access to the countryside and the setting of the listed Round House, from the proposed allocation.

There are also some unknown factors, particularly in relation to mineral resources and undesignated archaeology, or where the location of a specific piece of development is not yet known. Some policies scored entirely neutrally as they are entirely focused on other factors (such as on types of housing) which don't, in themselves, have immediate environmental impacts.

Appraisal of Option 1

SEA Objective		Time frame		
		ST	MT	LT
1	The need to reduce greenhouse gas emissions			

	All new development would need to comply with JCS Policy 1 (Addressing climate change and protecting environmental assets). Development is required to be sustainable with high standards in terms of energy efficiency in housing and there is a requirement to reduce reliance on private motor vehicles. However, whilst the delivery of some services and employment at the NRP over the lifetime of the Plan will reduce the need to travel to a degree, there will still be a need to travel to access some services	0	+	+
2	Increased risk of flooding from climate change			
	The site is outside of flood risk zones 2 and 3 and is some distance from these zones. It is not therefore anticipated that the development will be at risk of increased flooding from climate change	0	0	0
3	Ensuring new development is water efficient			
	All new development will need to comply with JCS Policy 3 (Energy and water) which sets high requirements for water efficiency	+	+	+
4	The potential for renewable energy development			
	All new development will be required to comply with JCS Policy 3 (Energy and water). This requires elements of renewable or low carbon energy on all developments of over 10 dwellings	+	+	+
5	Impact on any nationally protected wildlife sites			
	There are no nationally protected wildlife sites that are likely to be affected by development of this site	+	+	+
6	Impact on any locally protected wildlife sites			
	No locally protected sites in immediate proximity, but large scale development could lead to more disturbance to the Yare Valley CWS from increased activity	0	-	-
7	Impact on biodiversity			
	Development would primarily be on arable agricultural land, some hedges and other habitats which if retained	?	?/+	+

	with other additional habitat enhancements could lead to enhanced biodiversity			
8	Improving sustainable access to the countryside			
	Although development here would result in a loss of countryside, the site currently has no public access. The development could lead to improved access to the countryside by allowing public access to any buffer strip, although any access to the countryside beyond that is impeded by the A47 itself	0	0/+	+
9	Improving and implementing green infrastructure			
	Development will be required to implement the requirements for Green Infrastructure in the JCS	+	+	+
10	Impact on protected landscape areas			
	Development of Option 1 would be entirely within the NSBLPZ, majority within strategic gap and adjacent river valley. Concentrating development in this location is also likely to leave little potential for retaining any of the NSBLPZ between the development and the A47	-	--	--
11	Impact on Scheduled Ancient Monuments and undesignated archaeology			
	No Scheduled Ancient Monuments would be affected by the proposed development. The potential for undesignated archaeology would need to be investigated as part of any planning application	0/?	0/?	0/?
12	Impact on listed buildings			
	No listed buildings would be affected by development in Option 1	0	0	0
13	Impact on Conservation Areas			
	Development is unlikely to have any significant impact on Cringleford Conservation Area other than from possible increases in traffic flows through the village	0	0	0/-
14	Impact on the existing settlement from noise, air			

	and dust			
	Option 1 is relatively detached from the main settlement, with only properties at Newfound Farm at risk of suffering any impact from construction of development. There is a possibility of increased noise from traffic on Roundhouse Way (both at construction stage and from subsequent occupation of development), although this isn't likely to be significant in the context of existing traffic levels and potential increases in traffic from permitted but yet to be implemented development at the Norwich Research Park	0/-	0/-	0
15	Impact on water quality and supply			
	As part of the process of considering distributing growth in the preparation of the JCS, consideration was given to water supply and it was assessed that 1,200 dwellings can be accommodated	0	0	0
16	Loss of high quality soil resource			
	None of the site falls in either Grade 1 or Grade 2 agricultural land	+	+	+
17	Impact on minerals resource			
	Mineral resource not fully explored – development would need to comply with Policy CS16 of the adopted Waste and Minerals Plan	?	?	?
18	Reduce production of waste			
	The specific location of the allocation within the Parish is not, in itself, likely to have a specific bearing on this factor	0	0	0
19	Assessment of land contamination risks			
	The land is currently used for agriculture. It is unlikely that there is a significant risk of contamination	0	0	0
20	Encourage modal shift away from the private car, including reducing severance by major traffic routes and reducing parking pressure			

