

PPS25 Flood Risk Sequential and Exception Test Assessment for the Lake Lothing and Outer Harbour Area Action Plan

October 2010

1. PPS25 Sequential and Exceptions Tests

1.1 The Sequential Test

- 1.1.1. Planning Policy Statement 25: Development and Flood Risk (PPS25) sets out national planning guidance in relation to flood risk. PPS25 requires Local Planning Authorities (LPAs) to take a sequential risk-based approach to determine the suitability of land for development when allocating sites in the Local Development Framework (LDF) or determining planning applications. Through the application of the sequential test, the overarching aim of PPS25 is to steer development to areas at low risk from flooding.
- 1.1.2. PPS25 articulates a presumption in favour of locating new development in Flood Zone 1 (low probability). If there are no reasonably available sites in Flood Zone 1, the flood vulnerability of the proposed development can be taken into account in locating development in Flood Zone 2 (medium probability) and then Flood Zone 3 (3a high probability and 3b functional floodplain). The Sequential Test aims to ensure that development does not take place in areas at high risk of flooding when appropriate areas of lower risk are reasonably available.
- 1.1.3. Paragraph 19 of PPS25 recognises the fact that wider sustainable development criteria may require the development of some land that cannot be delivered through the sequential test. In these circumstances, the Exception Test can be applied to some developments depending on their vulnerability classification (Table D.2 of PPS25). The Exception Test provides a method of managing flood risk while still allowing necessary development to occur (see Section 1.2).
- 1.1.4. The Strategic Flood Risk Assessment (SFRA) for Waveney initially indicated that the majority of the AAP area falls within Flood Risk Zones 2, 3a and 3b, with flood risk increasing over the next century due to the impacts of climate change including anticipated sea level rise. The SFRA also considers the variation of flood hazard within AAP sites (included as Figure A23 of the SFRA). This information must be a further consideration in detailed site planning.
- 1.1.5. The Cumulative Land Raising Study (June 2008) provides an addendum to the SFRA and clarified, with agreement from the Environment Agency, that despite having a 1 in 20 annual flood probability, seven of the assessed sites did not serve as a functional flood plain. It concludes that a classification of Flood Zone 3a is more appropriate for these areas.
- 1.1.6. Policy CS03 of the Core Strategy indicates that land will not be allocated for highly or more vulnerable uses such as housing in Flood Zones 2 and 3a, with the exception of land within the AAP area where it can be demonstrated that development contributes to regeneration objectives set out in the AAP and Policy CS05 of the Core Strategy.
- 1.1.7. Waveney's Core Strategy identifies the AAP area as a broad location for mixed use redevelopment including residential, employment, leisure and

tourism uses. The Sequential Test is to be applied to areas which have been identified as sites for development in the AAP. The purpose of this exercise is to steer more vulnerable uses such as housing to sites at lowest risk of flooding in the AAP area. Table 2 lists the AAP strategic sites and details the flood risk according to the SFRA, as well as the vulnerability of proposed uses.

Table 2: Analysis of areas for potential development in the AAP

Strategic Site Proposal	SFRA Flood Risk Zones	Existing Uses	Potential Uses	PPS25 Flood Vulnerability Classification
SSP1: PowerPark	Flood Zones 3a and 2 (limited area in Flood Zone 1)	Previously developed land. Mixture of industrial, office and retail wholesale premises.	Employment (B1,B2, B8) Open Space	Less vulnerable Water compatible
SSP2: Peto Square	Flood Zone 3a	Previously developed land. Mixture of uses including Lowestoft rail station, secondary retail, catering businesses, residential and public realm. Includes a number of heritage buildings.	Retail Leisure Hotel Restaurants / cafes Bars Transport interchange Employment (office)	Less vulnerable Less vulnerable More vulnerable Less vulnerable More vulnerable Essential Infrastructure Less vulnerable
SSP3: Kirkley Waterfront and Sustainable Urban Neighbourhood	Flood Zones 1, 2 and 3a	Previously developed land. Vacant industrial premises, small and medium business within former boat yard, car dealership, open space, some office uses.	Residential Retail Employment Open Space Primary school Hotel Transport infrastructure Marina facilities Restaurants / cafes Bars	More vulnerable Less vulnerable Less vulnerable Water compatible More vulnerable More vulnerable Essential infrastructure Water compatible Less vulnerable More vulnerable
SSP4: East of England Park	Flood Zones 1, 2 and 3a	Underutilised open space.	Open Space Restaurant / cafe	Water compatible Less vulnerable
SSP5: Kirkley Rise	Flood Zones 1, 2 and 3a	Previously developed land. Employment, residential uses and car parking	Residential Retail Employment Restaurant / cafes Health facility Bars Hotel / guesthouses	More vulnerable Less vulnerable Less vulnerable Less vulnerable More vulnerable More vulnerable More vulnerable
SSP6: Western end of Lake Lothing	Flood Zones 1, 2 and 3a	Previously developed land. Mixture of residential and industrial uses as well as underutilised	Residential Marina	More vulnerable Water compatible

