



SCOTT WILSON BUSINESS CONSULTANCY

Sustainability Appraisal of Newham's Local Development Framework

TECHNICAL APPENDIX: Royal Docks and Thameside West AAP Appraisal Tables



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Scott Wilson Business Consultancy

We work with clients to develop, implement and evaluate projects, programmes and change initiatives to improve performance and reduce risk.

Sustainability Appraisal of Newham's Local Development Framework

TECHNICAL APPENDIX:

Royal Docks and Thameside West AAP Appraisal Tables

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Key to Appraisal Table

Significance

It is ultimately the responsibility of the body conducting the SA to determine whether the effects of the LDD are likely to be significant. Annex II of the SEA Directive provides criteria for assessing the significance of environmental effects (see Para1.7 below).

When determining the significance of the effect of a policy, RPBs and LPAs may need to consider the probability, duration, frequency and reversibility of the effects, including cumulative, secondary and synergistic effects. The magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected) need to be considered. The value and vulnerability of certain areas and populations may also influence the assessment, particularly where thresholds or standards, may be exceeded. The following points¹ set out some principles of significance that are valid for all types of effect at the strategic level:

- Significance has to be determined individually in each case. Effects which are significant in one situation are not necessarily significant in another;
- Analysis of significance needs to be proportionate. It should be able to be carried out with reasonable time and effort and the effort expended to assess significance should be proportionate to the expected severity of the effect;
- Flexibility is important so that individual cases can be assessed. Criteria should be considered as guidelines, not rules; and
- Mathematical models are difficult to use to determine significance. Many aspects can be covered by verbal descriptions. The use of numeric models could give rise to fictitious precision. An attempt at quantifying qualitative and semi-quantitative aspects will not lead to an increase in objectivity.

The nature, impact and potential significance of the impacts will be assessed using a standard scoping approach which is summarised in the tables below.

¹ ODPM (2005) ODPM (2005) *Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks: Interim advice note on frequently asked questions*. ODPM (available at: http://www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_037013.pdf)

Appraisal Scoring Symbols.

Symbol	Likely effect against the SA Objective
Significance impact	
++	Potentially significant beneficial impact (i.e. beneficial impact on several significance criteria)
+	Policy supports this objective although it may have beneficial impact (i.e. beneficial impact on one significance criteria)
0	1. Policy has no impact 2. Effect is neutral insofar as the benefits and drawbacks appear equal and neither is considered significant
?	Uncertain or insufficient information on which to determine base the assessment at this stage
-	Policy appears to conflict with the objective and may result in adverse impacts (i.e. adverse impact on one significance criteria)
--	Potentially significant adverse impact (i.e. beneficial impact on several significance criteria)
Temporal effects	
S	Predicted to occur from 0 to 5 years after the plan implementation, e.g. where PO is to be imposed on all / all new development.
M	Predicted to occur from 5 to 13 years after the plan implementation (i.e. 2012 to 2020 the end of the plan period).
L	Predicted to occur over 13 years after the plan implementation (i.e. beyond the plan period).
?	Uncertain or insufficient information on which to determine base the assessment at this stage
Magnitude / Description of the effect	
NS	Not Significant – where POs are not predicted to have significant impacts on the SA objective and it's significance criteria.
NA	Not Appropriate – where POs relationship are not considered to be appropriate.

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SA Objective 1: To Protect, Maintain, Restore and Enhance the Quality of Newham's Open Space, to Create New Open Spaces as Appropriate, and Ensure that Access to Open Space and the Wider Public Realm is Enhanced.

SEA Topic(s)	SA Indicators
Biodiversity (including flora and fauna), population, landscape/townscape, human health	Percentage of planning permissions for major development including provision for off-site environment and transport improvements to the adjacent street scene, public realm, public open space, or transport network. Amount of public open space per 1000 residents. Quality of parks and public open spaces (using Park Survey results).

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Improved amenity and landscape value of open space?
2. Improved physical access to open space and / or public realm and the connectivity between green spaces?
3. Improved quantity of publicly accessible open / greenspace?
4. Promotion of the East London?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
Baseline Situation: <ul style="list-style-type: none"> • Approx. 258 ha open space, the equivalent of 1.1ha per 1000 residents • Public open space constitutes 7% of the total area of Newham (London average 13%) • Public open space relatively well distributed, however Newham is ranked 27 out of 32 in provision of public open space • Parks have 74% satisfaction rating from residents. 							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Release of land enables new developments and open space provision.	S to L	+	M	Expert Judgement based on Newham Council's 'Open Space and Outdoor Recreation Background Paper' & Core Strategy (CS).	
4.2	Thameside West Area of Change	Lyle Park and Thames Barrier Park have low usage. Other areas of the AAP are deficient in open space. The Preferred Option (PO) confines an area to being adjacent to Lyle Park, potentially not reducing deficit elsewhere. The provision of open space for the number of new dwellings does not meet the standard set out in CS PO 53.	M to L	--	M	Expert Judgement based on Newham Council's 'Open Space and Outdoor Recreation Background Paper' & Core Strategy (CS).	PO should meet standards set out in CS for open space of residential developments which states that developments of over 100 dwellings should provide 1.1 hectares per 1000 new residents.
4.3	Silvertown Quays Development Area	Not Applicable (NA) as PO continues to support					

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		development already permitted.					
4.4	Royal Docks Recreational Area	Not Significant (NS)					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Beneficial impact assuming open space is provided alongside residential uses as identified in the CS.	S to M	+	M	Expert Judgement based on Newham Council's 'Open Space and Outdoor Recreation Background Paper' & Core Strategy (CS).	Should ensure PO in accord with CS open space POs.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS					
4.10	King George V Southside Mixed Use Development Zone	Open space should be provided, particularly where 'family orientated housing' is to be provided. Open space use may be limited by noise impacts from City Airport.	S to L	-	M	Expert Judgement & Environment Background Paper by Newham Council.	Should ensure development in accord with CS open space POs.
4.11	Silvertown Triangle Mixed Use Zone	NS - Meet the requirements of the CS Open space POs					Should ensure development in accord with CS open space POs.
4.12	Britannia Village	Some parts of the area have a deficiency of open space.	S to L	-	M	Expert Judgement based on Open Space	Areas that are deficient in open space may also be provided for

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		Open space contributions may be beneficial.				and Outdoor Recreation Background Paper by Newham Council.	in developer contributions.
4.13	Thames Barrier Park East	Barrier Park should potentially be able to contribute to the amount of open space required by the CS open space POs. Although the cumulative effect of new and existing residential developments, on open space standards, may be adversely effected if Barrier Park is unable to provide for all residences in the vicinity. Therefore additional open space may be required.	S to L	+	M	Expert Judgement based on Open Space and Outdoor Recreation Background Paper by Newham Council.	Should ensure development in accord with CS open space POs. Ensure that there is sufficient open space provision for residences.
Cumulative Effects: Open space provision should be required as per CS open space POs and standards. They should ensure that the cumulative effect of additional residential development does not result in areas of open space subsequently not meeting standards.							
Summary: Open space can have economic benefits in promoting an area, therefore requirements for consideration of open space in the non-residential developments should be considered in this AAP. Location of open space should look to reduce areas of deficit and meet the standards set out in the CS.							

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SA Objective 2: To Promote More Balanced Communities in Terms of their Socio-Economic Make-Up.

SEA Topic(s)	SA Indicators
Population, material assets	Social Class of employees and self-employed residents of Newham.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Increased access to community facilities, including key local services and shopping facilities?
2. Severance, or severs, a community from vital community services?
3. Encourage the provision of more locally based services and facilities?
4. Improve the satisfaction of people with their neighbourhoods as places to live?
5. Help to create a diverse and skilled economy?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> 2.1% of population between ages 16 to 74 in Newham are long-term unemployed (since 1999 or earlier).; <ul style="list-style-type: none"> 14.6% of this section of the population are in the socio-economic classification of lower managerial and professional occupations; 12.2% in semi-routine occupations; 2.1% as full time students; 11% that have never worked; 11.1% (London 17.6%) residents as managers and senior officials; 10.5% (London 14.9%) residents as professional occupations; 14.9% (London 9%) in elementary occupations; 5.4% of population (aged 16 to 74) are in NS-SEC groups 1 and 2 (London 12.1%); 20.1% are in NS-SEC groups 6 and 7 (London 14.8%). 							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Release of industrial land is beneficial where land is to be used to develop communities.	S to L	++	M	Expert Judgement	
4.2	Thameside West Area of Change	Beneficial, should meet many of the SA significance criteria.	M to L	++	H	Expert Judgement	
4.3	Silvertown Quays Development Area	NA – not assessed as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use	NA – not assessed as PO					

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	Zone	continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	This PO should meet this SA Objective.	M to L	++	H	Expert Judgement	
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS – beneficial economic input to the area.					
4.10	King George V Southside Mixed Use Development Zone	Beneficial through provision of future affordable housing in an area of potential employment uses.	M to L	++	M	Expert Judgement	
4.11	Silvertown Triangle Mixed Use Zone	Beneficial mix of residential (amount unknown) and employment provision, however there is little provision of community services and facilities.	S to L	+ / - -	M	Expert Judgement	Unknown mix of employment vs. residential uses. PO lacks the provision of community facilities and services which should support mixed developments.
4.12	Britannia Village	Beneficial provision of further services and facilities to this residential community.	S to L	++	M	Expert Judgement	
4.13	Thames Barrier Park East	Mixed tenure housing provision in employment area, however, presently does not consider the need for community services and facilities to provide for such a	S to L	+ / - -	M	Expert Judgement	Should also provide for community services and facilities to maintain the population.

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	community.				
	Cumulative Effects: These POs should provide the AAP area with viable communities within their developing employment area. Where housing is provided appropriate community services and facilities should also accompany them.				
	Summary: These POs generally provide a beneficial mix of community facilities and services, employment and residential uses within many areas in the AAP. Silvertown Triangle and Thames Barrier Park East POs provide benefits to the area, but require provision of community services and facilities to support the mixed development.				

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SA Objective 3: To Reduce Crime and the Fear of Crime.

SEA Topic(s)	SA Indicators
Population	Rates of Street Crime. Neighbourhood Satisfaction.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Contributions to reducing crime rates?
2. Reduced fear of crime?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	Baseline Situation: Street crime was 12.8 per 1000 population in 2002/2003. Street crime increased by 22.4% from 2000/01-2002/03. This compares unfavourably with London's street crime figures of 8.2 per 1000 population and a fall of 15.8% over 2000/01 – 2002/03.						
	PREFERRED OPTIONS						
4.1	Release of Industrial Land	Release of land for other development types may change the volume/type of crime, e.g. crime on vehicles may increase and residential crime may grow, in an area which has low crime at present.	S to L	--	M	Expert Judgement base on Crime maps provided by Newham Council.	Should ensure development in accord with CS quality design and community safety POs.
4.2	Thameside West Area of Change	Development may change the volume/type of crime, e.g. crime on vehicles may increase and residential crimes/crime against persons may grow, in an area which has low crime at present.	S to L	--	M	Expert Judgement base on Crime maps provided by Newham Council.	Should ensure development in accord with CS quality design and community safety POs.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					

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4.6	Landmark Site Mixed Use Development Zone	Development may change the volume/type of crime, e.g. crime on vehicles may increase and residential crimes/crime against persons may grow, in an area which has low crime at present.	S to L	--	M	Expert Judgement base on Crime maps provided by Newham Council.	Should ensure development in accord with CS quality design and community safety POs.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS					
4.10	King George V Southside Mixed Use Development Zone	Development may change the volume/type of crime, e.g. crime on vehicles may increase and residential crimes/crime against persons may grow, in an area which has low crime at present.	S to L	--	M	Expert Judgement base on Crime maps provided by Newham Council.	Should ensure development in accord with CS quality design and community safety POs.
4.11	Silvertown Triangle Mixed Use Zone	Development may change the volume/type of crime, e.g. crime on vehicles may increase and residential crimes/crime against persons may grow, in an area which has low crime at present.	S to L	--	M	Expert Judgement base on Crime maps provided by Newham Council.	Should ensure development in accord with CS quality design and community safety POs.
4.12	Britannia Village	NS					
4.13	Thames Barrier Park East	Development may change the volume/type of crime, e.g. crime on vehicles may	S to L	--	M	Expert Judgement base on Crime maps provided by Newham	Should ensure development in accord with CS quality design and community safety POs.