	The site has good access to employment with the hospital and NRP within walking distance. There are also bus services passing the site which link to the city centre. Some limited retail provision could be provided within the development and the school currently under construction at Roundhouse Park is also within walking distance. However, limitations in public transport access to other areas of the city and the limited range of retail in close proximity are still likely to result in relatively high use of private cars compared to a town centre or inner city location. There should be some improvement in proximity to services over the lifetime of the Plan as facilities are delivered as part of the development. There is also likely to be significant severance from the existing community due to Roundhouse Way. Assuming parking standards are complied with, it is unlikely that the development will have any impact on local parking pressure.	--	-	-
21	Impact on air quality			
	Potential impact on air quality from additional traffic	-	-	-
22	Noise impact, including from existing traffic on any occupants of any new development, particularly from the A11 and A47			
	Depending on the extent of the area to be developed, option 1 could lead to development relatively close to the A47. A buffer strip or noise mitigation measures would therefore be required. Noise disturbance from the A11 is unlikely to be an issue for option 1 given the distance involved.	0	0/-	0/-
Summary				
<p>This option is most divorced from the rest of the settlement and therefore suffers the most from severance. It does, however offer better access to employment opportunities than option 3. It is the least intrusive into the strategic gap, but would potentially suffer from noise disturbance from the A47 and limited access to the countryside.</p> <p>Overall, this option has 20 positives, which is the lowest of the three options. (Note: where a factor is ?/+ or -/+ it is scored as half a positive). The option also</p>				

scored three significant negative impacts.

Appraisal of Option 2

SEA Objective		Time frame		
		ST	MT	LT
1	The need to reduce greenhouse gas emissions			
	All new development would need to comply with JCS Policy 1 (Addressing climate change and protecting environmental assets). Development is required to be sustainable with high standards in terms of energy efficiency in housing and there is a requirement to reduce reliance on private motor vehicles. However, whilst the delivery of some services and employment at the NRP over the lifetime of the Plan will reduce the need to travel to a degree, there will still be a need to travel to access some services	0	+	+
2	Increased risk of flooding from climate change			
	The site is outside of flood risk zones 2 and 3 and is some distance from these zones. It is not therefore anticipated that the development will be at risk of increased flooding from climate change	0	0	0
3	Ensuring new development is water efficient			
	All new development will need to comply with JCS Policy 3 (Energy and water) which sets high requirements for water efficiency	+	+	+
4	The potential for renewable energy development			
	All new development will be required to comply with JCS Policy 3 (Energy and water). This requires elements of renewable or low carbon energy on all developments of over 10 dwellings	+	+	+
5	Impact on any nationally protected wildlife sites			
	There are no nationally protected wildlife sites that are likely to be affected by development of this site	+	+	+

6	Impact on any locally protected wildlife sites			
	County Wildlife Sites alongside the railway line could potentially be affected by development on Cantley Lane, more general impacts from increased size of settlement possible on the Yare Valley	0	-	-
7	Impact on biodiversity			
	Development would primarily be on arable agricultural land, some hedges and other habitats which if retained with other additional habitat enhancements could lead to enhanced biodiversity	?	-/+	+
8	Improving sustainable access to the countryside			
	Development of option 2 would lead to a loss of countryside, albeit an area which has no public access other than in terms of views from Roundhouse Way, the A11 and Cantley Lane. It may be possible to mitigate for this to some extent by providing public access to any remaining countryside between the land to be developed and the A47	0/-	+	+
9	Improving and implementing green infrastructure			
	Development will be required to implement the requirements for Green Infrastructure in the JCS	+	+	+
10	Impact on protected landscape areas			
	Option 2 would entirely be within the Norwich Southern Bypass Landscape Protection Zone, and the vast majority within the Strategic Gap. This more dispersed option does however allow for land to be retained between development and the A47 as a reduced landscape protection zone and less erosion of the strategic gap	-	-/0	-/0
11	Impact on Scheduled Ancient Monuments and undesignated archaeology			
	No Scheduled Ancient Monuments would be affected by the proposed development. The potential for undesignated archaeology would need to be investigated as part of any planning application	0/?	0/?	0/?

12	Impact on listed buildings			
	Development would potentially affect the setting of the Roundhouse.	-/+	-/+	-/+
13	Impact on Conservation Areas			
	Development is unlikely to have any significant impact on Cringleford Conservation Area other than from possible increases in traffic flows through the village	0	0	0/-
14	Impact on the existing settlement from noise, air and dust			
	Option 2 has the potential to cause impacts on existing settlement along Cantley Lane and to a lesser extent to properties on the southern fringe of Roundhouse Park during construction. There is also the potential for more noise impact on some properties along Cantley Lane from traffic and other activity from occupation of the development	0/-	0/-	0/-
15	Impact on water quality and supply			
	As part of the process of considering distributing growth in the preparation of the JCS, consideration was given to water supply and it was assessed that 1,200 dwellings can be accommodated	0	0	0
16	Loss of high quality soil resource			
	None of the site falls in either Grade 1 or Grade 2 agricultural land	+	+	+
17	Impact on minerals resource			
	Mineral resource not fully explored – development would need to comply with Policy CS16 of the adopted Waste and Minerals Plan	?	?	?
18	Reduce production of waste			
	The specific location of the allocation within the Parish is not, in itself, likely to have a specific bearing on this factor	0	0	0
19	Assessment of land contamination risks			

