

Lewes District Strategic Flood Risk Assessment

National Planning Policy Framework Sequential and Exception Tests for the Lewes District Local Plan – Part 1 Joint Core Strategy

Introduction

The proposed submission Lewes District Joint Core Strategy identifies locations for residential and commercial development.

This document sets out the Sequential and Exception Tests relating to the locations or development areas of strategic delivery (sites for early delivery in the plan period and identified broad locations) identified in the Core Strategy, following the guidance in the National Planning Policy Framework (NPPF) and the accompanying Technical Guidance to the NPPF.

Part 1 provides information about the general locations referred to in the Core Strategy.

Part 2 sets out the Sequential Test relating to each location.

Part 3 sets out the Exception Test for particular uses in those locations, where this additional test is required.

Note: This Sequential/Exception Test document applies to the Core Strategy only. Separate Sequential/Exception Tests will be prepared as necessary for land uses to be identified through any subsequent site allocations DPD or masterplans, including the Site Allocations and Development Management Policies DPD that will form Part 2 of the Local Plan.

Part 1 - Context and Background

Major flood areas (flood zone 3) have been identified in the Lewes District area, resulting from a combination of fluvial and tidal flooding. High groundwater levels following periods of heavy rainfall can also result in serious flooding but this is limited to relatively small and specific areas.

The centre of Lewes town, close to the River Ouse, has suffered serious flooding in the past, the most recent being the major floods of October 2000. This area is particularly prone to fluvial flooding, although increases in sea levels arising from climate change could also impact on Lewes town in the future.

Land either side of the River Ouse in Newhaven is also at risk of flooding, primarily due to tidal flooding.

Development options in Lewes District are also significantly constrained by a number of other factors such as the National Park designation, Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs) and transport infrastructure capacity issues. The result is that the number of strategic (100+ units) development sites available for delivery in the early part of the plan period in the district is very limited.

The following table sets out the development sites that have been considered in the Sequential Test that are potentially capable of delivering 100 residential units or more. The existing land uses of each site have been included, where known, together with proposed uses, the flood risk vulnerability classification for the proposed uses, and existing flood defences that provide protection for the site from flooding.

Sites within Flood Zone 1 are not assumed to be protected by flood defences as the land elevation is above the predicted flood level.

The Strategic Flood Risk Assessment for the district was completed in October 2009 and forms the basis for the sequential and exception tests.

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Table 1 – Analysis of proposed strategic development areas identified						
Green = sequential test passed Orange = sequential test passed, exception test also required						
Development area	Flood risk zone	Existing flood defences	Existing uses	Proposed uses	Number of residential units	Flood vulnerability classification
Lewes						
North Street / Eastgate area	FZ3	Defences provide protection to approximately the 1 in 50 year standard.	Commercial Employment	Retail Employment (B1, A2) Residential Hotel A3/A4/A5 Health (D1) Leisure (D2)	350 (approx)	Less vulnerable Less vulnerable More vulnerable More vulnerable More vulnerable More vulnerable More vulnerable
Newhaven						
Harbour Heights	FZ1	Not applicable	Greenfield	Residential	Up to 400*	More vulnerable
Ringmer						
Land North of Bishops Lane	FZ1	Not applicable	Greenfield	Residential	120	More vulnerable
Haywards Heath (within Wivelsfield parish)						
Land at Greenhill Way/Ridge Way	FZ1	Not applicable	Greenfield (agricultural)	Residential	140	More vulnerable

* This site is identified as a broad location for growth that will contribute towards the overall 780 net additional units planned for Newhaven. Detailed numbers will be identified after further site allocations work either as part of the Local Plan Part 2 Site Allocations and Development Management Policies DPD or through a Neighbourhood Plan. However, numbers are expected to be in the region of 350 – 400 units.

Part 2 – The Sequential Test

The aim of decision-makers should be to steer new development to Flood Zone 1. Where there are no reasonable available sites in Flood Zone 1, decision-makers should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2, applying the Exception Test if required. Only where there are no reasonably available sites in Flood Zones 1 and 2 should decision-makers consider the suitability of sites in Flood Zone 3, taking account the flood risk vulnerability of land uses and applying the Exception Test if required.

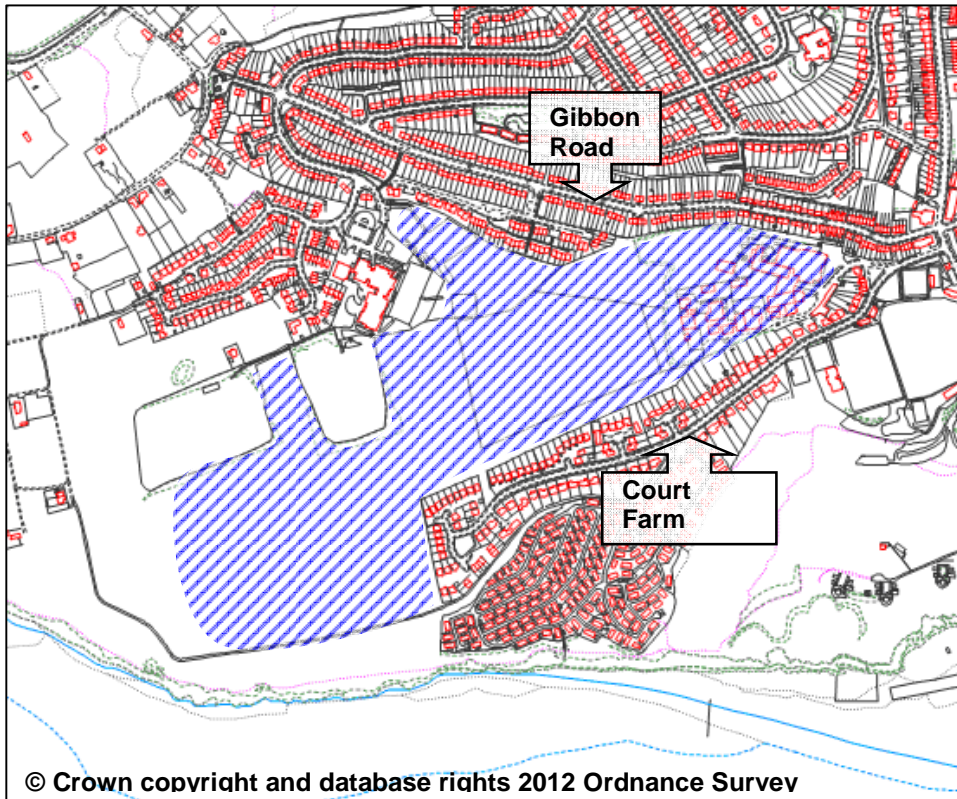
Within each flood zone, new development should be directed first to sites at the lowest probability of flooding and the flood vulnerability of the intended use matched to the flood risk of the site, i.e. higher vulnerability uses should be located on parts of the site at lowest probability of flooding.