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		increase and residential crimes/crime against persons may grow, in an area which has low crime at present.				Council.	
	Cumulative Effects: The development of the AAP area might make the area more attractive for vehicle, residential, personal crime and other types of criminal activity.						
	Summary: Where developments do not take into account the CS POs regarding community safety and quality of design there is a risk that development may change the volume/type of crime, e.g. crime on vehicles may increase and residential crime may grow, in an area which has low crime at present.						

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SA Objective 4: To Minimise Ambient Noise.

SEA Topic(s)	SA Indicators
Population	Complaints about noise.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Cause intolerable increases or significant decreases in noise nuisance to the community, particularly sensitive receptors (e.g. schools/hospitals/housing)?
2. Reduced noise levels?
3. Reduced noise concerns?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
Baseline Situation: Noise complaints increased from 2000 to 2001 by 400%. In 2002, there was a 12% drop when compared to 2001. The target is to stabilise noise complaints at current levels in 2004, 14 complaints per 1000 residents. This indicator is currently on target but at risk.							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	NS - increase in population and diversity of uses in the area may increase ambient noise.				Environment Background Paper by Newham Council	
4.2	Thameside West Area of Change	Potential adverse impacts where development of residences, schools and other sensitive receptors is permitted near to potentially noisy industrial sites.	S to L	--	H	Expert Judgement	Noise mitigation measures both within the noise producing site and the receptor site. Locating sensitive receptor away from noisy industry/developments.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	Potential increase in noise complaints or ambient noise because motor powered boats may be used within the docks, e.g. jet-skis.	S to L	-	M	Expert Judgement	Such developments should utilise, where possible, technology to reduce noise impacts. A condition of use of the river for these vehicles could include a maximum noise emission level. Operating hour restrictions might be introduced e.g.

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							restricted to within 9am to 8pm, to ensure that the hours of maximum sensitivity (sleep hours) are not disturbed.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Motor powered boats may be used within the docks, e.g. jet-skis, as a result of permanent water-sports facility.	S to L	+ / -	M	Expert Judgement	Where possible, technology should be used to reduce noise impacts. A condition of use of the river for these vehicles could include a maximum noise emission level. Operating hour restrictions might be introduced e.g. restricted to within 9am to 8pm, to ensure that the hours of maximum sensitivity (sleep hours) are not disturbed.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Beneficial enhancement to airport, which does not compromise environmental quality and amenity (including noise).	S to L	++	M	Expert Judgement	Mitigation measures should be included to ensure that this assumption is met.
4.10	King George V Southside Mixed Use	Residences impacted by noise from airport.	M to L	--	H	Expert Judgement	Design of residences to incorporate relevant SPDs and

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	Development Zone						
4.11	Silvertown Triangle Mixed Use Zone	Identified uses should not significantly increase noise in the area.	S to L	++	H	Expert Judgement	noise mitigation measures. Mitigation measures should be included to ensure that this assumption is met.
4.12	Britannia Village	NS					
4.13	Thames Barrier Park East	NS					
<p>Cumulative Effects: Overall beneficial impact on this SA Objective. However controls should be put in place to ensure that noise mitigation measures, (particularly for noise sensitive receptors), are considered within SPDs and developments adhere to them.</p>							
<p>Summary: The development of sites likely to contain noise sensitive receptors should adhere to all relevant design SPDs to try to reduce possible impacts upon them. The development of noise producing sites should adhere to noise mitigation measures and relevant SPDs to try to minimise their noise emissions and reduce the potential for complaints.</p>							

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SA Objective 5: To Ensure that all Residents have Access to Good Quality, Affordable Housing.

SEA Topic(s)	SA Indicators
Population, material assets	Percentage of new housing output that is affordable.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Increased access to decent and affordable housing?
2. Reducing the number of unfit homes?
3. Increasing the range and quality of housing choice?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> Affordable housing accounted for 15.6% of all new housing developments between 1993 and 2002. % up to around 28% for 2001-03. Newham's Housing strategy seeks 35% of housing completions/ outputs to be affordable. <p><i>Source: L.B Newham Forward Planning and Transportation (Environment and Regeneration Department)</i></p> <ul style="list-style-type: none"> Total Unfit Housing stock rose slightly from 2001-02 (18.3% - 18.8%). However, other public stock in better condition than London average. The private sector has the highest proportion of unfit dwellings 26.6% (2002). Target: By 2010, bring all social housing into fit/decent condition with most of the improvement taking place in the most deprived areas, and increase the proportion of private housing in fit/ decent condition, from 73.4% (2002) <p><i>Source: Housing Statistics Department, ODPM (2002)</i></p>							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Beneficial where it provides land on which it is potentially possible to build affordable housing. Provisions of a range of high quality housing through CS POs.	S to L	++	H	Expert Judgement	
4.2	Thameside West Area of Change	Beneficial provision of family homes and a proportion of affordable housing Provisions of a range of high quality housing through CS POs.	S to L	++	M	Expert Judgement	35% affordable housing has been identified as a suitable target for the borough.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already					

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		permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Beneficial provision of a proportion of affordable housing . Provisions of a range of high quality housing through CS POs.	S to L	++	M	Expert Judgement	35% affordable housing has been identified as a suitable target for the borough.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS					
4.10	King George V Southside Mixed Use Development Zone	Allows for housing developments, including family dwellings in close proximity to airport, potentially adversely impacting children. CS POs ensure quality housing for this range of housing.	S to L	+	M	Expert Judgement and Environment Background Paper by Newham Council	Current noise from airport may impact on family dwellings, noise mitigation should be required by the development. 35% affordable housing has been identified as a suitable target for the borough.
4.11	Silvertown Triangle Mixed Use Zone	Dependent on type and mix of housing to be provided. Though CS POs ensure quality of design for this mix		?			
4.12	Britannia Village	NS					
4.13	Thames Barrier Park	Beneficial provision of a mix	S to L	++	M	Expert Judgement	35% affordable housing has

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	East	of tenures. CS POs ensure quality housing for this range of housing.					been identified as a suitable target for the borough.
	Cumulative Effects: Housing provision for a range of income groups of the borough.						
	Summary: These POs provide a range and mix of tenure housing which, despite being at an affordable housing level below that set by the London Plan, has been identified as a suitable target for the borough.						

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SA Objective 6: To Promote Social Inclusiveness and Equity.

SEA Topic(s)	SA Indicators
Population	Viability of Shopping Centres. Percentage of new housing output that is affordable.

1. SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**
2. Providing easier access to opportunities, services and facilities for all?
3. Improving ethnic / cultural mutual understanding?
4. Encouraging a feeling of more community spirit?
5. Reducing social exclusion?
6. Avoiding community polarisation and ensure links between new developments and existing communities?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation: Between 1995 and 2002 there has been an increase in total retail, service floor space, a reduction in the proportion of vacant/ service floorspace and an increase in branches of national Multiple retailers. Target for the next 5 years:</p> <ul style="list-style-type: none"> To increase the amount of overall retail and services floorspace in town centres; To reduce the levels of vacant floorspace; and To increase the number of branches of national multiplier retailers locating in Newham. <p>The London Borough of Newham is generally on target except in the areas of Canning Town and Forest Gate.</p> <p>Affordable housing accounted for 15.6% of all new housing developments between 1993 and 2002. This increased to around 28% for 2001-03. Target for the next 5 years:</p> <ul style="list-style-type: none"> 35% of housing completions/ outputs to be affordable (Strategic Target in London Plan is 50%). <p>The Council are currently on target for planning permissions, and moving towards target in output.</p>							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Release of land enables the potential development of mixed, balanced communities.	S to L	++	M	Expert Judgement	
4.2	Thameside West Area of Change	Increases access to: job opportunities; provides community services and facilities; and affordable housing. Provisions for linking with existing communities are not known.	S to L	+	M	Expert Judgement based on Thameside and Royal Dock Background Paper and Community Service Paper by Newham Council.	Provisions for linking with existing communities are not identified in the PO.
4.3	Silvertown Quays	NA as PO continues to					

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	Development Area	support development already permitted.					
4.4	Royal Docks Recreational Area		S to L	+	M	Expert Judgement	These leisure facilities should be encouraged to be available to all. Other Council strategies could encourage this.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Residential development does not include community facilities . therefore it may not provide a sense of place or community spirit and meet the basic needs of the local population.	S to L	--	M	Expert Judgement	These leisure facilities should be encouraged to be available to all. Community services and facilities should be provided with developments to provide for the community.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS					
4.10	King George V Southside Mixed Use Development Zone	Lack of community services and facilities for the area may not support the employment and residential uses proposed.	S to L	--	M	Expert Judgement	Community services and facilities should be provided with developments to provide for the community.
4.11	Silvertown Triangle Mixed Use Zone	The development types do not promote a sustainable community. Where lack of community services and	S to L	--	M	Expert Judgement	Community services and facilities should be provided with developments to provide for the community.

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		facilities for the area may not support the employment and residential uses proposed.					
4.12	Britannia Village	Aims to meet this SA Objective.	S to L	++	H	Expert Judgement	
4.13	Thames Barrier Park East	The development types do not promote a sustainable community. Where lack of community services and facilities for the area may not support the employment and residential uses proposed.	S to L	--	M	Expert Judgement	Community services and facilities should be provided with developments to provide for the community.
Cumulative Effects: See summary below.							
<p>Summary: Some of the POs lack necessary provisions for providing sustainable communities into the future, where housing and/or employment provisions are made. There is a lack of provisions for community services and facilities that may build a sustainable community.</p> <p>Water-sports developments should be accessible to all, potentially through Council Strategies, initiatives, including school/youth and other community organisations.</p> <p>The links between new and existing communities should be improved and provided for, otherwise is repeat experience of Britannia Village community's 'isolated nature' may occur.</p>							

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SA Objective 7: To Tackle Poverty and Deprivation in Areas of Particular Geographical Need.