		employment land	Employment	Less vulnerable
SSP7: Oswald's Boatyard	Flood Zones 1, 2 and 3a	Previously developed land. Disused boatyard, library, cottage.	Residential Community / library	More vulnerable Less vulnerable
SSP8: The Scores	Flood Zones 1	Previously developed land. Mix of uses including retail and employment. Historic alleyways linking seafront with the High Street.	Residential Employment	More vulnerable Less vulnerable
SSP9: Peto Way / Denmark Road Corridor	Flood Zones 2 and 3a	Previously developed land. Mix of uses including retail and employment.	Employment	Less vulnerable

- 1.1.8. 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, e.g. higher vulnerability uses located on parts of the site at lowest probability of flooding.
- 1.1.9. If the sequential test cannot deliver acceptable sites, the exception test will be required; which assesses the impacts of the development on the flood risk. The exception test will have to be passed to permit development.
- 1.1.10. The overall AAP development strategy seeks to adopt a sequential approach to development across the AAP area and within individual AAP sites. The approach to residential development in particular has been through a rigorous options testing process which has identified sites to the south of the AAP within the Kirkley Waterfront and Sustainable Urban Neighbourhood Strategic site to be the most sequentially preferable. This location offers the potential for a significant amount of residential development to come forward within Flood Zone 1, whilst remaining residential sites within this area will benefit from a comprehensive approach to flood management taking into account site specific flood hazard issues identified within the SFRA. This will be complimented by mitigation developed through joint working between developers, the Council and other stakeholders including the Environment Agency.
- 1.1.11. The table below sets out a commentary as to how the PPS25 sequential test has been applied across the AAP area.

1. Are the proposed Strategic Sites in 'Flood Risk 1 – Low Probability' of flood risk?	
Yes	<p>Proposed locations entirely in Flood Zone 1 are:</p> <ul style="list-style-type: none"> • SSP8: The Scores <p>For these areas in Flood Zone 1 the strategic sites are appropriate and there is no need to proceed with the sequential test.</p>
No	<p>Proposed locations not entirely in Flood Zone 1 are:</p> <ul style="list-style-type: none"> • SSP1: PowerPark • SSP2: Peto Square • SSP3: Kirkley Waterfront and Sustainable Urban Neighbourhood • SSP4: East of England Park • SSP5: Kirkley Rise • SSP6: Western end of Lake Lothing • SSP7: Oswald's Boatyard • SSP9: Peto Way / Denmark Road Corridor <p>For sites in Flood Zones 2 and 3 proceed to Question 2</p>
2. Could the following proposed Strategic Sites in Flood Risk 2 and 3 alternatively be located in 'Flood Zone 1 Low Probability' of flood risk?	
No	<p>The AAP area covers a large area of previously developed land within the Lowestoft. There are no other areas of previously developed land on a similar scale within Lowestoft, which has been identified in the Waveney Core Strategy as the location which should accommodate the majority of the District's growth over the plan period.</p> <p>The AAP proposals include a mix of uses, including employment, retail, leisure, community facilities and approximately 1,500 residential dwellings. The AAP</p>

	<p>comprises some land within Flood Zone 1, although being a waterfront location, a significant proportion lies within Flood Zones 2 and 3 as illustrated in Figure 3.6.1 of the AAP and diagrams within the SFRA. It is not therefore possible to locate all of the AAP's development allocation within Flood Zone 1 although it should be noted that the AAP area is covered by existing defences.</p> <p>There are no other comparable development sites within Lowestoft or the wider Waveney district that would be capable of delivering a comprehensive mix of uses, or the scale of development proposed within the AAP area, with the benefits of being located in close proximity to existing town centre services and infrastructure. The alternative would be to develop on Greenfield site, or dispersed sites outside the AAP area, this would not achieve the regeneration benefits of creating a sustainable community with an integrated mix of uses. In accordance with Waveney's Core Strategy and PPS3, the majority of growth should be focussed on the settlement of Lowestoft. The only sizeable sites in Flood Zone 1 are non-developed sites on the edge of the town and are not considered as sustainable for the mix of uses set out in the AAP for reasons set out below.</p> <p>Proposals for employment development within the AAP are reliant on being in close proximity to the waterfront to support the off-shore energy section in accordance with AAP policies EMP1-4. There are no other such sites available in Lowestoft or Waveney District. Likewise retail, leisure and commercial development is considered to be best located in close proximity to the town centre, rather than out-of-town sites in accordance with Planning Policy Statement 4.</p> <p>In considering sites for residential development the alternative approach would be to develop greenfield sites, away from Lowestoft town centre and main employment/port areas. The justification for this approach is set out in the Exception Test below.</p> <p>If the site is in 'Flood Zone 2 Medium Probability' proceed to Question 3.</p> <p>If the in 'Flood Zone 3 High Probability' proceed to Question 4. With the exception of SSP8, all strategic sites contain significant areas of land within Flood Zone 3.</p>
3. For Strategic Sites in 'Flood Zone 2 Medium Probability' of flood risk	
	The SFRA illustrates that the majority of strategic sites contain only small pockets of land which are within Flood Zone 2. Therefore, it is more appropriate to proceed to Question 4 for all sites apart from SSP8.
3a. Are the proposed uses in the 'Water Compatible', 'Less Vulnerable', 'More Vulnerable', or 'Essential Infrastructure' Flood Risk Vulnerability Classifications set out in Table D2 of PPS25?	
No	Proposals not within this classification are: <ul style="list-style-type: none"> • None.
4. For strategic sites in 'Zone 3 High Probability' of flood risk.	
	<p>Sites partly in Flood Zone 3 are:</p> <ul style="list-style-type: none"> • SSP1: PowerPark • SSP2: Peto Square • SSP3: Kirkley Waterfront and Sustainable Urban Neighbourhood • SSP4: East of England Park • SSP5: Kirkley Rise • SSP6: Western End of Lake Lothing • SSP7: Oswald's Boatyard