The Core Strategy site identification included consideration of potential development areas in Flood Zones 1, 2 and 3 so the following tests consider these locations in sequence.

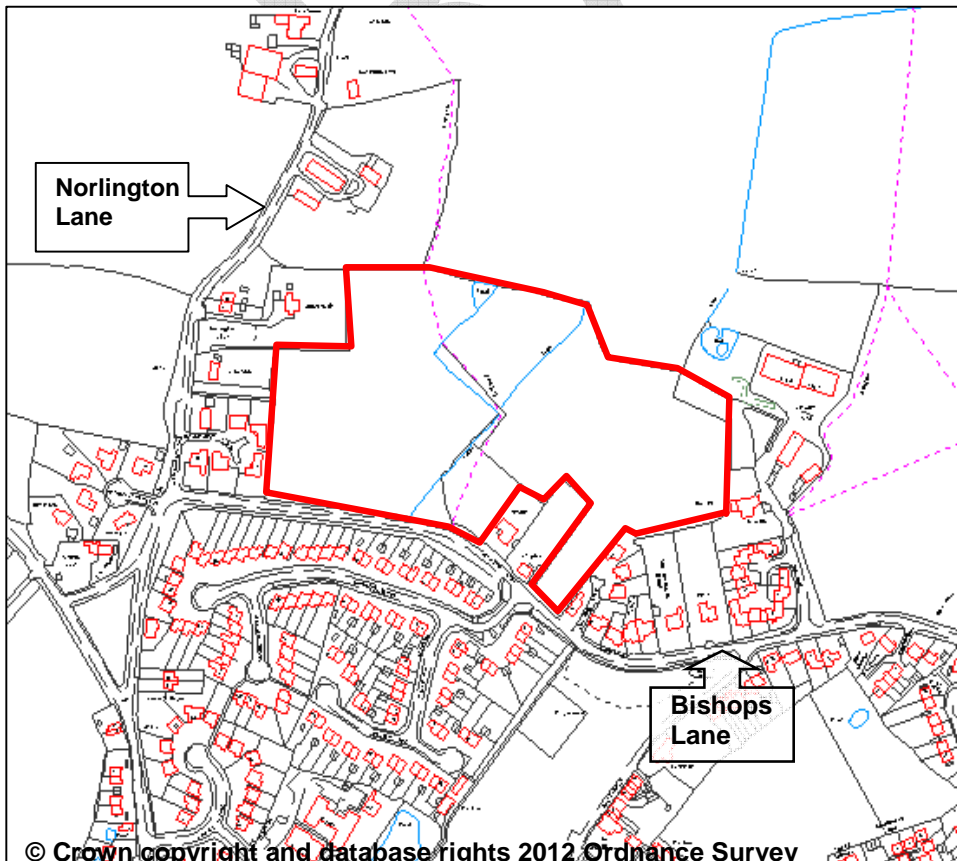
It should be noted that the NPPF and the accompanying technical guidance does not intend to prevent all development on sites liable to flooding, accepting that some development may have to be located there. Nevertheless, due to the risks of developing on land liable to flooding, the intention is to minimise risks to people and property.

The three key strategic sites that have passed the Sequential Test below, are Harbour Heights, Newhaven; Land North of Bishops Lane, Ringmer and Land at Greenhill Way, Haywards Heath (Wivelsfield parish). Site context maps for each are set out below. A site context map for the North Street/Eastgate area, Lewes is included in the Exception Test section.

Harbour Heights, Newhaven (Flood Zone 1)



Land North of Bishops Lane, Ringmer (Flood Zone 1)



Land at Greenhill Way, Haywards Heath (Wivelsfield parish) (Flood Zone 1)