SEA Topic(s)	SA Indicators
Population, material assets	Percentage of unfit dwellings in Newham and London. Children in Poverty.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Contributions to local regeneration, help deprived areas?
2. Helping low income groups / especially children in low income families?
3. Encouraging entrepreneurial activity in disadvantaged areas?
4. Reduced poverty in the most affected areas?
5. Reduced unemployment rates in disadvantaged areas?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	<p>Baseline Situation: Total Unfit Housing stock rose slightly from 2001-02 (Newham 18.3% - 18.8%; London 6.5% - 6.9%). Total stock (excluding housing) condition compares favourably with the London average. The private sector has the highest proportion of unfit dwellings 26.6% (2002). Target: by 2010:</p> <ul style="list-style-type: none"> Bring all social housing into fit/decent condition with most of the improvement taking place in the most deprived areas; and Increase the proportion of private housing in fit/ decent condition, from 73.4% (2002). <p>Status of target is stable needs further action. 66.6% of children live in households with relatively low income (2003) this is very high especially when compared to the London average of 38% and the UK average of 22%. Target:</p> <ul style="list-style-type: none"> Reduce the number of children in low income households by at least a quarter, as a contribution towards the broader target of halving child poverty by 2010 and eradicating it by 2020. <p>Status of Target is improving, but 2004 national target was missed. (Source: Newham Sustainability Appraisal Scoping Report)</p>						
	PREFERRED OPTIONS						
4.1	Release of Industrial Land	Release of land to other development uses, including residential is beneficial, providing potential dwellings lower-income households.	S to L	++	H	Expert Judgement	
4.2	Thameside West Area of Change	Presently unpopulated land to be developed for mixed communities (including affordable/family housing), contribution to regeneration of an industrial area.	S to L	++	H	Expert Judgement based on Index of Deprivation maps	
4.3	Silvertown Quays	NA as PO continues to					

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	Development Area	support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Encourages entrepreneurship (through starter units), and provides more potential affordable housing for lower income households.	S to L	++	H	Expert Judgement	
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Airport contributes to regeneration of the local area through the provision of local employment.	S to L	+	H	Thameside and Royal Dock Background Paper and Community Service Paper	
4.10	King George V Southside Mixed Use Development Zone	% of affordable housing provides potential dwellings for lower income groups. Extension of DLR is beneficial to regeneration of the area, therefore the site is contributing to local area.	S to L	++	H	Expert Judgement	
4.11	Silvertown Triangle Mixed Use Zone	Assists in local regeneration, though the employment types potentially do not suit	S to L	--	M	Expert Judgement based on baseline data	The developments should provide for training, skills and education centres, particularly

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		the labour force of the area or Newham.					where providing higher skilled jobs. Developments that provide employment to match the local skills should be encouraged.
4.12	Britannia Village	Beneficial in that PO is to regenerate an 'isolated' residential community.	S to L	+	M	Expert Judgement	
4.13	Thames Barrier Park East	Beneficial in providing a proportion of affordable and intermediate homes in an area of high deprivation. However, does not provide other services or facilities or opportunities potentially beneficial to deprived areas.	S to L	+ / -	M	Expert Judgement & Index of Deprivation Maps (provided by Newham Council)	Whilst housing is beneficial other regeneration is required to ensure the sustainability of the developments.
<p>Cumulative Effects: The POs predominately contribute to regeneration of the area.</p> <p>However developments should provide for training, skills and education centres, particularly where providing higher skilled jobs and a proportion of potentially lower skilled/affordable housing to ensure the future sustainability of the proposed developments.</p>							
<p>Summary: See cumulative effects above.</p>							

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SA Objective 8: To Improve the Health of Newham Residents, Reduce Health Inequalities and Promote Healthy Living.

SEA Topic(s)	SA Indicators
Human health, population	Average GP list Size. Life Expectancy at Birth. Number of confirmed TB cases per 100,000 Population.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Increased / decreased opportunities for physical exercise?
2. Reduced health inequalities?
3. Improved access to high quality health facilities?
4. Increased life expectancies in Newham compared to the London Average?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
Baseline Situation:							
<ul style="list-style-type: none"> Average GP list Size 2100 (UK average 1800) (2003). Target: To reduce the average list size per GP to less than 1800 by 2006 with the aim of reducing the average list per GP to 1500 within 10 years (2014). Status of target: Need further trend information. But below national average. Life expectancy in Newham was 71.93 (London 75.02) in 1997/98 and 78.48 (London 82.50) in 2001. Target: Reduce the gap in life expectancy (Newham - London average) by 40% by 2010 and achieve London Average life expectancy by 2020. Status of target: No significant move towards target. Number of confirmed TB cases per 100,000 Population: Highest rate of case per 100,000 in London. Cases rose from 92.1 (1998) to peak at 116 (2001) and down to 98.7 (2002). Target: TB rates per 100 000 to fall from 98.7 (2002) to the London average by 2020. Status of target: Highest rate in London. However latest figures show improving/ stabilising trend. 							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Considerable areas of the Royal Docks (Royals) and Thameside industrial land are vacant and underused. In this state they provide no opportunities for physical exercise or health facilities. The release of these areas provides opportunities for these to be built into developments.	S – L	+?	M	Site visit, Industrial land strategy background paper (by Newham Council) informing expert judgement.	The Planned SPD on Section 106 agreements should encompass guidance on expected contributions to high quality health facilities.
4.2	Thameside West Area of Change	Currently limited opportunities for physical exercise. Current residents close to traditional 'industrial' areas with noisy, dirty activities with associated heavy vehicle use. Site will provide 2 additional	S – L	+	M	Site Visit , Industrial Land strategy by Newham Council.	Ensure that opportunities for physical exercise is maximised in additional space provided. Similar to Lyle park – tennis courts, football pitches etc should be made available.

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		hectares of open space and includes community facilities including a health centre.					
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	Provision of water based sporting activities will increase opportunities for physical exercise.	S – L	+	H	Expert Judgement	
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Provision of water based sporting activities will increase opportunities for physical exercise. Assume open space provision in residential development is to be as stated in core strategy. Newham NIMS shows GPs exist around Canning Town area.	S – L	+?	L	Newham Neighbour Information Management System (NIMS), Expert Judgement.	GPs available in Canning Town area but no information on list size. If above target list size should seek contribution to further health facilities.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	The preferred options commitments both to enhancing existing airport	S - L	?	L	http://www.londoncityairport.com/	The airport runs a close programme of consultation with the community. This includes

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		facilities and not comprising local environmental quality (which may affect human health). The enhancement measures are not clear so its impossible to judge how future changes will affect human health. Clearly an increase in flight numbers has the potential to adversely affect noise and air quality having a detrimental affect on human health.					availability of sound insulation grants and availability of noise information. The airport limits operational hours and types of aircraft. This consultation and mitigation should continue to be improved especially in light of any increase in aircraft movements.
4.10	King George V Southside Mixed Use Development Zone	Ensure health facilities provided with development of housing oriented site.	S – L	?	L	NIMS Expert Judgement	
4.11	Silvertown Triangle Mixed Use Zone	Development for employment purposes should include appropriate provision of secure and visible cycle parking and showering and changing facilities for cycles and pedestrians.	S – L	0	L	Expert Judgement	Emphasis on cycling and walking to work and green travel plans should be provided in the SPD referred to in the Core Strategy. Para 6.46.
4.12	Britannia Village	Site isolated. Contributions should provide links to health facilities and physical exercise opportunities and therefore improve the current local situation.	S – L	?	M	Site Visit, Expert Judgement	Improving the access to health facilities and opportunities for physical exercise is dependent on development contributions and therefore the SPD on Section 106 agreements.
4.13	Thames Barrier Park East	Area adjacent to 22 acre park so good opportunities for physical exercise. Provision must be made for health	S – L	+	M	Site Visit, Expert Judgement	

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	facilities.					
	<p>Cumulative Effects: Cumulative effects of the increase in residents in the Royals area and the gradual increasing demand on few existing GPs and health facilities. The facilities must be put in place before existing capacity is exceeded or targets for GP list size are broken.</p>					
	<p>Summary: The AAP provides for thousands of new residents in the area. The Royals currently has very few health facilities (NIMS). There is a great need to ensure that appropriate provision is made for health facilities and GPs if Newham is going to meet its targets of lowering average GP list size. The provision of good quality affordable housing may mean residents can be moved from any currently unsuitable conditions, or where conditions are cramped. Measures such as this will help in reducing the number of TB cases arising each year. The large influx of residents will need appropriate provision of opportunities for physical exercise if healthy lifestyles are to be promoted and health inequalities are to be reduced. The provision of open space and other facilities for sport should be given emphasis in the SPD on developer contributions.</p>					

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SA Objective 9: To Ensure Local Residents have Access to Opportunities for Employment.

SEA Topic(s)	SA Indicators
Population, material assets	Unemployment rates.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Creating opportunities for unemployed?
2. Improved qualifications and skills of local people?
3. Reduced unemployment rates in disadvantaged areas?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> In 1999 Newham unemployment levels were 10.9% (the London average was 6.1%). The 2003 rate was 4.9% (the London average in 2003 was 3.6%). Newham unemployment rates, proportionate to the London average, have improved since 1999. The target is to reduce Newham unemployment rates to the London average by 2006. Newham is progressing towards the target but still has some way to go to reach London's average by 2006. <p>The Council believes that it is more useful to have a supply of industrial land that is modern, fit for purpose and efficiently used, rather than a large stock of decaying premises that are underused. There is no advantage in retaining vacant industrial land without a realistic prospect of it coming forward for industrial or warehousing development. The mixed-use development of some industrial land can be used to facilitate the development of modern premises (Background paper: managing industrial land and facilitating mixed use development).</p>							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Vacant industrial land available. Mixed use development and regeneration of areas will provide some employment.	S – L	+	M	Expert judgement, background paper by Newham Council.	Ensure that release of industrial land doesn't prejudice against provision of future employment.
4.2	Thameside West Area of Change	Vacant industrial land available. Mixed use development and regeneration of areas will provide some employment.	S – L	+	M	Expert judgement, background papers by Newham Council	Ensure that release of industrial land doesn't prejudice against provision of future employment. PO includes facilities to improve the skills of local people.
4.3	Silvertown Quays	NA as PO continues to					

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	Development Area	support development already permitted.					
4.4	Royal Docks Recreational Area	Leisure activities on the Dock will provide employment opportunities.	S – L	++	M	Expert Judgement	
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Employment uses are to be encouraged. Permanent water sports facilities to be set up.	S – L	+?	M	Expert judgement	
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Contributes by creating job opportunities both directly and indirectly.	S – L	++	H	Expert judgment, http://www.londoncityairport.com/	
4.10	King George V Southside Mixed Use Development Zone	Mixed use development and regeneration of areas will provide some employment.	S – L	+?	L	Expert Judgement	
4.11	Silvertown Triangle Mixed Use Zone	Mixed use site promoting offices, research, development, high technology, light	S – L	+	M	Expert Judgement	Will provide some employment but it is not clear in the preferred option what % of the development is

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		industrial facilities, housing and hotels.					residential. Employment opportunities should be maximised for the area.
4.12	Britannia Village	NS					
4.13	Thames Barrier Park East	NS					
<p>Cumulative Effects: The development and regeneration of area should continue to attract further investment. This should mean job opportunities continue to build into the future in this area.</p>							
<p>Summary: The Background paper “managing industrial land and facilitating mixed use development” sets out that “Redesignation of industrial land will be considered so that supply can still satisfy demand in the most appropriate locations, and in line with the regeneration objectives of the borough”. The strategy proposes a rationalisation of the supply of industrial land in the borough along the lines of “less land more jobs”. The key will be to ensure this happens so that “the use of vacant industrial land for housing does not reduce the future options for providing employment”. The implications of releasing and redesignating 38.4 hectares in the AAP should be considered in terms of the future effect on Newham and the other east London Boroughs.</p>							

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SA Objective 10: To Create a Favourable Climate for Sustainable Investment, with a Modern, Balanced Employment Structure Based on a Combination of Indigenous Growth and High-Technology Inward Investment.

SEA Topic(s)	SA Indicators
Population, material assets	Business Activity (Total VAT registered firms).

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Encouragement of inward investment?
2. Diversification of the economy, increase resilience to external shocks?
3. Encouraging innovation?
4. Improved business development and enhance competitiveness?
5. Promoting the borough as a location for major new investment and business activity?
6. Attracting uses which contribute to diversification and strengthening of the local economy?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	Baseline Situation:						
	<ul style="list-style-type: none"> In Newham there is a steady increase in VAT registered stock, from 3600 registered firms in 1994 to 4480 registered firms in 2002, this equates to a 24% increase (London's increase in VAT registered firms between 1994 and 2002 was 16%). Newhams target is to sustain annual growth in VAT registered firms at levels above the London average, and to increase the number of VAT registered firms per 10 000 residents to the London average. Progression towards the target is improving, however Newham has only 35 firms per 10,000 in comparison to the average of 59 firms per 10,000 in London. 						
	PREFERRED OPTIONS						
4.1	Release of Industrial Land	Release of industrial land for housing, social and physical infrastructure could have both positive and negative effects on the climate for sustainable investment in the area. The loss of industrial space may result in the loss of investment and business in this area. However, developments could encourage inward investment and the growth in key sectors but this will be dependent on the provision of suitable premises.	S-L	?	L	Expert Judgement	Transport access, provision of employment facilities, services and an attractive environment in areas released from industrial uses will be important components if business is to be encouraged to locate in the redeveloped sites.