	<ul style="list-style-type: none"> SSP9: Peto Way / Denmark Road Corridor
4a Can the development proposal be redirected to 'Zone 2 Medium Probability'?	
No	With the exception of SSP8, all sites contain significant areas with Flood Zone 3. The scale of development proposed within the AAP combined with the limited availability of sites within Flood Zone 2 mean it is not possible to redirect development completely out of Flood Zone 3.
4b Do the strategic site development proposals include only 'Water Compatible' or 'Less Vulnerable' classifications?	
Yes	SSP1: PowerPark <ul style="list-style-type: none"> Less Vulnerable: <i>Employment</i> These proposals are appropriate in Flood Zone 3a and there is no need to proceed with the Exception Test.
	SSP4: East of England Park <ul style="list-style-type: none"> Water compatible: <i>Open space</i> Less Vulnerable: <i>Restaurant / café</i> These proposals are appropriate in Flood Zone 3a and there is no need to proceed with the Exception Test.
	SSP9: Peto Way / Denmark Road Corridor <ul style="list-style-type: none"> Less vulnerable: <i>Employment</i> These proposals are appropriate in Flood Zone 3a and there is no need to proceed with the Exception Test.
No	SSP2: Peto Square <ul style="list-style-type: none"> More Vulnerable: <i>Hotel, Bars</i> Essential Infrastructure: <i>Transport Infrastructure</i> Proceed to Question 4c
	SSP3: Kirkley Waterfront and Sustainable Urban Neighbourhood <ul style="list-style-type: none"> More Vulnerable: <i>Residential, Bars, School, Hotel</i> Essential Infrastructure: <i>Transport Infrastructure</i> Proceed to Question 4c
	SSP5: Kirkley Rise <ul style="list-style-type: none"> More vulnerable: <i>Residential, Health facilities, Hotel/guesthouses, Bars</i>
	SSP6: Western end of Lake Lothing <ul style="list-style-type: none"> More vulnerable: <i>Residential</i> Proceed to Question 4c
	SSP7: Oswald's Boatyard <ul style="list-style-type: none"> More vulnerable: <i>Residential</i> Proceed to Question 4c
4c Is the development proposal in the 'Highly Vulnerable' classification?	
No	Proceed to Question 4d
4d Can the more flood sensitive development use types be directed to parts of the site where the risks are lower for both the occupiers and the premises themselves?	
Yes	The SFRA will be used to guide the more vulnerable uses away from Flood Zones 3 and 2 where possible i.e. in sites which are predominantly within Flood Zone 1

	<p>(SSP8) or which contain a mix of Flood Zones 1, 2 and 3a such as SSP3, SSP5 and SSP7.</p> <p>During the survey/analysis/design stages for developments the most sensitive uses on each site should be located in the areas of relatively lower flood risk.</p> <p>In all cases it must be demonstrated that an adequate standard of safety can be achieved through a site specific Flood Risk Assessment and will comply with the PPS 25 sequential and exception tests if applicable. Developers will be required to consult with the Environment Agency and District Emergency Planner in refining development proposals within Flood Zones 2 and 3.</p>
No	Proceed with the Exception Test for SSP2, SSP3, SSP5, SSP6 and SSP7.