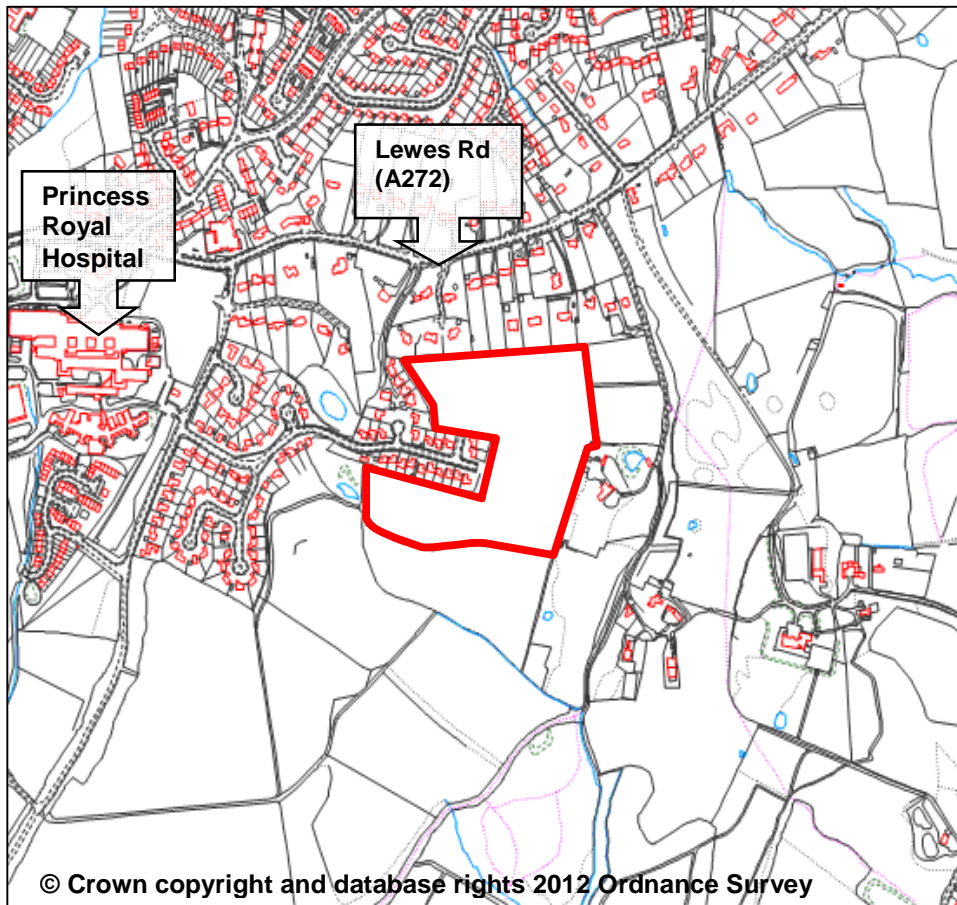


Table 2 – the Sequential Test

1. Are the proposed development areas in Flood Zone 1 – Low probability of flood risk?	
Yes	Development areas wholly within Flood Zone 1: Newhaven: Harbour Heights Ringmer Land north of Bishops Lane Haywards Heath (Wivelsfield parish) Land at Greenhill way/Ridge Way
No	For areas wholly or partly within Flood Zone 2 and 3, proceed to question 2 Relevant areas are:

	<p>Lewes: North Street/Eastgate (FZ3)</p>
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2. Could the following proposed development areas in Flood Zones 2 and 3 be alternatively located in Flood Zone 1?

Lewes:
North Street/Eastgate (FZ3)

No	<p>a) identify sites that were considered and explain why they were dismissed</p> <p>All development sites within the district that were initially identified as being potentially capable of delivering 100+ dwelling units have been considered in the Sequential Test. These include a majority of sites within Flood Zone 1. Table 3 in the Appendix gives details as to why a number of the sites within Flood Zone 1 have not been taken forward for strategic scale residential development in the Core Strategy. The locations are:</p> <p>Lewes: Land West Winterbourne Hollow/West of The Gallops Land West of Malling Down ESCC County Hall</p> <p>Newhaven: Meeching Quarry South of Harbour Heights Land at Downland Park, Court Farm Road</p> <p>Peacehaven: Valley Road Land at Lower Hoddern Farm Land at Friars Bay estate and Peacehaven Heights estate Land North of Valley Road Land South of Valley Road Land in the Valley Land at Kirby Farm</p> <p>Barcombe: Land East of Barcombe Cross</p> <p>Chailey: Land at Gradwell End (retirement village)</p>
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Ditchling:

Land Rear of Wintons Farm, Folders Lane, Burgess Hill
Land South of Folders Lane
Land off Fragbarrow Lane 2

Falmer:

Land Adjacent to university of Sussex

Plumpton:

Little Inholmes Farm
Land West of Riddens Lane
Land between Plumpton green and South Chailey

Ringmer:

Broyle Gate Farm
Land north and east of Broyle Side
Fingerpost Farm
Land at Lower Lodge Farm, Laughton Road

Wivelsfield:

Land at Eastern Road
Land at Eastern Road/Green Lane
Antye Farm and Gamble Mead, Theobalds Road
Land East of Valebridge Road
Land East of B2112
Site North of Abbots Leigh
Site at Haywards Heath

The sites in Flood Zone 2 and 3 have also been reviewed and the details as to why these sites have not been taken forward for strategic scale residential development in the Core Strategy are also in Appendix 3. These sites are:

Lewes:

Old Malling Farm (majority FZ1, part FZ3)

Newhaven:

Railway Quay -Phase 2 site (FZ3)

Hamsey:

Land East and West of A275, Cooksbridge (majority FZ1, part FZ2)

Ringmer:

Land east of Broyle Side (majority FZ1, part FZ3)

	<p>b) explain why the proposals cannot be directed to Flood Zone 1</p> <ul style="list-style-type: none"> • if the site is in Flood Zone 2, proceed to question 3 <p>No sites in Flood Zone 2.</p> <ul style="list-style-type: none"> • if the site is in Flood Zone 3a proceed to question 4 <p>Sites in this category are:</p> <p>Lewes: North Street/Eastgate</p> <ul style="list-style-type: none"> • if the site is in Flood Zone 3b proceed to question 5 <p>Lewes: Old Malling Farm (part of site only, majority FZ1)</p> <p>Sites located in more than one Flood Zone will require answers to questions 3, 4 and 5 as necessary</p>
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3. Development Areas in Flood Zone 2	
<ul style="list-style-type: none"> • There are no potential strategic development areas in the Core Strategy in Flood Zone 2, in whole or part. 	
3a – are the proposed uses in the “water compatible”, “less vulnerable”, “more vulnerable” or “essential infrastructure” Flood Risk Vulnerability Classifications as presented in Table 2 of the NPPF Technical Guidance?	
yes	<p>List the proposed uses in these classifications:</p> <p>Not applicable</p>
No	<p>List the proposed uses that are not within those classifications:</p> <p>Not applicable</p> <p>For these proposed uses proceed to question 3b</p>
3b – Can the “highly vulnerable” development types be directed to parts of the site where the risks are lower both for occupiers and the premises themselves?	
Yes	<p>Identify how the risks have been reduced:</p> <p>Not applicable</p>

	Proceed with Exception Test Yes/No
No	Explain why the development types cannot be relocated: Not applicable Proceed to Exception Test Yes/No

4. Development Areas in Flood Zone 3a
Locations in flood zone 3a in part or in whole include:

Lewes:
North Street/Eastgate

4a – Can the development be redirected to Flood Zone 2?