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4.2	Thameside West Area of Change	The mix of facilities that are proposed for this area should help to create a more attractive social and physical environment for business. There are however no provisions for office or space for industry within the PO that may be a limiting factor for the encouragement of indigenous business and diversification of the economy. Good transport links will be important in encouraging inward investment into the area.	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	Promotion of business facilities could be incorporated into this PO to encourage inward investment, indigenous business and to diversify the local economy. Transport access must also be a key consideration.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	The provision of employment facilities should help encourage the location of business in this zone. The range of facilities proposed supports the diversification of the economy and offers	S-L	+	M	Expert Judgement	Transport access should be considered in order for this PO to be successful.

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		opportunity for indigenous growth. There may however be conflicts between residential and industrial uses.					
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Enhancements to the airport are likely to help create a favourable climate for investment, where national and international travel into the area will encourage regeneration. The PO is likely to have a positive effect provided development continues to encourage employment opportunities for local people and to enhance transport links which connect the airport and the wider community,.	S-L	+	M	http://www.londoncityairport.com/index.php?page=environment Expert Judgement	Development should encourage indigenous business wherever possible through improved access to the surrounding areas.
4.10	King George V Southside Mixed Use Development Zone	Beyond 2009, once the DLR extension is complete, the PO for this site is housing-led mixed use development. This	M-L	?	M	Expert Judgement	Incorporating incentives for business could be encouraged as part of new development. Office provision including serviced

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		will provide homes in the area and also the potential for new business opportunities within the developments. The lack of office space provision may limit the types of investment that is attracted to the area.					offices could for example be incorporated into the mixed use developments. Provision of access to community services (e.g. childcare), open space and transport networks will help encourage investment and indigenous business and to help create a more diverse local economy as a more suitable working environment.
4.11	Silvertown Triangle Mixed Use Zone	The PO for this area will promote inward investment, innovation, and increased diversity of the local economy, where the development proposals favour a mix of facilities including offices, research development, high-tech and light industry, housing and hotels.	S-L	++	H	Newham UDP Expert Judgement	Development should also incorporate improvements transport links and integration of development with the local community i.e. through the creation of employment for local people.
4.12	Britannia Village	The PO will help connect this area with the wider borough, which could encourage growth and investment in the area. Improved services and facilities will help reduce social barriers to employment such as lack of childcare and could	S-L	+	M	Newham UDP Expert Judgement	

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		also help make the area more attractive for people to live and work in.					
4.13	Thames Barrier Park East	The proposed housing densities could mean an increased demand for services and transport facilities, these would need to be addressed for the site to be viable. The development would create a pool of potential labour which could compliment development in nearby zones (e.g. Silvertown Triangle Mixed Use Zone) provided social and physical links are encouraged (e.g. employment opportunities and transport access)	S-L	+?	M	UDP	This PO has the potential to create a positive impact for increased investment and growth. However, in order to be viable integration into the wider community and area is essential.
<p>Cumulative Effects: The provision of housing, services and open space should help create an attractive living and working environment. However, the integration of new development is essential for business and investment to be encouraged. Integration in terms of transport and job creation and provision of a diversity of employment types would be most beneficial.</p>							
<p>Summary: Access and provision of business space is an important issue in creating a favourable climate for sustainable investment. There is little provision for high-tech industry development within the AAP.</p>							

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SA Objective 11: To Reduce the Amount of Waste Requiring Final Disposal Through Waste Minimisation, and to Increase (in Order of Priority) the Proportion of Waste Used, Recycled, Composted and Recovered.

SEA Topic(s)	SA Indicators
Soil	Household Recycling rates. Amount of Secondary/recycled Aggregates used compared with virgin aggregates.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Reduced waste generated (i.e. consumption of materials and resources), reuse / recycle / use recycled?
2. Reduced waste in the construction industry?
3. Maximising use of recycled materials?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> Household Recycling rates: In 2002/03 Newham recycled 5% of its household waste, an increase on the 2001/02 rate of 3%. However, it is still in lowest quarter in performance terms. Average for London - 10.8% (2002/03). National rates were 15.75% in 2002/03. The target in Newham is to recycle or compost 25% of household waste by 2005/6; recycle 30% of household waste by 2010 (2000 Waste Strategy); and treble 2002/2 recycling rates by 2006. The indicators for this target are deteriorating relative to both the London and National picture. Amount of Secondary/recycled Aggregates used compared with virgin aggregates: No data is available for Newham available at present. In London for construction and demolition waste in 2000/01 4337 thousand tonnes of recycled aggregate (71.6% of total waste) was utilised. Nationally the aggregates used (in Millions of tonnes) in 2001 were virgin-169, and recycled- 54. Newhams target is to make better use of aggregates, and to achieve targets of: <ul style="list-style-type: none"> 80 per cent re-use of construction and demolition waste 60 per cent re-use of that waste as aggregates in London by 2010. 							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	The release of industrial land is likely to create demolition waste and potentially hazardous waste. Subsequent development could lead to waste generation both during construction and operational phases. The proportions produced as a result of development compared to what is produced by the	S-L	--	M/H	Expert Judgement Core Strategy Preferred Options	Wherever possible waste produced from demolition, construction and operation should be reduced, reused, recycled or recovered. Development should also conform to the waste POs in the Core Strategy. Household recycling facilities should be provided in residential developments.

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		present use will depend on the nature of activity.					
4.2	Thameside West Area of Change	The provision of 3,000 new residential units, educational and community facilities will generate large quantities of waste both from construction and operation of the sites. The provisions in the Core Strategy PO for Sustainable Waste Strategy should be followed for all developments. The effectiveness of such measures will depend on the implementation.	S-L	--	M/H	Expert Judgement Core Strategy Preferred Options	New developments should reduce waste wherever possible and follow the waste management hierarchy. A Sustainable Waste Strategy should be produced for developments. Household recycling facilities should be provided in residential developments.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	Development may increase the generation of waste but provided the Core Strategy waste PO is adhered to this should not create a negative impact.	S-L	0	M/H	Expert Judgement Core Strategy Preferred Options	New developments should seek to minimise the waste generated both as a result of construction and operation.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	The encouragement of 800 new residential units, offices, high-tech and light industry will generate large volumes of waste. This will be both from construction and from	S-L	--	M	Expert Judgement Core Strategy Preferred Options	New developments should reduce waste wherever possible and follow the waste management hierarchy. A Sustainable Waste Strategy should be produced for

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		waste generated by the operation of the sites. The waste PO from the Core Strategy should lead to reductions, reuse, recycling of arisings but the effectiveness will depend on the implementation of the waste PO.					developments. The waste Preferred Option outlined in the Core Strategy must be adhered to. Household recycling facilities should be provided in residential development.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Enhancements to the airport could potentially increase the waste generated by the site both from construction and operation. The PO does state that developments are not to compromise local or Borough-wide environmental quality – if this includes waste then the effect of this PO should not be negative.	S-L	-	M	Expert Judgement Core Strategy Preferred Options	Enhancements should conform with the waste PO set out in the Core Strategy and should seek to reduce waste generated wherever possible.
4.10	King George V Southside Mixed Use Development Zone	Development of 300 units after 2009, will result in increased waste generated by construction and operation of the site. Pre 2009, construction materials on the site should, wherever	S-L	--	M	Expert Judgement Core Strategy Preferred Options	Development on this site should abide by the waste PO set out in the Core Strategy and wherever possible seek to minimise waste generated and reuse and recycle waste. Household recycling facilities

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		possible, be reused and recycled.					should be provided in residential development.
4.11	Silvertown Triangle Mixed Use Zone	The development of offices, research, development, high-tech and industrial facilities on this site will generate increased volumes of waste in construction and the operation of the site. If the waste PO in the Core Strategy are adhered to then the impacts of this might be reduced.	S-L	--	M	Expert Judgement Core Strategy Preferred Options	Development on this site should abide by the waste PO set out in the Core Strategy and wherever possible seek to minimise waste generated and reuse and recycle waste.
4.12	Britannia Village	Improvements in the physical links to this area could lead to an increase of waste generated particularly from construction. If the waste PO from the Core Strategy is adhered to the arisings should be reduced, reused and recycled wherever possible.	S-L	-	M	Expert Judgement Core Strategy Preferred Options	Development should abide by the waste PO set out in the Core Strategy and wherever possible seek to minimise waste generated and reuse and recycle waste.
4.13	Thames Barrier Park East	The development of 600 residential units in this area will increase the generation of waste from construction and operation of the site. Assuming the waste PO from the Core Strategy is adhered to this should be minimised, reused and recycled but this will be dependent on implementation.	S-L	--	M	Expert Judgement Core Strategy Preferred Options	Development should abide by the waste PO set out in the Core Strategy and wherever possible seek to minimise waste generated and reuse and recycle waste. Household recycling facilities should be provided in residential development.

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	<p>Cumulative Effects: The POs for this AAP are likely to result in an increase in the volume of waste produced during the various developments' construction and operational phases. Release of industrial sites could also increase the generation of hazardous waste from remediation of contaminated industrial land. The extent to which waste is reduced, reused, recycled and recovered will depend on the extent to which the waste PO in the Core Strategy is adhered to.</p>
	<p>Summary: All development should meet the requirements of the waste PO in the Core Strategy and should seek to reduce waste generation, reuse and recycle waste wherever possible. Recycling facilities should be provided in new developments (particularly residential developments) and waste minimisation in the construction industry should be increased.</p>

SA Objective 12: To Reduce Emissions of Greenhouse Gases and Plan for Further Reductions to Meet or Exceed National Climate Change Targets.

SEA Topic(s)	SA Indicators
Climate	Emissions of carbon dioxide per capita. Volume of road traffic.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Minimised need for energy?
2. Increased energy efficiency?
3. Reduced emissions of CO₂?

		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	<p>Baseline Situation:</p> <ul style="list-style-type: none"> No specific data is available in Newham for emissions of carbon dioxide per capita. Concern has been expressed where the future predicted large population rise will mean total local emissions will rise faster than the London average (1100kg of CO2 emissions per capita) (Caution is needed because emissions from power generation are attributed to the region in which the source is located, which is not necessarily the same region where the end user is located). Newhams target is a 20% reduction in total CO2 emissions from 1990 levels by 2010, this target is stable, but needs further action. Data on the volume of road traffic is not available for Newham, however 2001 census data shows Newham to rank 6th nationally and regionally for travel to work by public transport. London road traffic volumes show a 6% increase in road traffic between 1993 and 2002. Newhams target is to reduce congestion in large urban areas to below 2000 levels by 2010. Status of target: Lower than regional average level of car use in Newham. 						
	PREFERRED OPTIONS						
4.1	Release of Industrial Land	NS					
4.2	Thameside West Area of Change	The majority of the released land is to be developed for housing, industry and community facilities. Each of these uses is likely to contribute to CO2 emissions and to put pressure on energy resources.	M - L	--	M	Expert judgement	Require energy-efficient development as far as possible. Encourage use of renewable energy, including e.g. small-scale wind generators on buildings, solar water heaters.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					

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4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	The preferred development plans for this area are likely to put pressure on energy resources and contribute to CO2 emissions.	M - L	--	M	Expert judgement	Require energy-efficient development as far as possible. Encourage use of renewable energy, including e.g. small-scale wind generators on buildings, solar water heaters.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	The preferred development plans for this area are likely to put pressure on energy resources and contribute greatly to CO2 emissions.	M - L	--	M	Expert judgement	Require energy-efficient development as far as possible. Encourage use of renewable energy, including e.g. small-scale wind generators on buildings, solar water heaters.
4.10	King George V Southside Mixed Use Development Zone	The preferred development plans for this area are likely to put pressure on energy resources and contribute greatly to CO2 emissions	M - L	--	M	Expert judgement	Require energy-efficient development as far as possible. Encourage use of renewable energy, including e.g. small-scale wind generators on buildings, solar water heaters.
4.11	Silvertown Triangle Mixed Use Zone	The preferred development plans for this area are likely to put pressure on energy resources and contribute greatly to CO2 emissions	M - L	--	M	Expert judgement	Require energy-efficient development as far as possible. Encourage use of renewable energy, including e.g. small-scale wind generators on buildings, solar water heaters.