1.2 The Exception Test

- 1.2.1. The Exception Test provides a method of managing flood risk while still allowing necessary development to occur. The Exception Test is only appropriate for use when there are large areas in Flood Zones 2 and 3, “where the Sequential Test alone cannot deliver acceptable sites, but where some continuing development is necessary for wider sustainable development reasons, taking into account the need to avoid social or economic blight”.
- 1.2.2. For the Exception Test to be passed:
- It must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a SFRA where one has been prepared.
 - The development should be on developable previously-developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously-developed land; and
 - A FRA must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.
- 1.2.3. The following tables applies the PPS 25 exception test to each of the AAP Strategic Sites with land in flood zones 2 and/or 3.

SSP2 – Peto Square

1. Do the development proposals make a positive contribution to sustainable communities and to the sustainable development with reference to the Sustainability Appraisal (SA)	
Yes	<p>The Sustainability Appraisal for this AAP highlights that a variety of sustainability benefits will result from the redevelopment of Lake Lothing and the Outer Harbour in general and Peto Square specifically.</p> <p>Regeneration The SA baseline highlighted that the wards comprising the AAP area contain some of the most deprived areas in Suffolk (Indices of Multiple Deprivation 2007). Mixed use redevelopment will promote regeneration in these communities, improving access to services and community facilities as well as providing greater range of employment and accommodation options for new and existing residents, including those in most need.</p> <p>Access and Movement By increasing the accessibility of town centre retail / leisure amenities, the creation of a new transport interchange will further assist with the promotion of more efficient public transport movements and a modal shift away from car use. This modal shift will help to reduce traffic congestion and contributions to climate change. The provision of cycle and pedestrian connections will further encourage more sustainable travel choices in Lowestoft.</p> <p>Town Centre Vitality The proposals for Peto Square will have a major positive effect on revitalising the town centre by increasing the range of shops and leisure activities in central Lowestoft, improving accessibility and connecting the town's heart with the waterfront. These improvements will help to address leakage of spending to neighbouring centres.</p>

	<p>Efficient and Effective Use of Land</p> <p>The reconfiguration and redevelopment of the site will make more efficient use of Peto Square which is currently underutilised. The allocation of the site for new retail development will decrease pressure on out-of town, greenfield locations for new retail growth.</p> <p>A revitalised waterfront</p> <p>New retail development and public realm improvements will promote the revitalisation of Lake Lothing. The redevelopment of the site will enhance the identity and character of Lowestoft's overall townscape. The incorporation of new pedestrian and cycle routes will ensure these revitalised environments can be enjoyed by all.</p> <p>Enhancing Tourism</p> <p>New leisure facilities and tourist accommodation will help to strengthen Lowestoft as a tourist destination and attract more visitors outside the traditional summer peak season. Moreover, the physical transformation of Lake Lothing to create a high quality and attractive waterfront will also improve the public perception of Lowestoft.</p>
2. Are the development proposals on developable land or where there are no reasonable alternative reasonable alternatives on previously developed land?	
Yes	<p>In the interests of reducing car dependence and promoting the vitality of town centres, Planning Policy Statement 4: Planning for Sustainable Economic Growth (December 2009) encourages LPAs to focus new retail development and other town centre leisure uses within existing centres. There are no other reasonable town centre or edge of centre locations on previously developed land for retail expansion within the AAP area. Allocation of the site for new retail development will decrease pressure on out-of town, greenfield locations for new retail growth.</p>
3. Has a flood risk assessment been produced that demonstrates that 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?	
Yes	<p>Peto Square is considered to be the most appropriate location for town centre development within the AAP area in accordance with Planning Policy Statement 4 which stresses the importance of focussing new retail, office and leisure development within or on the edge of town centres. This will promote the vitality and viability of Lowestoft town centre. Furthermore, the Waveney and Great Yarmouth Retail Study (2006) advised that the projected capacity for additional retail floorspace will need to be concentrated in the principal centres, as they have the critical mass of retailing, physical capacity, demand and catchment populations to sustain major new additions to their retail stock.</p> <p>Section 4.2 and Policy SSP2 of the AAP identifies broad development principles for the development of the Peto Square site. This is focussed upon the North Peto Square area which provides clear linkages to the town centre. The AAP advocates a sequential approach to development of the site with uses positioned in locations either safe from flood, or where safe means of escape is possible during a flood event. The AAP also contains principles for integrating flood defence measures as part of a comprehensive, planned scheme. This draws from an initial site specific Flood Risk Assessment that has been undertaken for North Peto Square and PowerPark which sets out a series of site design parameters that must be incorporated to ensure flood risk issues are satisfactorily addressed.</p> <p>It is anticipated that North Peto Square will be subject to a comprehensive development strategy that takes into full consideration flood mitigation measures across the site. The</p>

	<p>AAP policy ensures that this will be informed by a Flood Risk Assessment in accordance with Part C of the Exception Test stating that FRAs “must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall”. This requirement will be addressed in a comprehensive way through planning applications in Peto Square which must be subject to detailed flood risk assessments, flood mitigation and evacuation strategies.</p> <p>Core Strategy Policy CS03 states that the risk to development should be fully mitigated by design and engineering measures in line with the requirements of PPS25.</p> <p>In accordance with AAP Policy FRM1, developments will be required to adequately demonstrate how flood risk has been mitigated (e.g. through SUDS) and how resilience during flood events has been maximised (e.g. safe access/egress points; habitable rooms above ground floor etc).</p>
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SSP3 - Kirkley Waterfront and Sustainable Urban Neighbourhood