No	Explain why the development types can not be relocated to Flood Zone 2: The SFRA clearly demonstrates that Flood Zone 2 in the district is extremely small and has almost entirely the same extent as Flood Zone 3. There are therefore no site options in Flood Zone 2 that development could be reasonably redirected to. Lewes: <u>North Street/Eastgate:</u> This area is currently occupied by commercial/employment units that are generally in a poor condition. This is partly due to the site having historically flooded and a subsequent lack of investment in the properties that has occurred. The area is in need of regeneration and this can only be achieved through a mixed use scheme as commercial development alone will not create sufficient funds to carry out the necessary regeneration, relocation of industrial units, contaminated land remediation and flood risk mitigation. The site is located in a highly sustainable town centre location and presents an opportunity to create an improved urban structure which will create a more attractive access for pedestrians and cyclists and reduce the impact of car transport. The area could be developed to provide residential and employment opportunities, both of which are needed in the town, and other community uses such as health facilities. This site is an opportunity to provide these uses within the existing urban area (and therefore not involving a development on the sensitive landscape areas, subject to National Park designation, that surround
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	the town) and to improve an area of Lewes town that is currently under utilised and somewhat rundown.
Yes	Not applicable
4b – Are the proposed uses in the “water compatible” or “less vulnerable” Flood Risk Vulnerability Classifications as presented in Table 2 of the NPPF Technical Guidance	
Yes	<p>List the proposed uses in these classifications:</p> <p>Lewes:</p> <p><u>North Street/Eastgate</u> Less vulnerable: retail, offices, A2</p>
No	<p>List the proposed uses not in these classifications:</p> <p>Lewes:</p> <p><u>North Street/Eastgate</u> More vulnerable: residential, hotel, A3/A4/A5, health (D1), leisure (D2)</p>
4c Is the development in the “highly vulnerable” classification”?	
No	<p>Lewes:</p> <p><u>North Street/Eastgate</u></p> <p>Proceed to question 4d</p>
4d Can the more sensitive development use types be directed to parts of the site where the risks are lower for both occupiers and the premises themselves	
Not entirely	<p>It is expected that through the proposed strategic planning policy and masterplanning the more vulnerable uses will, wherever possible, be directed away from the source of flooding and closer to the outer edges of Flood Zone 3. In general the most sensitive uses on the site should be located in areas of lower risk, if such locations can be identified. However as the majority of the site is within Flood Zone 3 it will not be possible to accommodate all the more vulnerable uses away from the source of flooding. Site specific locations for the “more vulnerable” uses will be determined at the masterplanning/planning application stage and then subject to a site specific flood risk assessment.</p> <p>The Lewes District Strategic Flood Risk Assessment included a Level 2 SFRA for the North Street area of the town. The SFRA identified the flood risks, including depth, rate of onset, velocity and the residual risk</p>

	<p>to people and property for the existing situation and for the situation if the whole area was protected to a standard which would prevent flooding including the impact of climate change.</p> <p>The analysis shows there is a small increase in flood risk upstream of the site when the whole area is protected and the Site Specific Flood Risk Assessment will need to show how these increased flood risks will be mitigated so that there is no adverse impact on adjacent properties and preferably some improvement.</p> <p>A Site Specific Flood Risk Assessment must be carried out in order to demonstrate that the development will manage the flood risk on the site and not worsen, and where possible reduce, the flood risk elsewhere.</p> <p>The proposed site allocation includes the need to provide significant flood defences that would be of benefit to this site specifically and the town. It is anticipated that this would be secured by S106 planning obligation at an early stage of development. Flood risk management will be a central requirement to the masterplanning, the subsequent planning application and the redevelopment of the site. Such measures would not be viably funded without redevelopment of the site and an employment use alone would be unlikely to ever generate sufficient funds to do so. The proposed mixed use redevelopment is therefore the only option for making a positive contribution to flood risk management and the wider benefits of the redevelopment of a rundown brownfield site in this sustainable location.</p> <p>It must be demonstrated that an adequate standard of safety against flooding can be achieved through a site specific flood risk assessment and the Environment Agency's requirements will need to be satisfied.</p> <p>Proceed to the Exception Test Yes/No</p>
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5. For sites in Flood Zone 3b, the functional floodplain	
Locations in flood zone 3b in part or in whole include:	
Lewes:	
<u>Old Mallings Farm</u> (majority FZ1, part FZ3b)	
5a Can the development proposal be redirected to Flood Zone 2	
	Explain why
	The SFRA clearly demonstrates that Flood Zone 2 in the district is

	extremely small and has almost entirely the same extent as Flood Zone 3. There are therefore no site options in Flood Zone 2 that development could be reasonably redirected to.
5b Can the development proposal be redirected to Flood Zone 3a	
	This site, which is located wholly within the National Park, has not been progressed in the Core Strategy due to landscape impact concerns identified by the South Downs National Park Authority and the lack of need to identify a further strategic allocation in Lewes town for the early part of the plan period. In the event that the landscape impact can be adequately mitigated and this site was identified for residential development in the future, the dwelling units could be directed to the majority area of the site which lies in FZ1. The area in FZ3b could be used for open space or similar so as to avoid placing vulnerable uses at flood risk.
5c Is the development proposal in the “water compatible” classification?	
No	Proceed to Question 5d
5d Is the development proposal in the “essential infrastructure” classification?	
No	

Sequential Test Conclusions

The Greenhill Way/Ridge Way, Land North of Bishop’s Lane and Harbour Heights sites are all fully within Flood Zone 1.

The North Street/Eastgate site is almost entirely within Flood Zone 3a. No suitable alternative sites have been identified to deliver the proposed development. The proposed development is also a key element of the delivery of sustainable growth in the proposed submission Core Strategy. The redevelopment and regeneration of the site will deliver a number of other key benefits, including decontamination of the site, homes and employment in a sustainable, central location, improved sustainable (walking and cycling) connectivity to the town centre on the western side of the river, as well as significant flood defence improvements to the site’s river frontage. It is highly unlikely that any of these benefits would be delivered without a full redevelopment of the site, including higher value uses, such as residential, even though it is acknowledged that they are more vulnerable in flood risk terms. Appropriate flood risk mitigation, including defences, agreed with the Environment Agency, will be required to be provided by the development and incorporated in to the layout and design.

The provision of housing (including affordable) and a range of business units to meet modern requirements are a central part of the proposed submission Core

Strategy vision for Lewes town, as is the recognition of the natural asset of the River Ouse through new development (e.g. the riverside walkway/cycleway proposed as part of a comprehensive redevelopment of the North Street/Eastgate area).

The Exception Test

The Exception Test is applied to ensure the risks have been properly assessed and that appropriate mitigation measures are provided. All “more vulnerable” and “essential infrastructure” development proposals in Flood Zone 3a must pass the Exception Test and must already have passed the Sequential Test. “Essential infrastructure” development proposals in Flood Zone 3b must pass the Exception Test and must already have passed the Sequential Test.

The Exception Test is required for the North Street/Eastgate Area Site, Lewes.

The extent of the potential development area is identified on the map below.