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4.12	Britannia Village	NS - The plans for this area are unlikely to have a significant effect – any localised decrease in traffic through provision of footpaths and cycleways is likely to be slight.	M - L	0	M	Expert judgement	
4.13	Thames Barrier Park East	The preferred development plans for this area are likely to put pressure on energy resources and contribute greatly to CO2 emissions	M - L	--	M	Expert judgement	Require energy-efficient development as far as possible. Encourage use of renewable energy, including e.g. small-scale wind generators on buildings, solar water heaters.
<p>Cumulative Effects: In combination, the impact of these plans will be to increase CO2 emissions in the long term, and to increase the demand for energy in the Borough. The proportion of energy coming from renewable sources is likely to remain dependent on provision for renewable energy at the local site level and provisions elsewhere in the UK energy network.</p>							
<p>Summary: The preferred options will increase demand for energy and emissions of CO2. Improved energy efficiency is dependent on development design and standards of construction.</p>							

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SA Objective 13: To Substantially Increase the Proportion of Energy both Purchased and Generated from Renewable and Sustainable Sources.

SEA Topic(s)	SA Indicators
Climate	Renewable electricity generated as a percentage of total energy supplied. Renewable electricity purchased as a percentage of total energy purchased.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Increased renewable share of energy, in terms of production and use?
2. Promote use of renewable technologies?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	Baseline Situation:						
	<ul style="list-style-type: none"> Currently there exists a data gap regarding the amounts of renewable electricity generated and purchased in Newham. 						
	PREFERRED OPTIONS						
4.1	Release of Industrial Land	NS New development on previously industrial land should conform to the Core Strategy requirements. Proposals should seek to increase the proportion of energy generated from sustainable sources and to provide at least 10% of energy demand from renewable sources.					
4.2	Thameside West Area of Change	NS New development on previously industrial land should conform to the Core Strategy requirements. Proposals should seek to increase the proportion of energy generated from sustainable sources and to provide at least 10% of energy demand from					

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		renewable sources.					
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Employment uses which are to be encouraged in this area include high tech and light industry which might have a high energy demand. Assuming the POs in the Core Strategy are adhered to, new developments including industry should have an increased proportion of their energy generation and use from renewable sources. However, the outcome will be dependent on the implementation.	S-L	?	L	Expert Judgement	Greater amounts of renewable energy production and use should be sought in all new developments. Proposals should conform with the POs of the Core Strategy.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Enhancing existing airport facilities could include increasing the amount of	S-L	?	L	Expert Judgement	Greater amounts of renewable energy production and use should be sought in all new

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		energy that is from renewable sources, used in the terminal building but this is dependent on the exact proposals for the site.					developments. Proposals should conform with the POs of the Core Strategy in particular the Energy Efficiency Preferred Option.
4.10	King George V Southside Mixed Use Development Zone	Assuming the Core Strategy POs are adhered to, new developments post 2009, will have at least 10% of their projected demand for energy from renewable sources. There is likely to be an increase in energy use however. This will depend on the implementation.	M-L	?	L/M	Expert Judgement Core Strategy Preferred Options	Greater amounts of renewable energy production and use should be sought in all new developments. Proposals should conform with the POs of the Core Strategy in particular the Energy Efficiency Preferred Option.
4.11	Silvertown Triangle Mixed Use Zone	Mixed use development in this area would increase the energy demand. This is particularly the case for industrial land uses. However, assuming the Core Strategy is followed, there should be an increased amount of this demand being met by renewable sources. This will depend on the implementation.	S-L	+/?	M	Expert Judgement Core Strategy Preferred Options	Greater amounts of renewable energy production and use should be sought in all new developments. Proposals should conform with the POs of the Core Strategy.
4.12	Britannia Village	NS New development on previously industrial land should conform to the Core Strategy requirements. Proposals should seek to increase the proportion of energy generated from					

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		sustainable sources and to provide at least 10% of energy demand from renewable sources.					
4.13	Thames Barrier Park East	Development will increase the energy demand. Providing the POs set out in the core strategy are followed, there should be a benefit in that more of the energy will be from renewable sources.	S-L	+	L/M	Expert Judgement Core Strategy Preferred Options	Greater amounts of renewable energy production and use should be sought in all new developments. Proposals should conform with the POs of the Core Strategy.
<p>Cumulative Effects: Provided the POs in the Core Strategy are followed, there should be an increase in energy provision from renewable sources in new development. For a number of areas the expected effect is determined by the implementation of the POs. There is however likely to be an increase in energy demand as a result of development.</p>							
<p>Summary: All new developments should conform to the Preferred Options in the Core Strategy and in particular the Energy Efficiency and Renewable Energy PO. Developments should aim to provide at least 10% of projected energy demand from renewable sources.</p>							

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SA Objective 14: To Minimise Risks to People from Flooding.

SEA Topic(s)	SA Indicators
Water	Number of properties at risk from flooding (not taking into account flooding defences) from a 1.200 tidal flood and 1.100 fluvial floods. Percentage of development applications each year where Environment Agency objects on flood grounds.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Leads to no additional flood risk from new development?
2. Minimising the risk of flooding from rivers and watercourses to people and property?

	Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures																								
<p>Baseline Situation: Risk is commonly defined as the product of a consequence and its probability of occurrence. The Thames Gateway London Partnership (TGLP), supported by ODPM, commissioned Entec and JBA to undertake a Strategic Flood Risk Assessment (SFRA) of East London. For the purposes of the assessment, a source-pathway-receptor model was used to understand the relative importance of the different sources of flood risk – see below.</p> <table border="1"> <thead> <tr> <th>Source</th> <th>Pathway</th> <th>Receptor</th> <th>Consequences</th> </tr> </thead> <tbody> <tr> <td>Tidal / fluvial flooding from the River Thames</td> <td>Breach, overtopping</td> <td>Properties and people behind the Thames Tidal Defences (TTD), civil infrastructure</td> <td>VERY LARGE</td> </tr> <tr> <td>Thames tributary fluvial flooding</td> <td>Breach, overtopping Overbank flooding</td> <td>Properties and people behind fluvial defences, civil infrastructure</td> <td>Medium to large</td> </tr> <tr> <td>Surface water flooding</td> <td>Blockage, overflow Failure of pumps or sluice outfalls</td> <td>Properties adjacent to surface water drains</td> <td>Small to medium</td> </tr> <tr> <td>Groundwater flooding</td> <td>Rising groundwater level</td> <td>Properties in low lying areas, civil infrastructure</td> <td>Small to medium</td> </tr> <tr> <td>Human error in operating tidal defences</td> <td>Overtopping of defences</td> <td>Properties and people behind TTD, civil infrastructure</td> <td>Medium to large</td> </tr> </tbody> </table> <p>The Thames Tidal Defences (TTD) reduce the probability of flooding below the threshold of the 0.1% per annum. However, more extreme events or conditions may occur if those defences are breached or overtopped. In the case of East London the quality of tidal defence is high and the probability of flooding low. However, the consequences of flooding could be very large, particularly in areas adjacent to the TTD which can be subject to rapid inundation. This is particularly true of Newham's Arc of Opportunity which extends from Stratford to the River Lea then down the Lea to the Thames and eastwards to Beckton including the former Royal Docks. It is the area where most of the Borough's major development sites are concentrated and is situated in flood risk Zone 3 – High risk (Zone 3 is further subdivided into high, medium and low risk areas and much of the Arc of Opportunity is in the highest risk zone). It should be noted that climate change provides a further challenge since it is fuelling a rise in relative sea level and increasing both the intensity and frequency of tidal surges.</p>							Source	Pathway	Receptor	Consequences	Tidal / fluvial flooding from the River Thames	Breach, overtopping	Properties and people behind the Thames Tidal Defences (TTD), civil infrastructure	VERY LARGE	Thames tributary fluvial flooding	Breach, overtopping Overbank flooding	Properties and people behind fluvial defences, civil infrastructure	Medium to large	Surface water flooding	Blockage, overflow Failure of pumps or sluice outfalls	Properties adjacent to surface water drains	Small to medium	Groundwater flooding	Rising groundwater level	Properties in low lying areas, civil infrastructure	Small to medium	Human error in operating tidal defences	Overtopping of defences	Properties and people behind TTD, civil infrastructure	Medium to large
Source	Pathway	Receptor	Consequences																											
Tidal / fluvial flooding from the River Thames	Breach, overtopping	Properties and people behind the Thames Tidal Defences (TTD), civil infrastructure	VERY LARGE																											
Thames tributary fluvial flooding	Breach, overtopping Overbank flooding	Properties and people behind fluvial defences, civil infrastructure	Medium to large																											
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Groundwater flooding	Rising groundwater level	Properties in low lying areas, civil infrastructure	Small to medium																											
Human error in operating tidal defences	Overtopping of defences	Properties and people behind TTD, civil infrastructure	Medium to large																											

<p>Parts of the Arc may also be at risk from fluvial flooding from the River Lea. Flood risk on fluvial rivers is less well documented in the SFRA due to its very local and temporal variation. As a result, the SFRA takes a precautionary approach to the categorisation of flood risk on fluvial systems, together with a presumption against development in the fluvial floodplain.</p> <p>The SFRA discusses a range of potential mitigation measures. These include the use of sustainable drainage systems and making space for water with the use of green space – measures that could be promoted through the Newham Core Strategy.</p>							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Development in the industrial areas which are in locations exposed to high flood risk (Thameside West) could result in an increased risk of flooding. The location and nature of development will determine the resultant risk.	S-L	?	L	Expert Judgement Evidence Base	New developments in this area should include flood mitigation measures.
4.2	Thameside West Area of Change	Provision of open space could help reduce the risk of flooding as hard standing is reduced. However, the PO for the area also includes a large amount of development e.g. 3,000 new residential units which will increase the flood risk, particularly as it is located in an area of high residual flood risk. Additional hard standing in the area as a result of development could also increase the risk from	S-L	--	H	Expert Judgement Evidence Base	New developments in this area should include flood mitigation measures.

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		flooding to existing buildings.					
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	The Royal Docks are located in areas of low and moderate residual flood risk. Water levels are controlled in the Docks which reduces the risk from flooding. Water based leisure facilities located along the Royal Victoria Dock are not expected to lead to an additional flood risk. The south side of the King George V Dock is at high risk of residual flooding and development here would increase the risk from flooding to both property and to users.	S-L	-	M	Expert Judgement Evidence Base	New development should incorporate flood mitigation measures, particularly if the facilities are to be provided around the Royal Albert Dock and King George V Dock.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	There is varied risk of flooding in this area with some parts experiencing a high risk and others a low risk. Development	S-L	-	M	Expert Judgement Evidence Base	New developments in this area should include flood mitigation measures.