1. Do the development proposals make a positive contribution to sustainable communities and to the sustainable development with reference to the Sustainability Appraisal (SA)	
Yes	<p>The Sustainability Appraisal for this AAP highlights that a variety of sustainability benefits will result from the redevelopment of Lake Lothing and the Outer Harbour in general and Kirkley Waterfront / SUN specifically.</p> <p>Regeneration The SA baseline highlighted that the wards comprising the AAP area contain some of the most deprived areas in Suffolk (Indices of Multiple Deprivation 2007). The development proposals will promote regeneration in these communities, improving access to services and community facilities as well as providing greater range of employment and housing options for new and existing residents, including those in most need.</p> <p>Housing The delivery of a mix of new housing including a variety of types, tenures and sizes, will help to address Lowestoft's identified housing needs. The increase in population associated with new residential development will help to support the viability of local shops and services in the immediate area and town centre.</p> <p>Employment New employment space will provide local employment opportunities and contribute to the economic regeneration of Lowestoft.</p> <p>Access and Movement Mixed use development of the site, including new housing, leisure facilities, community infrastructure and employment space will encourage walking and cycling to local destinations in line with the strategic ambition of reducing commuting and car dependency. The provision of cycle and pedestrian connections will further encourage more sustainable travel choices in Lowestoft.</p> <p>Efficient and Effective Use of Land Mixed use redevelopment of the site will make effective use of currently under-utilised land as well as existing infrastructure, thereby promoting more sustainable patterns of travel.</p> <p>A revitalised waterfront Redevelopment of the site will contribute to the overall revitalisation of Lowestoft's waterfront and promote better connection between Lake Lothing and the existing urban fabric of the town. The range of land uses will encourage footfall at different times of day whilst the incorporation of new cycle and pedestrian routes will ensure the waterfront areas are accessible to all.</p> <p>Enhancing Tourism New leisure facilities and tourist accommodation will help to strengthen Lowestoft as a tourist destination and attract more visitors outside the traditional summer peak season. Moreover, the physical transformation of Lake Lothing to create a high quality and attractive waterfront will also improve the public perception of Lowestoft.</p>
2. Are the development proposals on developable land or where there are no reasonable alternative reasonable alternatives on previously developed land?	
Yes	Planning Policy Statement 3: Housing (June 2010) seeks to prioritise previously

	<p>developed land (PDL) for the development of new housing. Kirkley Waterfront / SUN is consistent with PPS3's definition of PDL, with much of the site currently under-utilised or vacant. Mixed use redevelopment at Kirkley Waterfront / SUN will contribute towards targets for the use of previously developed land.</p> <p>Kirkley Waterfront / SUN is considered a suitable location for residential development within the AAP area because the site includes a significant portion of land outside Flood Zone 3, enabling a greater proportion of the AAP's housing allocation to be directed towards the areas at lowest risk of flooding. Previous iterations of the AAP proposed housing in Peto Square and PowerPark, which are almost exclusively located within Flood Zone 3.</p> <p>Other sites where mixed use development was proposed in previous drafts of the AAP (such as PowerPark) are not considered suitable for new residential development due to potentially adverse impacts on port operations which were identified by stakeholders during consultation.</p>
3. Has a flood risk assessment been produced that demonstrates that 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?	
Yes	<p>The PPS25 sequential approach has been adopted across the AAP area. A range of different options for accommodating residential development within the AAP area were considered through the options testing process. This considered the provision of high density residential development as part of mixed use development in Peto Square and the Town Centre. However, through options testing and dialogue with the Environment Agency it is considered that residential development should be concentrated primarily in areas within Flood Zone 1, or alternatively in areas adjacent to flood zone 1 where safe means of escape can be made through land raising or other engineered solutions. A major focus for residential development is within the southern part of the AAP area, primarily upon Brooke Peninsula, Sanyo and part of the Jeld Wen site which collectively form part of the Sustainable Urban Neighbourhood strategic site. Much of the area considered for housing is located within Zone 1, whilst flood mitigation in areas within Zones 2 and 3 was part examined through the cumulative land raising study for Brooke Peninsula. The AAP places a requirement upon developers to work jointly to further examine flood risk issues and identify a comprehensive mitigation strategy for the sites.</p> <p>Part C of the Exception Test requires that site Flood Risk Assessments (FRAs) "must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall". The AAP seeks to ensure that individual site developers within Kirkley Waterfront and the SUN work together to ensure a comprehensive and strategic approach is taken to the development of this site, including an integrated approach to flood mitigation and defence. This will need to be demonstrated through the evolution of a site development brief/outline planning application that will be subject to detailed FRA.</p> <p>The Strategic Flood Risk Assessment (SFRA) identifies that much of the site is currently protected through existing defences, whilst the Cumulative Land Raising Study considered the potential for land raising at Brooke Peninsula which may be appropriate in other parts of the site. Much of the area to the south is outside of Flood Zone 2 and 3.</p> <p>Section 4.3 of the AAP and SSP 3 seek to ensure that a partnership approach is taken to the development of this site, taking into full consideration flood risk issues. This will involve developers, the Council and the Environment Agency. The AAP seeks to ensure that a sequential approach is taken in planning the site to ensure that residential and more vulnerable uses are located away from flood risk areas, or in areas identified as flood zone 2 or 3, that flood risk can be fully mitigated through detailed site design and</p>