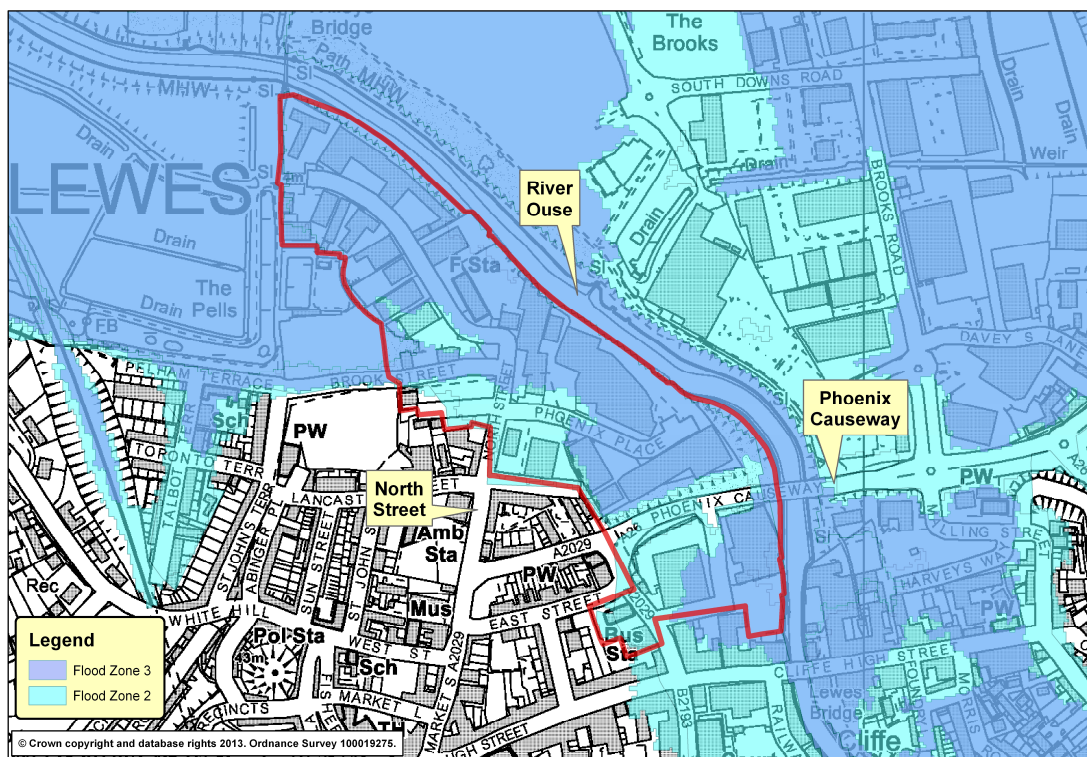


Table 3 – Exception Test North Street/Eastgate, Lewes

<p>1. Do the development proposals make a positive contribution to sustainable communities and to the sustainable development objectives of the Lewes District Local Plan - Part 1 Core Strategy</p>	
	<p>The proposed development is a key element of the delivery of sustainable growth in the proposed submission Core Strategy. Delivery of this strategic development on this site will aid in the delivery of all of the strategic objectives that are set out in section 5 of the Core Strategy. The redevelopment and regeneration of the site will deliver a number of other key benefits, including decontamination of the site, homes and employment in a sustainable, central location, improved sustainable (walking and cycling) connectivity to the town centre on the western side of the river, as well as significant flood defence improvements to the site's river frontage. It is highly unlikely that any of these benefits would be delivered without a full redevelopment of the site, including higher value uses, such as residential, even though it is acknowledged that they are more vulnerable in flood risk terms. Appropriate flood risk mitigation, including defences, agreed with the Environment Agency, will be required to be provided by the development and incorporated in to the layout and design.</p> <p>The provision of housing (including affordable) and a range of business units to meet modern requirements are a central part of the proposed submission Core Strategy vision for Lewes town, as is the recognition of the natural asset of the River Ouse through new development (e.g. the riverside walkway/cycleway proposed as part of a comprehensive redevelopment of the North Street/Eastgate area).</p> <p>The comprehensive redevelopment of the North Street/Eastgate area was positively appraised in the Sustainability Appraisal of the Joint Core Strategy (latest, proposed submission version). The SA found that the comprehensive redevelopment would enable the delivery of housing in an area of need, ensure that the site still performs an important economic role, would make good use of brownfield land and deliver flood improvements in a vulnerable area. Appendix 3 shows the SA appraisal table for the comprehensive redevelopment option for the North Street/Eastgate area. SA objective 14 relates directly to flood risk.</p>
<p>2 Are the development proposals on developable brownfield land or where there are no reasonable alternative options on greenfield land.</p>	

	<p>The development proposals for North Street/Eastgate area are on developable brownfield land. The site has current and historical industrial use, having been in large part an iron foundry in the past. The majority of the North Street area currently consists of older style industrial buildings and the Eastgate area includes the bus station and Waitrose superstore.</p> <p>The North Street/Eastgate site is almost entirely within Flood Zone 3a. No suitable alternative sites have been identified to deliver the proposed development.</p> <p>Appendix 1 sets out other strategic scale sites considered for the potential delivery of 100+ dwellings and the reasons why these could not be progressed in the Joint Core Strategy. In the case of North Street/Eastgate there is the added benefit that as well as having the potential to deliver 350+ dwellings, the redevelopment would also involve wider regeneration and environmental improvements of the site, including flood defences, in the early part of the plan period.</p>
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3. Has a flood risk assessment been produced that demonstrates the development is safe, the residual risks of flooding to people and property (including the likely effects of climate change) are acceptable and can be satisfactorily managed.

	<p>The Strategic Flood Risk Assessment for Lewes District included a Level 2 SFRA for the North Street/Eastgate area, Lewes (also known as the Phoenix quarter). The SFRA identified the flood risks, including depth, rate of onset, velocity and the residual risk to people and property for the existing situation and for the situation if the whole area was protected to a standard which would prevent flooding including the impact of climate change.</p> <p>An analysis (from a previous site specific Flood Risk Assessment) showed that there is a small increase in flood risk upstream of the site when the whole area is protected. A future site specific Flood Risk Assessment must show how these increased flood risks will be mitigated so that there is no adverse impact on adjacent properties and preferably some improvement.</p> <p>Information provided by the Environment Agency has also been used to inform this part of the Exceptions Test. Table 2 below provides further information relating to site specific measures to demonstrate a managed adaptive approach to flood risk.</p> <p>A full site specific Flood Risk Assessment will be required at the</p>
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planning application stage.