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		in either class (low or high) could potentially be at risk from flooding. Those located in the high risk areas are likely to increase the risk of flooding to people and property.					
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	The airport is located in an area where there is medium and high residual flood risk. Any alterations to the site could potentially increase the risk of flooding to people and property due to increases in hardstanding. This would be dependent on the nature of the enhancements to be made.	S-L	?	L/M	Expert Judgement Evidence Base	New development in this area should incorporate flood risk mitigation measures.
4.10	King George V Southside Mixed Use Development Zone	Post 2009, there will be an increase in hardstanding in this area as a result of this PO. This zone is	S-L	--	M/H	Expert Judgement Evidence Base	New development in this area should incorporate flood risk mitigation measures.

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		located in an area of high flood risk and therefore housing-led mixed use development is likely to increase the risk of flooding to the new development and to people and property.					
4.11	Silvertown Triangle Mixed Use Zone	This zone is in an area of high flood risk and therefore there is an increased flood risk as a result of new development.	S-L	--	M/H	Expert Judgement Evidence Base	New development in this area should incorporate flood risk mitigation measures.
4.12	Britannia Village	If links include roadways then there is the potential to increase the amount of hardstanding and therefore the risk of flooding to new and existing buildings.	S-L	?	L	Expert Judgement Evidence Base	Development of roads and other hardstanding should be accompanied by measures to reduce flood risk.
4.13	Thames Barrier Park East	The location of the area adjacent to the Barrier Park is beneficial where this open space may provide flood storage capacity during flood periods. However, development at this site is likely to increase the risk from flooding to people and property as the site is near the Thames and is exposed to a high residual flood	S-L	--	M/H	Expert Judgement Evidence Base	New development in this area should incorporate flood risk mitigation measures.

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		risk. Flooding due to climate change might potentially be an issue for development in this area.					
	<p>Cumulative Effects: Most of the sites experience medium to high risk from flooding and development in these areas will increase the risks to people from flooding.</p>						
	<p>Summary: Flood mitigations measures must be included in all new developments.</p>						

SA Objective 15: To Promote a High Quality of Urban Design in Conjunction with Sustainable Construction Principles and Techniques Including More Efficient Resource Use.

SEA Topic(s)	SA Indicators
Cultural heritage (including archaeology and architecture), material assets	Energy Efficiency (Average SAP rating).

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Minimised demand for primary materials?
2. A change in the amount of recycled materials used?
3. Promotion of high quality design?
4. Creation of attractive environments in built up areas?
5. Use materials from sustainable sources?
 - Promotion of flood resistant design and take into account potential affects of climate change?

		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> Energy efficiency in Newham has increased between 2001/2002 and 2002/2003 but has levelled off since. In 2003/2004 Newham's Average SAP rating for energy efficiency was 57 (1=highly inefficient and 100=highly efficient). The Newham average was above the national average but below the London average in 2001. The proportion of new developments which have a BREEAM rating of Very Good or Excellent is a potential indicator for which no data currently exists. 							
<p>PREFERRED OPTIONS</p>							
4.1	Release of Industrial Land	Release of land is likely to increase the demand for raw materials as sites are developed. Releasing land for development is likely to promote high quality design and create an attractive environment assuming Core Policy Preferred Options relating to quality design and sustainable construction are followed.	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	Sustainable construction principles and techniques should be included in new developments on previously industrial land.
4.2	Thameside West Area of Change	There will be an increase in demand for raw material to meet the 3000 new residential units and 4ha education site proposals. Open space provision will help create an attractive environment. Assuming sustainable construction principles and techniques are to be used and a high quality	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	New development in this area should follow sustainable design principles. Developments should also make use of recycled and sustainably sourced materials wherever possible. Proposals should conform to the requirements of the Core Strategy.

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		of urban design is sought the impact should be positive. This will depend on the extent to which the Core Strategy is followed.					
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	Assuming the Core Strategy is followed and sustainable construction principles and techniques are used this should be a positive effect.	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	High quality of design should be pursued in the development of the leisure facilities and sustainable construction principles and techniques should be integral in the development.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Provision of residential and employment development in this area is likely to increase the demand for raw materials. New developments could help promote high quality design and could use recycled and sustainably sourced materials provided Core Strategy requirements are followed. The Core Strategy requirements for provision of open space with residential developments of 100+ dwellings could also help create an attractive environment.	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	High quality of design should be pursued in new developments and sustainable construction principles and techniques should be integral in the development.
4.7	Royal Business Park	NA as PO continues to					

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	Zone	support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	New developments will increase the demand for raw materials, however, assuming the POs in the Core Policy are adhered to, enhancements to the airport zone should promote high quality design and should use recycled and sustainable sourced materials.	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	High quality of design should be pursued in new developments and sustainable construction principles and techniques should be integral in the development.
4.10	King George V Southside Mixed Use Development Zone	Beyond 2009, this PO will lead to an increase in demand for raw materials. Conversion to housing-led mixed use development should incorporate sustainable construction principles and techniques. This will however depend on the implementation of the Core Strategy.	M-L	?	L/M	Expert Judgement Core Strategy Preferred Options	High quality of design should be pursued in new developments and sustainable construction principles and techniques should be integral in the development.
4.11	Silvertown Triangle Mixed Use Zone	Construction of buildings for varying uses could promote high quality of urban design and use sustainable construction principles and techniques in line with the requirements of the Core Strategy POs. New development would however	S-L	?	L/M	Expert Judgement Core Strategy Preferred Options	Developments in this zone should conform to the requirements of the Core Strategy and should seek to create a high quality of environment

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		increase the demand for raw materials.					
4.12	Britannia Village	Improvements in this area by way of links to other areas, provision of services and facilities are likely to increase the demand for raw materials but in comparison to other sites, this demand is not expected to be excessive.	S-L	0	M	Expert Judgement Core Strategy Preferred Options	Developments should seek to promote high quality design and wherever possible use sustainable construction principles and techniques. Proposals should also conform to the POs in the Core Strategy.
4.13	Thames Barrier Park East	The development will increase the demand for raw materials. Developments should incorporate sustainable construction principles and use renewable and sustainably sourced resources. This will however depend on the implementation of the Core Strategy.	S-L	?	L	Expert Judgement Core Strategy Preferred Options	Care should be taken to ensure that proposals will create an attractive environment and will promote high quality design.
<p>Cumulative Effects: The effects of the POs for each zone in the AAP will depend on the implementation of the Core Strategy POs. New development is likely to increase the demand for raw materials. If the POs in the Core Strategy are followed then there is potential for the developments to promote high quality urban design and to follow sustainable construction principles and techniques.</p>							
<p>Summary: New development should, wherever possible, use recycled and sustainably sourced materials, and incorporate sustainable construction principles and techniques. Development in the zones in the AAP should conform to the Core Strategy POs.</p>							

SA Objective 16: To Reduce the Need to Travel, Encourage Alternatives to the Car, and Make Best Use of Existing Transport Infrastructure.

SEA Topic(s)	SA Indicators
Population, air, climate	Volume of road traffic. Number of school trips by modes other than car.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Reducing the need to travel?
2. Reducing car reliance, encouraging other modes, e.g. walking, cycle, bus, and train?
3. Reduced traffic congestion?
4. Promoting alternatives to freight movement by road?
5. Improving access to public transport, walking and cycling?

		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	<p>Baseline Situation:</p> <ul style="list-style-type: none"> Data on the volume of road traffic is not available for Newham, however 2001 census data shows Newham to rank 6th nationally and regionally for travel to work by public transport. London road traffic volumes show a 6% increase in road traffic between 1993 and 2002. Newham's target is to reduce congestion in large urban areas to below 2000 levels by 2010. Status of target: Lower than regional average level of car use in Newham. 						
	PREFERRED OPTIONS						
4.1	Release of Industrial Land	This will depend on the type and scale of new development on the industrial land. Depending on the nature of previous uses new development may result in a reduction in road freight movements, or increases in traffic generation and the need to travel. Assuming the POs in the Core Strategy are adhered to the increases in traffic generation and the need to travel may be mitigated.	S-L	?	L	London Plan Newham UDP Expert Judgement Core Strategy Preferred Options	Release of industrial land for development may lead to increases in the need to travel and in traffic generation, commuting and congestion. The POs in the Core Strategy should be adhered to and wherever possible, future development should seek to improve access to public transport and promote reductions in car use. Road construction traffic should be minimised through taking advantage of the areas' proximity to the River Thames.
4.2	Thameside West Area of Change	Construction of the developments is also likely to lead to increased freight movements. The location of community facilities and employment opportunities in the area could however	S-L	?	L	London Plan Newham UDP Expert Judgement Core Strategy Preferred Options	Measures to reduce the reliance on cars and the need to travel should be introduced to development such as providing good access to public transport or green travel plans. Development should adhere to

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		reduce the need to travel for those living in the new residential. Assuming the POs in the Core Strategy are followed, the need for car use should be minimised and access to public transport maximised for new developments.					the POs in the Core Strategy. Road construction traffic should be minimised through taking advantage of the areas' proximity to the River Thames.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	The location of water-based leisure facilities by the Docks has the potential to lead to increased car use to and from the facilities. This could increase congestion in the surrounding area. Assuming the POs in the Core Strategy are adhered to, reliance on the car should be reduced and public transport provided to the site.	S-L	0	M/L	London Plan Newham UDP Expert Judgement Core Strategy Preferred Options	The POs in the Core Strategy should be followed and access routes for cyclists, pedestrians and public transport should be enhanced in the area.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Provision of residential and employment uses in the zone are likely to increase the use of the car and the need to travel and commute. Construction of the developments is likely to increase freight movements. Provided the POs in the Core Strategy are followed, there	S-L	-	L	London Plan Newham UDP Expert Judgement Core Strategy Preferred Options	Measures to reduce the reliance on cars and the need to travel should be introduced to development such as providing good access to public transport or green travel plans. Development should adhere to the POs in the Core Strategy. Road construction traffic should be minimised through taking

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		should be increased access to public services and a reduced need for car use.					advantage of the areas' proximity to the River Thames.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Enhancements to the airport are likely to increase the use of the airport which could increase the use of air travel and transport to and from the airport. This in turn is likely to increase the use of the car and could cause congestion in the surrounding area. Provided the POs in the Core Strategy are followed, access to public transport and measures to reduce the need for the car should be put in place.	S-L	-	M	Expert Judgement Core Strategy Preferred Options	Alternatives to car use should be sought when any enhancements are made to the airport. In addition, the need for air travel should be reduced. This could be encouraged by continued improvements to the bus and rail infrastructure links to areas outside the Borough.
4.10	King George V Southside Mixed Use Development Zone	Post 2009, the freight movements associated with the DLR works site should cease. However, developments on the site are likely to require freight movements during the construction phase. The construction of housing-led mixed use development is likely to increase the need to travel, increase congestion	S-L	?	L	Expert Judgement Core Strategy Preferred Options	Measures to reduce the reliance on cars and the need to travel should be introduced to development such as providing good access to public transport or green travel plans. Development should adhere to the POs in the Core Strategy. Future construction in the area should take advantage of minimising road construction traffic by taking advantage of

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		and to increase car use. Provided the POs in the Core Strategy are adhered to, these increases should to some extent be mitigated.					the areas' proximity to the River Thames.
4.11	Silvertown Triangle Mixed Use Zone	Mixed use development in this area is likely to increase the need to travel, increase freight movements during construction, and increase car and possibly air travel. Provided the POs in the Core Strategy are adhered to these increases should to some extent be mitigated.	S-L	-	M/L	Expert Judgement Core Strategy Preferred Options	Measures to reduce the reliance on cars and the need to travel should be introduced to development such as providing good access to public transport or green travel plans. Development should adhere to the POs in the Core Strategy. Road construction traffic should be minimised through taking advantage of the areas' proximity to the River Thames.
4.12	Britannia Village	This PO could have a positive effect if the proposed links to the wider area include public transport, cycle and pedestrian access. Provision of services and facilities could reduce the need for the existing community to travel. However there may be some increase in travel to these facilities from other areas.	S-L	+	M	Expert Judgement Core Strategy Preferred Options	The POs in the Core Strategy should be adhered to.