	<p>engineering measures in line with the requirements of PPS25.</p> <p>In accordance with AAP Policy FRM1, developments will be required to adequately demonstrate how flood risk has been mitigated (e.g. through SUDS) and how resilience during flood events has been maximised (e.g. safe access/egress points; habitable rooms above ground floor and appropriate evacuation strategies).</p>
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SSP5 – Kirkley Rise

1. Do the development proposals make a positive contribution to sustainable communities and to the sustainable development with reference to the Sustainability Appraisal (SA)	
Yes	<p>The Sustainability Appraisal for this AAP highlights that a variety of sustainability benefits will result from the redevelopment of Lake Lothing and the Outer Harbour in general and Kirkley Rise specifically.</p> <p>Regeneration The SA baseline highlighted that the wards comprising the AAP area contain some of the most deprived areas in Suffolk (Indices of Multiple Deprivation 2007). Mixed use redevelopment will promote regeneration in these communities, improving access to services and community facilities as well as providing greater range of employment and accommodation options for new and existing residents, including those in most need.</p> <p>Housing The delivery of a mix of new housing including a variety of types, tenures and sizes, will help to address Lowestoft's identified housing needs. The increase in population associated with new residential development will help to support the viability of local shops and services in Kirkley District Shopping Centre and the town centre.</p> <p>Access and Movement Mixed use development at Kirkley Rise will encourage walking and cycling to local destinations in line with the strategic ambition of reducing commuting and car dependency. The provision of new and improved cycle and pedestrian connections will further encourage more sustainable travel choices in Lowestoft.</p> <p>Efficient and Effective Use of Land Redevelopment would make effective use of currently under-utilised land as well as existing infrastructure.</p> <p>Increased Viability of Kirkley Shopping Area A mix of residential, leisure and retail uses as well as new social infrastructure will help to consolidate the existing Shopping Area which serves the local community.</p> <p>A revitalised waterfront New connections through the site will help integrate the revitalised waterfront of Lake Lothing and existing communities in Kirkley.</p> <p>Enhancing Tourism New leisure facilities and tourist accommodation will help to strengthen Lowestoft as a tourist destination and attract more visitors outside the traditional summer peak season. Moreover, the physical transformation of Lake Lothing to create a high quality and attractive waterfront will also improve the public perception of Lowestoft.</p>
2. Are the development proposals on developable land or where there are no reasonable alternative reasonable alternatives on previously developed land?	
Yes	<p>Planning Policy Statement 3: Housing (June 2010) seeks to prioritise previously developed land (PDL) for the development of new housing. Kirkley Rise is consistent with the definition of PDL set out in PPS3. Mixed use redevelopment of Kirkley Rise will contribute towards targets for the use of previously developed land.</p>

	<p>Kirkley Rise is considered a suitable location for residential development within the AAP area because the site includes land outside Flood Zone 3, enabling a greater proportion of the AAP's housing allocation to be directed towards the areas at lowest risk of flooding. Previous iterations of the AAP proposed housing in Peto Square and PowerPark, which are almost exclusively located within Flood Zone 3.</p> <p>Other sites where mixed use development was proposed in previous drafts of the AAP (such as PowerPark) are not considered suitable for new residential development due to potentially adverse impacts on port operations which were identified by stakeholders during consultation.</p>
3. Has a flood risk assessment been produced that demonstrates that 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?	
Yes	<p>Figure 3.6.1 of the AAP and diagrams within the SFRA identify that much of the site is within Flood Zone 2 and 3, whilst hydraulic modelling undertaken as part of the SFRA and Cumulative Land Raising Study identified that a flow path exists along Horn Hill which must be maintained unless it can be demonstrated that development will not increase the risk of flooding elsewhere.</p> <p>Section 4.5 and SSP6 seek to ensure that development will not be permitted unless a site specific flood risk assessment is undertaken, accompanied by a flood evacuation plan and appropriate mitigation measures to ensure that development is safe. A sequential approach to site planning is advocated through illustrative development principles which seeks to focus development in the immediate vicinity of Kirkley District Shopping Centre. Further development may be possible in the vicinity of Horn Hill provided flood risk issues can be overcome and the identified flow path is not affected with negative impacts on other areas.</p> <p>In accordance with AAP Policy FRM1, development within Kirkley Rise will be required to adequately demonstrate how flood risk has been mitigated (e.g. through SUDS) and how resilience during flood events has been maximised (e.g. safe access/egress points; habitable rooms above ground floor).</p>