4. Does the development make a positive contribution to reducing or managing flood risk.

<p>Proposed redevelopment of this site area would protect the North Street and Town Centre (West) flood cells. It is our understanding that Environment Agency funding for such defences is not currently available (and is likely to be made available), it will therefore be necessary to secure developer contributions for these. Without developer funding such defences are very unlikely to be delivered in the foreseeable future. The proposed redevelopment would therefore be beneficial in flood risk mitigation terms, bringing additional defences to a significant area of the town centre, which is currently at flood risk. This is likely to include improved defences for residential properties outside the site boundary.</p>
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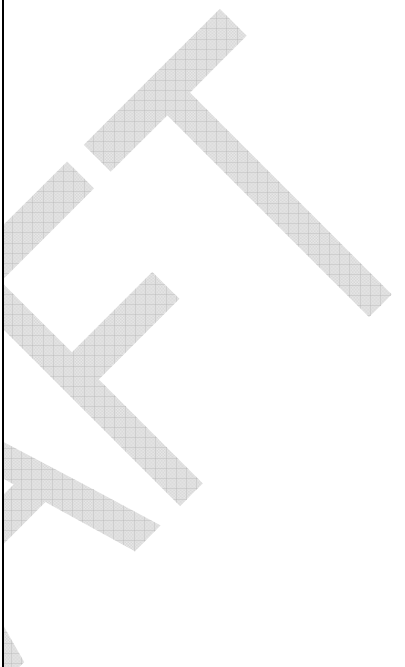
<p>The full site specific Flood Risk Assessment will set out full details on this at the planning application stage.</p>
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Table 4 – Supporting Information - Exception Test for North Street/ Eastgate Area, Lewes

Green = sequential test passed

Development area	Flood risk zone	Existing flood defences	Existing uses	Proposed uses	Number of residential units	Flood vulnerability classification
Lewes						
North Street / Eastgate area	FZ3	Defences provide protection to approximately the 1 in 50 year standard. The site is more vulnerable to overtopping upstream, and back door flooding in a 1 in 20 year event.	Commercial Employment	Retail	350 (approx)	Less vulnerable
				Employment (B1, A2)		Less vulnerable
				Residential		More vulnerable
				Hotel		More vulnerable
				A3/A4/A5		More vulnerable
				Health (D1)		More vulnerable
Leisure (D2)	More vulnerable					
Measures to manage site specific flood risk						
Site Specific Measures to Demonstrate a Managed Adaptive Approach to Flood Risk				Emergency Planning Considerations		Summary
<ul style="list-style-type: none"> All flood defences should be built with a minimum 125 year design life. 				<ul style="list-style-type: none"> If there is a risk (actual or residual) of flooding 		<ul style="list-style-type: none"> Significant flood defences will be

<ul style="list-style-type: none"> • Flood defence design should incorporate sustainable features which allow for future modification of the defences to take into account sea level rise. • Flood defences should be at 6.1m AOD. This includes allowance for sea level rise over 50 years and a freeboard of 0.2-0.3m. The freeboard allowance will reduce the increased risk of fluvial flooding under climate change scenarios. Extreme levels in the River Ouse are fluvially-dominated, with the tide limiting the outflow of fluvial flood events. • Linkages to be sought across Phoenix Causeway only, not under it or to lower it. The Phoenix Causeway embankment defines the flood cells and splits the North Street and Eastgate areas, meaning that there are currently no flood routes between the two areas. Proposals to lower or provide connections under the causeway would have significant flood risk implications. • Flood defence construction should occur during the first phases of proposed development, prior to habitation of buildings. • Ground floor levels of habitable buildings should be designed to take into account site specific Flood Risk Assessment recommendations. • Proposals will also need to protect the Talbot Terrace area 	<p>there will need to be a robust Flood Response Plan which will show how flood risk will be managed (for example through evacuation or safe refuge).</p> <ul style="list-style-type: none"> • Well planned evacuation routes from the site (pedestrian and vehicular) will be required. • Emergency procedures should be put in place, during the construction and post-construction phases. • These procedures should be developed with Environment Agency, the Local Authority and emergency services. • All properties within the site area are listed with the Environment Agency flood warning 	<p>required to improve the standard of protection of the North Street/Eastgate development area.</p> <ul style="list-style-type: none"> • Defences should prevent the proposed development area from flooding for events up and to and including a 1 in 200 year fluvial flood. Climate change allowances should also be included (as set out in the River Ouse Flood Management Strategy). • Site design proposals should ensure that ground levels of proposed buildings are matched against their vulnerability to flooding. • All flood defences should be built with a minimum 125 year design life. • Funding streams for the
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<p>upstream.</p> <ul style="list-style-type: none"> • Site drainage requires careful consideration. The Flood Risk Assessment will need to take into account storage for tide locked situations whilst also enabling drainage of the site as soon as possible before the flood peak comes down river. • Incorporation of buffer zones into development proposals (for flood defence wall maintenance) should be linked with opportunities to incorporate Green Infrastructure. <p>Other sources of flooding should be assessed at the detailed design stage, this should include:</p> <ol style="list-style-type: none"> 1. Flooding from sewers: the area may be at risk from flooding due to potential under capacity of existing sewers. Mitigation may include: <ul style="list-style-type: none"> ▪ significant upgrades to existing sewer networks, both foul and surface water; and ▪ significant surface water storage. 2. Groundwater: while there is no historic record of groundwater flooding in this area, groundwater levels are known to be relatively shallow. There are no active aquifers on the site, and high groundwater levels in the Ouse catchment are likely to coincide with high river levels which pose a more serious risk to the development site. 3. Surface Water: site design should consider how surface water will be collected. This could be via an on-site dedicated below ground drainage system, from roofs, hard-standings, roadways and car parking areas. 	<p>service.</p> 	<p>ongoing maintenance of flood defences should be investigated (for example through S106 or CIL).</p>
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<p>Some of the water could be used for landscaped water features within the development area. Such measures are likely to improve the existing surface water drainage system on the site.</p>		
<p>Conclusion on deliverability of site in light of flood risk:</p>		
<ul style="list-style-type: none"> ▪ A combination of feasible measures should ensure that the site can be made safe in flood risk terms without increasing flood risk elsewhere, and where possible, will reduce flood risk overall. ▪ The comprehensive mixed-use redevelopment of the site is consistent with wider sustainability and economic vision and objectives for Lewes town and the overall strategic plan for the wider district. ▪ Lewes District Council and the South Downs National Park Authority believe that the flood mitigation measures have a high prospect of delivery as part of a comprehensive mixed-use redevelopment of the site. However, without development funding these flood defences are considered unlikely to be delivered as public funding is not thought to be available in the foreseeable future (estimated costs circa £10m). ▪ It should be noted that this assessment or conclusion does not remove the need for a full site level flood risk assessment when a planning application is made. This will be undertaken once a masterplan for the site has determined the types of development to be located on the site in more detail and will inform the proposed design and layout at the planning application stage. 		