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4.13	Thames Barrier Park East	The provision of 600 residential units in this area is likely to increase freight movements during construction, increase the need to travel, increase congestion and car use. Assuming the POs in the Core Strategy are adhered to, these impacts should to be reduced.	S-L	-?	L	Expert Judgement Core Strategy Preferred Options	Measures to reduce the reliance on cars and the need to travel should be introduced to development such as providing good access to public transport or green travel plans. Development should adhere to the POs in the Core Strategy. Road construction traffic should be minimised through taking advantage of the areas' proximity to the River Thames.
<p>Cumulative Effects: Generally, the POs are likely to increase the need to travel, increase congestion and increase car use. Freight movements are also likely to increase during the construction phases. There is however ambiguity as the effects of the POs will depend on the extent to which the POs of the Core Strategy are adhered to.</p>							
<p>Summary: Developments should seek to reduce the need to travel and should encourage public transport, cycle and pedestrian access and improve transport links.</p>							

SA Objective 17: Avoid the Wasteful Use of Water and Maintain and Improve Surface and Ground Water Quality.

SEA Topic(s)	SA Indicators
Water	River Water Quality-Chemistry. Average household water consumption.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Development that could increase/decrease the potential for water pollution. Sustainable Drainage Systems (SUDS) schemes, for example.
2. Improvement of the water quality of rivers?
3. Reduced water use/consumption per capita, maintaining the water security despite climate change?
4. Maintaining the water environment whilst meeting demand from development?
5. Improving the quality of inland water?
6. Promoting the recycling of grey water?

		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation: River Water Quality-Chemistry:-</p> <ul style="list-style-type: none"> LEE - Lea Bridge Weir - Carpenters Road: Biochemical Oxygen Demand (mg/l)- C[2000], C [2001], D [2002], Ammonia (mgN/l): D[2000], D [2001], D [2002], Dissolved Oxygen (Percentage Saturation): C[2000], C [2001], D [2002]. London: Percentage of total river lengths of good or fair chemical quality- Good- 13 [1990] , 31 [2001]; Good & Fair - 71 [1990], 87 [2001]. Target: Monitored river lengths have a baseline assessment called the River Quality Objectives (RQO), which is the level of water quality that a river should achieve in order to be suitable for its agreed uses. The government set a target to increase RQO compliance in England and Wales from 82 per cent in 1997 to at least 91 per cent in 2005 (by 2002, RQO compliance stood at 91.2 per cent). Status of target: Data sets are not directly comparable. No data regarding the percentage of rivers in good or fair quality is available for Newham. No data is available for biological quality for Newham. Data available for Newham would suggest a small increase in river water quality between 2000-2001. <p>Average household water consumption:-</p> <ul style="list-style-type: none"> Newham's household water consumption is marginally (4%) below the average for the Thames Region, at 389 litres per household per day. However, household water consumption is currently rising at 3% per annum regionally, a clearly unsustainable trend. London: Public demand for water has risen by over 50% since the early 1960's. Estimated that demand for water will increase by 26% in the Thames Region between 1990 and year 2021. Target: (1) Ensure all major development incorporates a Water Conservation Strategy outlining measures to reduce water consumption or reuse grey water by 2005. (2) An aspirational target to stabilise per capita water consumption in the Borough by 2010. Status of target: Performance against 1st target is improving. However performance against 2nd target is deteriorating and action is needed. 							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	It is likely that some industrial land will be contaminated. New development on this land, after it is released, might potentially lead to instances of contamination of surface and ground water. New developments might also change the demand for	S-L	?	L	Expert Judgement Core Strategy Preferred Options	New developments on industrial land must be aware of contamination and carry out all the necessary procedures to ensure that any contamination is identified and remediated without causing pollution incidents. New developments should only be allowed where

		<p>water but this will be dependent on the nature of uses of the site before and after it is released. Shifts away from industrial uses have the potential to reduce the potential for water pollution incidences. Provided the contaminated land is remediated new developments should not reduce water quality. Additional development should only be permitted provided there is sufficient water supply, sewage and drainage infrastructure.</p>					<p>sufficient infrastructure (water supply, sewage, drainage) is available. Developments should also be designed to include measures to reduce water wastage e.g. SUDS. The POs in the Core Strategy must be adhered to.</p>
4.2	Thameside West Area of Change	<p>Creation of residential units, community facilities and education facilities are all likely to increase water consumption in this area. Assuming the POs set out in the Core Strategy are adhered to. New development in this area should not exceed sewage and drainage infrastructure capacity, and not lead to a deterioration in water quality.</p>	S-L	?		Core Strategy Preferred Options Expert Judgement	<p>New developments on industrial land must beware of contamination and carry out all the necessary procedures to ensure that any contamination is identified and remediated without causing pollution incidents. New developments should seek to use water more efficiently. New developments should also be designed to include measures to reduce water wastage e.g. SUDS. The POs in the Core Strategy must be adhered to.</p>
4.3	Silvertown Quays Development Area	<p>NA as PO continues to support development already permitted.</p>					
4.4	Royal Docks	<p>Impact of development of</p>	S-L	?	M	Expert Judgement	

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	Recreational Area	water sports facilities is dependent on the type of water sports undertaken at the site. Uses such as sailing, canoeing and windsurfing will not have a negative impact, whereas activities requiring powerboats etc. may have a negative impact through water pollution.					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Impact of development of water sports facilities is dependent on the type of water sports undertaken at the site. Uses such as sailing, canoeing and windsurfing will not have a negative impact, whereas activities requiring powerboats etc. may have a negative impact through water pollution. The provision of residential units, offices, high-tech and industrial units will increase the demand for water. The potential to increase water pollution will depend on the design of units and the types of industries that are encouraged to be located in the area. Provided the POs in the Core Strategy are	S-L	?	L	Expert Judgement Core Strategy Preferred Options	New residential, office and industrial development should aim to reduce the wasteful use of water. Development should also take into consideration the maintenance of surface and groundwater quality and should put mitigation measures in place if it appears water quality might be threatened as a result of construction or operation of new developments. POs in the Core Strategy should be followed.

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		followed there should not cause a negative effect on this objective.					
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	The airport is flanked to the north and south by Docks. Development to the airport either the runway or the terminal building may potentially adversely affect the Docks. There may also be an increased level of water consumption as a result of development. The PO does state that enhancements are not to compromise the environmental quality and amenity uses of the surrounding area, provided this is adhered to the impact on water quality should be minimised. In addition, the POs in the Core Strategy should be adhered to.	S-L	?	L	Expert Judgement Core Strategy Preferred Options	Potential reductions in water quality must be taken into consideration when enhancements are made to the airport due to its sensitive location in between two docks. Developments should conform to the POs set out in the Core Strategy.
4.10	King George V Southside Mixed Use Development Zone	Post 2009, housing-led mixed development will increase the amount of water consumed in the zone. However, provided the POs	S-L	0	H	Expert Judgement Core Strategy Preferred Options	Development should wherever possible seek to reduce the wasteful use of water. Measures could include SUDs, Grey water recycling, etc.

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		in the Core Strategy are adhered to there should not be a reduction in water quality in the area as a result of development and water conservation and recycling measures should be incorporated into designs.					The Core Strategy POs should be followed.
4.11	Silvertown Triangle Mixed Use Zone	Mixed use development will increase the water use in this area particularly as high tech and industrial facilities are being encouraged. Provided the POs in the Core Strategy are followed new development should not be permitted if it exceeds the supply, sewerage and drainage infrastructure capacity and should not create a reduction in water quality and should incorporate water efficiency and recycling measures.	S-L	?	L/M	Core Strategy Preferred Options Expert Judgement	The Core Strategy POs must be followed and development should seek to use water efficiently and not threaten to reduce the water quality in the surrounding area.
4.12	Britannia Village	NS					
4.13	Thames Barrier Park East	Assuming the POs in the Core Strategy are followed, there should be no reduction in water quality in the area, no excess demand placed on supply, sewage and drainage infrastructure and development should incorporate water conservation and recycling measures and therefore development would not be	S-L	?	M	Core Strategy Preferred Options Expert Judgement	The POs set out in the Core Strategy must be followed.

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	negative.				
	<p>Cumulative Effects: Developments are likely to increase the demand for water in each of the areas. Provided the Core Strategy POs are followed, however, there should not be a reduction in water quality nor should development have been permitted if there is insufficient water supply to serve it.</p>				
	<p>Summary: Provided development incorporates measures to reduce the wasteful use of water and does not reduce water quality (i.e. the Core Option POs are followed) the POs should not have a negative effect on the objective. Development will however increase water consumption and there is the potential, in some cases, for reductions in water quality.</p>				

SA Objective 18: To Ensure that New Development Occurs on Derelict, Vacant and Underused Previously Developed Land and Buildings, and that Land is Remediated as Appropriate.

SEA Topic(s)	SA Indicators
Soil, biodiversity (including flora and fauna)	Previously-developed land (Brownfield Sites) that is used or may be available for redevelopment as a % of the local authority land area.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Development of land with least environmental/amenity value?
2. A reduced amount of derelict, degraded and underused land and buildings?
3. Areas of contaminated land being reduced?
4. Maintenance and enhancement of soil quality?

		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> Newham has the highest rate of vacancy of industrial land in London. In 2004, 6.53% (229.1ha) of the Borough's land area was Brownfield land. The target for Newham was a sustained reduction in the total area of brownfield land, in both hectares and percentage of land area. Newham is on target, where the amount of vacant land in Newham has been decreasing over time. 							
<p>PREFERRED OPTIONS</p>							
4.1	Release of Industrial Land	If the planned release of land results in remediation of contaminated land prior to development, this would have a positive impact	M - L	+	M	Expert judgement	
4.2	Thameside West Area of Change	The preferred option would result in a decrease in the amount of derelict land in the area, and any remediation of contaminated land is likely to be beneficial	M - L	+	M	Expert judgement	
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	The preferred option would result in a decrease in the amount of derelict land in the area, and any remediation of	M - L	+	M	Expert judgement	

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		contaminated land is likely to be beneficial					
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS					
4.10	King George V Southside Mixed Use Development Zone	The preferred option would result in a decrease in the amount of derelict land in the area, and any remediation of contaminated land is likely to be beneficial.	M - L	+	M	Expert judgement	
4.11	Silvertown Triangle Mixed Use Zone	The preferred option would result in a decrease in the amount of derelict land in the area, and any remediation of contaminated land is likely to be beneficial. Areas of open land on the site may hold wildlife value as a link between fragments of habitat.	M - L	?	M	Expert judgement	Use of sympathetic design to maintain possible corridor for wildlife movement
4.12	Britannia Village	NS					
4.13	Thames Barrier Park East	The preferred option would result in a decrease in the amount of derelict land in the area, and any remediation of contaminated land is likely to be beneficial. Areas of open land on the site may hold wildlife value as a link	M - L	?	M	Expert judgement	Use of sympathetic design to maintain possible corridor for wildlife movement

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		between fragments of habitat.				
	<p>Cumulative Effects: The cumulative effect of the proposals will be to reduce the amount of derelict and vacant land in the Borough by a significant amount. Areas of contaminated land are likely to be reduced, and the number of vacant and/or derelict buildings should be reduced as well. Soil quality will improve through contaminated land remediation, however increased population and vehicle numbers may increase soil pollutants.</p>					
	<p>Summary: Plans to remediate contaminated land and to reduce the amount of derelict land will be beneficial. However, loss of open grasslands and scrub will reduce the biodiversity, environmental and amenity value of those areas and perhaps also neighbouring areas.</p>					

SA Objective 19: To Protect and Enhance Existing Biodiversity and Natural Habitat, and Creating New Wildlife Habitats.