SSP6 – Western End of Lake Lothing

1. Do the development proposals make a positive contribution to sustainable communities and to the sustainable development with reference to the Sustainability Appraisal (SA)	
Yes	<p>The Sustainability Appraisal for this AAP highlights that a variety of sustainability benefits will result from the redevelopment of Lake Lothing and the Outer Harbour in general and the Western End of Lake Lothing specifically.</p> <p>Regeneration The SA baseline highlighted that the wards comprising the AAP area contain some of the most deprived areas in Suffolk (Indices of Multiple Deprivation 2007). Mixed use redevelopment will promote regeneration in these communities, improving access to services and community facilities as well as providing greater range of employment and accommodation options for new and existing residents, including those in most need.</p> <p>Housing The delivery of a mix of new housing including a variety of types, tenures and sizes, will help to address Lowestoft's identified housing needs. The increase in population associated with new residential development will help to support the viability of local shops and services in the immediate vicinity and town centre.</p> <p>Employment New employment space will provide local employment opportunities and contribute to the economic regeneration of Lowestoft.</p> <p>Access and Movement The provision of new and improved cycle and pedestrian connections will encourage more sustainable travel choices in Lowestoft.</p> <p>Efficient and Effective Use of Land The Western End of Lake Lothing is currently under-utilised and current land uses on site do not take full advantage of its waterfront location. Redevelopment would make efficient use of the land at the Western End of Lake Lothing.</p> <p>A revitalised waterfront Redevelopment of the site will contribute to the overall revitalisation of Lowestoft's waterfront and promote better connection between Lake Lothing and the existing urban fabric of the town. The range of land uses will encourage footfall at different times of day whilst the incorporation of new cycle and pedestrian routes will ensure the waterfront areas are accessible to all.</p> <p>Enhancing Tourism New leisure / tourism facilities will help to strengthen Lowestoft as a tourist destination and attract more visitors outside the traditional summer peak season. Moreover, the physical transformation of Lake Lothing to create a high quality and attractive waterfront will also improve the public perception of Lowestoft.</p>
2. Are the development proposals on developable land or where there are no reasonable alternative reasonable alternatives on previously developed land?	
Yes	<p>Planning Policy Statement 3: Housing (June 2010) seeks to prioritise previously developed land (PDL) for the development of new housing. The Western End of Lake Lothing is consistent with the definition of PDL set out in PPS3. Mixed use redevelopment of the Western End of Lake Lothing will contribute towards targets for the</p>

	<p>use of previously developed land.</p> <p>The Western End of Lake Lothing is considered a suitable location for residential development within the AAP area because the site includes land outside Flood Zone 3, enabling a greater proportion of the AAP's housing allocation to be directed towards the areas at lowest risk of flooding. Previous iterations of the AAP proposed housing in Peto Square and PowerPark, which are almost exclusively located within Flood Zone 3.</p> <p>Other sites where mixed use development was proposed in previous drafts of the AAP (such as PowerPark) are not considered suitable for new residential development due to potentially adverse impacts on port operations which were identified by stakeholders during consultation.</p>
3. Has a flood risk assessment been produced that demonstrates that 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?	
Yes	<p>Parts of the Western End of Lake Lothing Strategic Site are within Flood Zone 1 and therefore development applications within these areas will not require flood risk assessment. However, any development proposed within Flood Zones 2 and 3 will be subject to a detailed Flood Risk Assessment in accordance with Policy FRM1 and SSP6 of the AAP. Section 4.6 also provides indicative development principles to assist developers in refining detailed plans within this area taking into full consideration flooding issues.</p> <p>In accordance with Part C of the Exception Test, site specific Flood Risk Assessments (FRAs) "must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall".</p> <p>Core Strategy Policy CS03 states that the risk to development should be fully mitigated by design and engineering measures in line with the requirements of PPS25.</p> <p>In accordance with AAP Policy FRM1, developments will be required to adequately demonstrate how flood risk has been mitigated (e.g. through SUDS) and how resilience during flood events has been maximised (e.g. safe access/egress points; habitable rooms above ground floor).</p>