	The land is currently used for agriculture. It is unlikely that there is a significant risk of contamination	0	0	0
20	Encourage modal shift away from the private car, including reducing severance by major traffic routes and reducing parking pressure			
	There is reasonable access to employment with the hospital and NRP within walking distance of the development to the south and west of Roundhouse Park. There are also bus services along Roundhouse Way and along the Newmarket Road corridor which should be enhanced with the planned BRT into the city centre. Some limited retail provision could be provided within the development and the school currently under construction at Roundhouse Park is also within walking distance. However, limitations in public transport access to other areas of the city and the limited range of retail in close proximity are still likely to result in relatively high use of private cars compared to a town centre or inner city location. There should be some improvement in proximity to services over the lifetime of the Plan as facilities are delivered as part of the development. There is also likely to remain severance within the development due to the A11 and potentially from Roundhouse Park due to Roundhouse Way, although measures could be taken to reduce this, particularly in the case of Roundhouse Way. Assuming parking standards are complied with, it is unlikely that the development will have any impact on local parking pressure.	-	-/+	-/+
21	Impact on air quality			
	Potential impact on air quality from additional traffic	-	-	-
22	Noise impact, including from existing traffic on any occupants of any new development, particularly from the A11 and A47			
	Development in option 2 allows for a reasonable buffer zone between the extent of development and the A47 which allows for noise mitigation. Development would be either side of the A11 although traffic speeds are	0	+	+

	slower on the A11 at this point than the A47.			
Summary				
<p>This option allows for the best retention of a protection zone for the bypass and to introduce sustainable access to the countryside. It infringes more into the strategic gap than option 1 but suffers less from severance.</p> <p>Overall, this option scored 25 positives which makes this option the best performing. There were no significant negative impacts with this option.</p>				

Appraisal of Option 3

SEA Objective		Time frame		
		ST	MT	LT
1	The need to reduce greenhouse gas emissions			
	All new development would need to comply with JCS Policy 1 (Addressing climate change and protecting environmental assets). Development is required to be sustainable with high standards in terms of energy efficiency in housing and there is a requirement to reduce reliance on private motor vehicles. However, whilst the delivery of some services and employment at the NRP over the lifetime of the Plan will reduce the need to travel to a degree, there will still be a need to travel to access some services	0	+	+
2	Increased risk of flooding from climate change			
	The site is outside of flood risk zones 2 and 3, but development could come close to flood risk zone 2 at its southern extent. It is possible that if climate change were to bring increased flooding then there could be a small risk of flooding at the southern fringe of the site	0	0	-/?
3	Ensuring new development is water efficient			
	All new development will need to comply with JCS Policy 3 (Energy and water) which sets high requirements for water efficiency	+	+	+

4	The potential for renewable energy development			
	All new development will be required to comply with JCS Policy 3 (Energy and water). This requires elements of renewable or low carbon energy on all developments of over 10 dwellings	+	+	+
5	Impact on any nationally protected wildlife sites			
	There are no nationally protected wildlife sites that are likely to be affected by development of this site	+	+	+
6	Impact on any locally protected wildlife sites			
	Concentrated development on Cantley Lane could well lead to impacts on CWS adjacent to the railway line.	-	-	-
7	Impact on biodiversity			
	Development would primarily be on arable agricultural land, some hedges and other habitats which if retained with other additional habitat enhancements could lead to enhanced biodiversity	?	?/+	+
8	Improving sustainable access to the countryside			
	Development of option 3 would lead to a loss of countryside, albeit an area which has no public access other than in terms of views from Roundhouse Way, the A11 and Cantley Lane. It may be possible to mitigate for this to some extent by providing public access to any remaining countryside between the land to be developed and the A47, however the concentration of development is such that it is unlikely that there will be any meaningful areas of countryside left between the development and the A47	0/-	0	0
9	Improving and implementing green infrastructure			
	Development will be required to implement the requirements for Green Infrastructure in the JCS	+	+	+
10	Impact on protected landscape areas			
	Entirely within Norwich Southern Bypass Landscape Protection Zone and Strategic Gap, density of development also leaves little room for retention of	-	--	---