Appendix 1

Development locations potentially capable of delivering 100+ residential units that were considered but have not been progressed in the Proposed Submission Core Strategy.

Table 5 – Sites that were considered but rejected for the Proposed Submission Core Strategy

Sites considered	Flood Zone	Reasons why not included in LDF
Lewes		
Old Malling Farm	FZ1, part FZ3	Small area in FZ3b. Land not previously developed. Whole site surrounded by flood water in extreme flood events so safe access or egress would be difficult to achieve. SDNPA has landscape impact concerns and the delivery of two strategic sites in the early part of the plan period is not considered to be appropriate due to the need to maintain a steady supply of housing throughout the plan period. Site could still be considered for development in the SDNPA's own Local Plan.
Land West of Winterbourne Hollow/The Gallops	FZ1	Open downland, unacceptable landscape impact in SDNP. The SHLAA concludes that the site is not deliverable or developable.
ESCC County Hall	FZ1	Future unclear as no current schedule for any potential future relocation of ESCC
Land West of Malling Down	FZ1	Not suitable due to landscape sensitivity in the SDNP.
Newhaven		
Meeching Quarry	FZ1	Considered as part of the Harbour Heights broad location.
Railway Quay -Phase 2 site	FZ3	FZ3a, costly flood mitigation measures likely to be required. Site availability unknown as the site currently forms part of Port operation land and is not identified in the Port Masterplan as being available for residential use. Existing Local Plan policy applies to this site.
South of Harbour Heights	FZ1	Considered as part of the Harbour Heights broad location.
Land at Downland Park, Court Farm Road	FZ1	Security of tenure under Mobile Homes Act 1983 means it is unlikely the site will become wholly available for permanent residential development within the timescale of the Core Strategy.

Peacehaven		
Valley Road	FZ1	In multiple ownerships and although parts of the site are available for development, the site as a whole is considered to be unavailable. High development costs likely, including wastewater pumping, access works and strategic improvements to highway network.
Land at Lower Hoddern Farm	FZ1	Highway capacity issues that cannot obviously be addressed. Delivery of housing on the site could still be considered in the Local Plan Part 2.
Land at Friars Bay estate and Peacehaven Heights Estate	FZ1	Some plots have no access and are therefore 'landlocked'. Land for access has not been identified.
Land to the North of Valley Road	FZ1	Abnormal build costs associated with road access. Unacceptable landscape impact. Unknown availability but site unlikely to be available for 10-15 years or beyond.
Land south of Valley Road	FZ1	Abnormal development costs associated with works access, strategic improvements to highway network (capacity issues) and infrastructure (such as wastewater pumping). Landscape concerns with eastern part of site particularly.
Land in the Valley	FZ1	Ownership details unknown, various owners. Unknown availability but may become available in the future. High numbers of units would have an adverse landscape impact. Lower density/numbers have unknown/marginal achievability/viability.
Land at Kirby Farm	FZ1	Large site in SDNP. Scale would have adverse landscape impacts in SDNP. Only available in the future.
Barcombe		
Land east of Barcombe Cross	FZ1	Unsuitable on landscape grounds.
Chailey		
Land at Gradwell End (retirement village)	FZ1	Site being actively pursued by applicant for C2 residential care facility.
Ditchling		
Land rear of Wintons Farm, Folders Lane, Burgess Hill	FZ1	Isolated site detached from existing settlement with no suitable access identified.
Land South of Folders	FZ1	Majority of site within SDNP and unacceptable

Lane		landscape impact on SDNP. Site not currently available as some landowners unwilling to release for development. Exceptional delivery costs are likely putting serious questions on deliverability as strategic highway extension would be required, which would need to cross a railway line.
Land off Fragbarrow Lane 2	FZ1	Unacceptable landscape impact on SDNP. Detached from existing settlement.
Falmer		
Land adjacent to University of Sussex	FZ1	Nearest settlement is Falmer village (north) and not within walking distance of services. Unacceptable landscape impacts.
Hamsey		
Land east and west of A275, Cooksbridge	FZ1, part FZ2	Open countryside area north of Cooksbridge. Landscape suitability concerns.
Plumpton		
Little Inholmes Farm	FZ1	Site capacity reduced on landscape grounds to below the 100+ units threshold for strategic sites. No obvious achievable access to site.
Land West of Riddens Lane	FZ1	Unsuitable access and junction with existing highway. Unsuitable landscape impact.
Land between Plumpton Green and South Chailey	FZ1	Extremely large site, essentially the creation of a new settlement and joining of two separate villages. Cannot be accommodated without unacceptable impacts on local services and the environment.
Ringmer		
Broyle Gate Farm	FZ1	Considered suitable, available and achievable for up to 100 units (capacity therefore too low for inclusion as a strategic site in the Core Strategy). Impact on the valued gap between Ringmer and Broyle Side will also need to be considered at Site Allocations DPD/Neighbourhood Plan allocations stage.
Land north and east of Broyle Side	FZ1	Not within walking distance of shops, services, primary school or train station. Landscape impacts difficult to mitigate due to open character.
Fingerpost Farm	FZ1	Landscape issues resulted in numbers being reduced below strategic threshold. Small Scale Site Allocations DPD/Neighbourhood Plan will consider the site further.
Land east of Broyleside	FZ1, part	Not within walking distance of shops, services, primary school or train station. Landscape

	FZ3	impacts difficult to mitigate due to open character.
Land at Lower Lodge Farm, Laughton Road	FZ1	Not within walking distance of shops, services, primary school or train station. Landscape protrusion into countryside that would set precedent for urban sprawl.
Wivelsfield		
Land at Eastern Road	FZ1	Unacceptable highway network capacity issues, particularly at nearby Ditchling, with no apparent mitigation options available.
Land at eastern Road/Green Lane, Wivelsfield	FZ1	ESCC Highways consider that development here would impact on the highway network capacity/congestion issue at Ditchling, for which there are no identified mitigation options.
Antye Farm and Gamble Mead, Theobalds Road, Burgess Hill	FZ1	Significant negative factors. Unacceptable impact on landscape features and ancient woodland. No means of suitable and viable vehicular access identified. Highway network capacity issues. Third party land likely to be required for which there is unknown availability. Even if all these factors were addressed the site could not be progressed until the Haywards Heath Relief Road is fully open.
Land east of Valebridge Road	FZ1	Uncertain deliverability due to a number of landowners – not clear if or when the whole site might become available. If parts of the site were to be developed individually they would fall well below the strategic 100+ units threshold.
Land east of B2112, Wivelsfield	FZ1	Site capacity reduced to max 100 units as southern part of the site would have unacceptable landscape impact. Not suitable due to highways capacity/congestion issue, particularly with regard to Ditchling, for which no apparent mitigation options exist.
Site north of Abbots Leigh	FZ1	Isolated site with no means of access identified. Site ownership unknown. Potential adverse landscape impact.
Site at Haywards Heath	FZ1	Northern part of this site is considered suitable for development (Greenhill Way/Ridge Way site). Remainder unsuitable on landscape/urban protrusion grounds and possibly on access/highways grounds depending on scale of development.