SSP7 – Oswald’s Boatyard

1. Do the development proposals make a positive contribution to sustainable communities and to the sustainable development with reference to the Sustainability Appraisal (SA)	
Yes	<p>The Sustainability Appraisal for this AAP highlights that a variety of sustainability benefits will result from the redevelopment of Lake Lothing and the Outer Harbour in general and Oswald’s Boatyard specifically.</p> <p>Regeneration The SA baseline highlighted that the wards comprising the AAP area contain some of the most deprived areas in Suffolk (Indices of Multiple Deprivation 2007). Mixed use redevelopment will promote regeneration in these communities, improving access to services and community facilities as well as providing greater range of employment and accommodation options for new and existing residents, including those in most need.</p> <p>Housing The delivery of a mix of new housing including a variety of types, tenures and sizes, will help to address Lowestoft’s identified housing needs. The increase in population associated with new residential development will help to support the viability of local shops and services as well as the evening economy in Oulton Broad.</p> <p>Access and Movement The provision of new and improved cycle and pedestrian connections will encourage more sustainable travel choices in Lowestoft.</p> <p>Efficient and Effective Use of Land Oswald’s Boatyard is currently under-utilised and current land uses on site do not take full advantage of its waterfront location. Redevelopment would make efficient use of underutilised brownfield land in this gateway location.</p> <p>A revitalised waterfront Redevelopment of the site will contribute to the overall revitalisation of Lowestoft’s waterfront and promote better connection between Lake Lothing and the existing urban fabric of the town. The range of land uses will encourage footfall at different times of day whilst the incorporation of new cycle and pedestrian routes will ensure the waterfront areas are accessible to all. The development of a landmark building of high architectural quality and distinctiveness of the townscape.</p> <p>Enhancing Tourism New leisure / tourism facilities will help to strengthen Lowestoft as a tourist destination and attract more visitors outside the traditional summer peak season. Moreover, the physical transformation of Lake Lothing to create a high quality and attractive waterfront will also improve the public perception of Lowestoft.</p>
2. Are the development proposals on developable land or where there are no reasonable alternative reasonable alternatives on previously developed land?	
Yes	<p>Planning Policy Statement 3: Housing (June 2010) seeks to prioritise previously developed land (PDL) for the development of new housing. Oswald’s Boatyard is consistent with the definition of PDL set out in PPS3. Mixed use redevelopment of Oswald’s Boatyard will contribute towards targets for the use of previously developed land.</p> <p>Oswald’s Boatyard is considered a suitable location for residential development within</p>

	<p>the AAP area because the northern area of the site includes land outside Flood Zone 3, enabling a greater proportion of the AAP's housing allocation to be directed towards the areas at lowest risk of flooding. Previous iterations of the AAP proposed housing in Peto Square and PowerPark, which are almost exclusively located within Flood Zone 3.</p> <p>Other sites where mixed use development was proposed in previous drafts of the AAP (such as PowerPark) are not considered suitable for new residential development due to potentially adverse impacts on port operations which were identified by stakeholders during consultation.</p>
3. Has a flood risk assessment been produced that demonstrates that 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?	
Yes	<p>Figure 3.6.1 of the AAP and information contained within the SFRA identifies that much of the southern part of the site is within Flood Risk Zones 2 and 3. The Cumulative Land Raising Study concludes that land raising of the quay crest between the Railway Bridge and Mutford Bridge will provide sufficient flood defence to facilitate development of the site. Alternatively a defence wall could be constructed along the Lake Lothing Frontage.</p> <p>The AAP provides illustrative design principles for the site which seek to incorporate flood resilience measures. This seeks to ensure that any residential uses within the southern part of the site are raised above alternative ground floor uses, with residential development focussed on the higher areas to the north of the site.</p> <p>The AAP identifies that any development proposed within the site must be subject to a detailed flood risk assessment. This must be carried out in accordance with Part C of the Exception Test which requires that site Flood Risk Assessments (FRAs) "must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall".</p> <p>Core Strategy Policy CS03 states that the risk to development should be fully mitigated by design and engineering measures in line with the requirements of PPS25.</p> <p>In accordance with AAP Policy FRM1, developments will be required to adequately demonstrate how flood risk has been mitigated (e.g. through SUDS) and how resilience during flood events has been maximised (e.g. safe access/egress points; habitable rooms above ground floor).</p>

2. Conclusion

- 2.1.1. Comprehensive redevelopment of Lake Lothing and the Outer Harbour will contribute positively towards the regeneration of Lowestoft. There are no other sites on previously developed land in the town, or previously developed land within the district, which are capable of accommodating the level of development allocated to the AAP area through the Core Strategy. In addition, there are no sequentially available sites that would be appropriate for the proposed development mix, or deliver the benefits offered by allocating this under-utilised area for mixed-use development. The majority of vulnerable uses, in particular residential development, will be located outside the areas of greatest flood risk.
- 2.1.2. Through the application of the sequential and exception tests to the AAP area, the regeneration benefits associated with the mixed use redevelopment of Lake Lothing and the Outer Harbour will be realised whilst minimising flood risk to new and existing development.