	land between the extent of development and the A47 to be retained as a by-pass protection zone. This option also would lead to the most significant erosion of the strategic gap of the three			
11	Impact on Scheduled Ancient Monuments and undesignated archaeology			
	No Scheduled Ancient Monuments would be affected by the proposed development. The potential for undesignated archaeology would need to be investigated as part of any planning application	0/?	0/?	0/?
12	Impact on listed buildings			
	Development has the potential to impact on the setting of the listed Roundhouse and listed buildings 8-9 Meadow Farm Drive	-/+	-/+	-/+
13	Impact on Conservation Areas			
	Development is unlikely to have any significant impact on Cringleford Conservation Area other than from possible increases in traffic flows through the village	0	0	0/-
14	Impact on the existing settlement from noise, air and dust			
	Option 3 has the potential to cause impacts on existing settlement along Cantley Lane and adjoining roads to the south and to a lesser extent to properties on the southern fringe of Roundhouse Park during construction. There is also the potential for more noise impact on some properties along Cantley Lane and on Brettingham Avenue, Taylor Avenue and Sidell Close from traffic and other activity from occupation of the development	-	-	-
15	Impact on water quality and supply			
	As part of the process of considering distributing growth in the preparation of the JCS, consideration was given to water supply and it was assessed that 1,200 dwellings can be accommodated	0	0	0
16	Loss of high quality soil resource			

	None of the site falls in either Grade 1 or Grade 2 agricultural land	+	+	+
17	Impact on minerals resource			
	Mineral resource not fully explored – development would need to comply with Policy CS16 of the adopted Waste and Minerals Plan	?	?	?
18	Reduce production of waste			
	The specific location of the allocation within the Parish is not, in itself, likely to have a specific bearing on this factor	0	0	0
19	Assessment of land contamination risks			
	The land is currently used for agriculture. It is unlikely that there is a significant risk of contamination	0	0	0
20	Encourage modal shift away from the private car, including reducing severance by major traffic routes and reducing parking pressure			
	There is reasonable access to employment with the hospital and NRP within walking distance of the development to the south of Roundhouse Park. There are also bus services along Roundhouse Way and along the Newmarket Road corridor which should be enhanced with the planned BRT into the city centre. Some limited retail provision could be provided within the development and the school currently under construction at Roundhouse Park is also within walking distance. However, limitations in public transport access to other areas of the city and the limited range of retail in close proximity are still likely to result in relatively high use of private cars compared to a town centre or inner city location. There should be some improvement in proximity to services over the lifetime of the Plan as facilities are delivered as part of the development. There is also likely to remain severance within the development due to the A11 and potentially from Roundhouse Park due to Roundhouse Way, although measures could be taken to reduce this, particularly in the case of Roundhouse Way.	-	-/+	-/+

	Assuming parking standards are complied with, it is unlikely that the development will have any impact on local parking pressure.			
21	Impact on air quality			
	Potential impact on air quality from additional traffic	-	-	-
22	Noise impact, including from existing traffic on any occupants of any new development, particularly from the A11 and A47			
	There is significant potential for noise disturbance from traffic on the A47 given the likely close proximity of development to the A47 unless appropriate noise mitigation measures can be provided. There is also potential for noise disturbance from the A11, although traffic speeds are lower on this section of the A11 than the A47	0	-	-
Summary				
<p>The site scores poorly on the likely proximity of development to the A47 which increases potential for noise disturbance and also erodes the by-pass protection zone, strategic gap and access to the countryside more than either of the other options. It would, however, suffer considerably less from severance than option 1.</p> <p>Overall, this option has 21 positives, which makes it narrowly better performing than option 3, but not well performing as option 2. There were two significant negative impacts scored in this option.</p>				

6. The preferred option

The scoring that is given in the SEA is qualitative in nature and as such placing too much significance on the number of positive scores should be avoided. The appraisal is a tool to identify areas for improvement rather than as a quantitative evaluation. Nonetheless, comparing the scores does provide an indication of the most appropriate option.

As noted in the summary boxes above, option 2 scored the most positives in the appraisal with options 1 and 3 performing similarly with option 3 narrowly ahead of option 1. Option 2 is therefore considered the best option in terms of the SEA findings.

Next steps

This report will be subject to public consultation alongside the revised consultation draft Cringleford Neighbourhood Development Plan. Responses on the consultation draft Neighbourhood Plan will be reviewed and the Plan amended if appropriate. If there were to be any changes to the Plan and these affected the outcome of the SEA, then the SEA will be reviewed accordingly.