Table 5 – Alternative ways of accommodating the development in order to locate it within Flood Zone 1

Alternative ways to accommodate the development considered	Reasons why not included in Core Strategy
Potential new settlement within the district of a minimum of 5000 units.	A new settlement Scoping Report was undertaken in April 2012. Taking account of factors such as environmental constraints (including flood risk), transport implications and land availability it identified that there is no scope for delivering a new settlement in the district. This approach has therefore not been pursued in the Core Strategy.
Relying upon windfalls in areas of lower flood risk.	While windfall development will continue, as has been the case over recent years, to contribute an element of the overall housing totals in the district, windfall would never deliver sufficient dwelling numbers or certainty of delivery. Windfalls can only be considered a component of potential housing supply and cannot be considered an alternative to allocating land for housing development.

Appendix 2

Table 6 - Sustainability Appraisal of the comprehensive redevelopment of North Street/Eastgate, Lewes.

Objectives	Option B (comprehensive redevelopment)			Explanation
	S	M	L	
1.Housing	++	++	++	This option is likely to provide a significant amount of housing, including affordable housing, in a location where a significant housing need exists. Development at this site would be deliverable in the short term.
2.Deprivation	+?	+?	+?	The Indices of Multiple Deprivation (IMD) is a tool used to measure the most disadvantaged areas in England. The IMD measures the barriers to housing and services when determining deprivation levels. In terms of the wider barriers sub-domain (which considers affordability and ability to access owner-occupation), as well as overall deprivation levels, the lower super output area (LSOA) in which this site lies is not considered to be located in an area of relative deprivation. Therefore, it is not thought that this option would have a direct impact on this objective. However, the North Street site is located in Lewes Castle Ward, which does contain some of the most deprived lower super output areas in the district, and therefore it is possible that this option could have an indirect positive impact in terms of improving access to affordable housing, as well as associated infrastructure and jobs that could improve the area.
3.Travel	+?	+?	+?	<ul style="list-style-type: none"> - The site benefits from good public transport access being located within 700m of both the bus and train stations in Lewes town. - Also, a number of local services, facilities and employment centres are located nearby; reducing the need for motorised transportation. - Development at the site would include sustainable transport infrastructure. - The site has decent access to the trunk road network (A26/A27), although this is via town centre streets that are prone to congestion, especially at peak times.
4.Communities	?	?	?	It is not thought that this option would have a direct impact on this objective, although new community facilities may be provided alongside the redevelopment of the site. In addition, this option offers the opportunity to improve the townscape, including public realm, of this part of the town. This could result in improving people's satisfaction in the place in which they live.
5.Health	0	0	0	The NHS does not believe that development at this location, and of this scale, would impact on health services in the area.
6.Education	-?	-?	-?	East Sussex County Council (the local education authority), in their School Observation Plan, indicated that development at the site may result in a possible short-term and long-term shortfall in primary school educational provision which may need addressing. There is no such shortfall regarding secondary school facilities.
7.Land Efficiency	++	++	++	The North Street site is currently developed, as well as including a number of vacant and derelict units, and so this option would be making good use of brownfield land.
8.Biodiversity	0	0	0	The site is not located within, or adjacent to, any international, national or local biodiversity designations
9.Environment	+?	+?	+?	Opportunities to improve the townscape of this part of Lewes are presented through this option. In turn, this has the potential to improve the setting for listed buildings that are either on, or within the vicinity of the site, as well as the Lewes Conservation Area. The improved riverside access, as proposed with this option, may have a

Objectives	Option B (comprehensive redevelopment)			Explanation
	S	M	L	
				positive effect by increasing access to parts of the National Park by sustainable means.
10.Waste	?	?	?	It is not possible to know the effects on this objective. It is likely that the additional homes would lead to an increase in domestic waste being produced on site, although industrial waste is likely to be reduced as employment land is lost. It may also be the case that the current recycling centre on site is relocated as part of the redevelopment of the area, and so the effects are uncertain.
11.Water	?	?	?	It is not known whether there would be a net increase in water usage should the site be developed in line with this option. Also, any redevelopment of the site offers the opportunity to remediate known contaminated sites. Contaminated sites run the risk of polluting both ground and surface waters, hence remediating the sites could have a positive impact upon water quality.
12.Energy	?	?	?	It is not possible to specify whether development at this site will increase/decrease energy consumption. Any increase in energy generation is likely to be offset as new homes and employment units will be built to high energy efficiency standards. Also, it possible that a significant amount of energy will be sourced from renewables.
13.Air Quality	?	?	?	Although not in an AQMA, most private travel to the site will pass through the AQMA in Lewes Town. As the designation of the AQMA is largely as a result of traffic emissions, the impact of this option could impact upon this objective. Any negative impacts would be expected to be mitigated through the Action Plan. It will only be possible to determine the full impact upon this objective at a more detailed planning stage..
14.Flooding	++	++	++	This option would include upgraded flood defences within a flood zone 3A area, as such it would reduce this part of the towns susceptibility to flood risk.
15.Coastal Erosion	0	0	0	It is not thought that this option would impact on this objective.
16.Economy	0	0	0	The Employment and Economic Land Assessment identified that Lewes town has a qualitative shortfall in employment space, particularly office accommodation. This option will provide some new employment space (particularly office units) that is likely to be of a higher quality and more suited to modern business needs than existing units, thereby helping to address the aforementioned shortfall. However overall, the quantity of employment space could be reduced, maybe causing some existing businesses to be relocated.
17.Tourism	0	0	0	It is not thought that this option would impact on this objective.