SEA Topic(s)	SA Indicators
Biodiversity (including flora and fauna)	Total Area and number of UDP protected sites, nature conservation Importance, and % area managed for ecology. Bird species population. Hectares of habitat developed or degraded by fragmentation or insensitive use.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Promotion of design that helps conservation of species or includes sympathetic design?
2. Provision of opportunities for people to come into contact with and appreciate wildlife & wild places?
3. Protection and enhancement of habitats and wildlife taking account of climate change?
4. Conservation and enhancement of natural/semi-natural habitats?
5. Conservation and enhancement of species diversity, and in particular avoid harm to important / protected species (i.e. Black Redstart)?
6. Protection and enhancement of designated nature conservation sites
7. The avoidance of harm to BAP habitats and Species
 - Promotion of sensitive design and proactive measures to achieve the above, e.g. green roofs, nest boxes?

		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> In Newham 133 of 665 ha of land classified as being of importance for nature conservation in the Borough were lost between 1990 and 1999. Habitats given a higher degree of protection appear to be skewed in favour of wetland and woodland, to the possible detriment of diverse but visually less appealing grasslands and 'wastelands'. Open space in the Borough is already very fragmented. The AAP area holds numerous patches of vacant land, some of which is currently grassland. This is an under-represented habitat in biodiversity action plans, despite being important for invertebrates, plants, and foraging animals. Large areas of vacant land are covered in hard standing. Many of the patches of open space are fragmented. 							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Loss of open land to development will result in loss of biodiversity	S - L	--	H	Expert judgement	If development uses environmentally sound building techniques, sustainable drainage, biodiversity-friendly features such as bat tiles and Swift boxes, then the impact could be reduced. Provision of a significant number of green roofs and soft features within developments would help mitigate biodiversity loss, but the impact is still likely to be negative.
4.2	Thameside West Area of Change	The development of new housing units will have a significant impact on biodiversity through loss of habitat due to land-take (although much of	S - L	--	H	Expert judgement	Management and design of new open space is to benefit biodiversity. The designation of a larger open space in this PO would be preferable. Opportunities to

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		this appears to be derelict land) and through subsequent disturbance.					create corridor(s) linking Lyle Park and Barrier Park should be created. Dissemination of information about the biodiversity of the Borough in local schools would also be useful.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	Unlikely to have significant direct impacts on biodiversity. However, there is a risk of increased pollution of the water in the docks and downstream, depending on the sporting activities encouraged, and disturbance to aquatic wildlife is likely to increase.	S – L	-	M	Expert judgement	Dissemination of information about biodiversity in and around the docks would be beneficial may increase opportunities for people to come into contact with and appreciate wildlife & wild places.
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	The development of new housing and employment units will have a negative impact on biodiversity through loss of habitat due to land-take and through subsequent disturbance.	S – L	-	M	Expert judgement	Design and build in an environmentally sensitive manner – e.g. sustainable drainage, green and/or brown roofs, provision for breeding birds and bats, food sources for invertebrates.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					

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4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Unlikely to have further significant impacts on biodiversity.	S – L	0	M	Expert judgement London City Airport website	Any soft features that can be incorporated without increasing the risk of birdstrike (for instance mixed grass verges for invertebrate communities c.f. Bristol Airport)
4.10	King George V Southside Mixed Use Development Zone	Unlikely to have further significant impacts on biodiversity. Potential loss of breeding habitat for birds in the future is likely to be offset if development of housing units includes gardens.	L	?	M	Expert judgement	Biodiversity-friendly design of developments, use of suitable plants in open space, creation of gardens
4.11	Silvertown Triangle Mixed Use Zone	The development of new housing, retail and employment units will have a negative impact on biodiversity through loss of habitat due to land-take and through subsequent disturbance.	S - L	-	M	Expert judgement	Biodiversity-friendly design of developments, use of suitable plants in open space, creation of gardens
4.12	Britannia Village	Improved links with surrounding areas could offer possibilities for creation of wildlife corridors.	M – L	?	M	Expert judgement	Tree planting and perhaps the use of mixed grass along routeways would benefit invertebrates in particular.

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4.13	Thames Barrier Park East	The development of new housing units will have a negative impact on biodiversity through loss of habitat due to land-take and through subsequent disturbance.	S – L	-	H	Expert judgement	Biodiversity-friendly design of developments.
<p>Cumulative Effects: The overall impact on biodiversity of developing a significant proportion of currently open land will be negative. Mitigation measures will not fully compensate for loss of habitat and increased disturbance. The remediation of contaminated land will have positive impacts on soil fauna.</p>							
<p>Summary: The preferred options are unlikely to meet any of the significance criteria listed above. If design promotes conservation of species, sympathetic/sensitive design and proactive measures are applied rigorously, the impact of the AAP on biodiversity may be mitigated in part, but a loss of biodiversity is still the most likely outcome.</p>							

SA Objective 20: To Improve Air Quality Levels to Levels that do not Endanger Human Health.

SEA Topic(s)	SA Indicators
Air	Days when Air Pollution is Moderate or Higher (PM10).

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Minimising emissions of NOx and PM10?
2. Deterioration or improvement in existing health problems from environmental pollution?
3. Increases / decreases in air pollution that may exceed air quality standards, including in AQMAs or areas of concern?
4. Improved air quality?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
	<p>Baseline Situation:</p> <p>The number of days when air pollution was moderate or higher for PM₁₀ increased from 46 days to 73 days (Tant Avenue) between 1999 and 2003. In Newham the national targets for PM₁₀ and NO₂ were not anticipated to be met by 2004/05. The Council is currently developing a strategy and an action plan for Newham to manage air quality within the Borough and to meet Government limits on air pollution. On average at least one person per day is admitted to hospital in Newham because of their asthma. Newham has declared an Air Quality Management Area (AQMA) around main roads in the Borough – see below. Road traffic is the major source of air pollution giving rise to PM₁₀ and NO₂. Dust from construction is also an important source (potentially so in Newham given the level of regeneration). There is a general deterioration in local air quality in Newham.</p>						

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PREFERRED OPTIONS							
4.1	Release of Industrial Land	Dependent on development types identified in other POs below.					
4.2	Thameside West Area of Change	Potentially polluting industrial development replaced by developments types that are less polluting. Increase in population of the area may increase road traffic pollution within an existing AQMA. Construction of new developments may create dust and PM10. Increases in industrial and domestic uses of area are to potentially decrease air quality.	S to L	+ / - -	M	Baseline information and Expert Judgement and Environment Background Paper by Newham Council	Developments should encourage access by public transport and local facilities within walking distance. Construction management of dust and emissions should be required. Developments should follow the principles of relevant SPDs regarding reducing construction and operational emissions.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	NS					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Construction activities creating dust and emissions might reduce air quality significantly. Offices and high tech developments may have a relatively low impact on air quality, although resulting traffic emissions may potentially be high.	S to L	-	M	Expert Judgement based on Environment Background Paper by Newham Council	Construction and operations/design to take account of relevant SPDs regarding reducing emissions. Developments should ensure good non-vehicular accessibility to public transport, community facilities and jobs.

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4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	Airport is identified as a significant contributor to poor air quality. Enhancements which have the potential to increase flight frequency will be adverse to air quality. Though the PO identifies that enhancements are not to compromise environmental quality or amenity.	S to L	--	M to L	Expert Judgement based on Environment Background Paper by Newham Council	Enhancements which increase flight frequency can adversely impact air quality and thus environmental quality or amenity. Ensure sufficient non-vehicular accessibility to public transport.
4.10	King George V Southside Mixed Use Development Zone	Dust and emissions from the works site (pre-2009) may have negative impacts on air quality, as will the construction and operation of residences. Negative impact of air quality and potential increase in asthma due to location near to airport (particularly in children encouraged to the area due to family housing provision).	S to L	--	M	Expert Judgement based on Environment Background Paper by Newham Council and Baseline	Construction works and designs should take account of relevant SPDs on emissions. Ensure sufficient non-vehicular accessibility to public transport and community facilities and jobs.
4.11	Silvertown Triangle Mixed Use Zone	Construction activities creating dust and emissions might reduce air quality significantly. Offices and high tech developments may have a relatively low impact	S to L	--	M	Expert Judgement	Construction works and designs should take account of relevant SPDs on emissions Ensure sufficient non-vehicular accessibility to public transport and community facilities and

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		on air quality, although resulting traffic emissions may potentially be high.					jobs.
4.12	Britannia Village	Development of physical transport links may increase car use between communities, adversely impacting air quality and AQMAs.	S to L	-		Expert Judgement	Public transport, cycling and walking links should be established to other communities.
4.13	Thames Barrier Park East	Construction and design/operation and traffic increases may adversely impact air quality.	S to L	--	M	Expert Judgement based on Environment Background Paper by Newham Council	Construction works and designs should take account of relevant SPDs to emissions Ensure sufficient non-vehicular accessibility to public transport and community facilities and jobs.
<p>Cumulative Effects: The cumulative impact of the significant increase in new development and residences in the Royal Docks and Thameside area is significantly adverse, due to the expected emissions from construction of developments and their associated operational traffic.</p>							
<p>Summary: Construction works and designs should take account of relevant SPDs to emissions. Developments should ensure sufficient non-vehicular accessibility to public transport, community facilities and jobs. At the Airport where enhancements increase flight frequency this could adversely impact air quality and thus environmental quality or amenity (which the PO states should not be compromised), these adverse impacts may be particularly felt in the family housing provision area of King George V Southside.</p>							

SA Objective 21: To Conserve and Enhance the Character and Appearance of the Historic Environment and Features of Cultural Importance.

SEA Topic(s)	SA Indicators
Cultural Heritage (including archaeology and architecture)	Number of and % (of the total), of Listed Buildings on the Building at Risk Register. Number of and percentage (of the total) of Scheduled Monuments on the Buildings at Risk Register.

SA/ SEA Significance Criteria / sub objectives: **Would the plan in association with other plans and programmes result in:**

1. Beneficial / adverse impacts on sites and monuments valued for their cultural heritage?
2. Ensures settlements can absorb growth without damage to character?
3. Protects designated and undesignated (historic) sites and areas of significance?
4. Enhances historic character, streetscape and townscape to strengthen sense of place?
5. Proactively encourages the re – use of listed buildings on BAR register to protect and secure their future?

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		Magnitude / Description of the effect	Temporal effects (S / M / L / ?)	Significant impact (++, +, 0, ?, -, --)	Level of Certainty (high (H), medium (M), low (L))	How judgement was reached (i.e. Evidence Base)	Suggested mitigation and enhancement measures
<p>Baseline Situation:</p> <ul style="list-style-type: none"> Part of East London known since 1965 as the London Borough of Newham. Over the last 150 years the area has been transformed from a rural backwater to a major manufacturing centre, suffered decline and deprivation and is now in the process of regeneration. (The Newham Story – A short history 2002). 130 listed buildings [2005] (Newham Council) , 18 buildings on the BAR register (English Heritage) (approximate percentage - 6%). Target: Remove 40% of the entries on the 1999 'at risk' list [2006] – taken from the South East Integrated Regional Framework (2004) 2 scheduled monuments (Jackie Morrison, Newham Council), 0 scheduled monuments on the BAR register (English Heritage) <p>Many of the AAP areas considered for development in the plan are currently derelict or vacant. There are, however, a number of Grade II listed buildings and structures of historic interest still standing. The whole area is strongly influenced by a predominantly industrial past.</p>							
PREFERRED OPTIONS							
4.1	Release of Industrial Land	Risk of development sites overwhelming sites of historic interest.	M – L	?	L	Expert judgement	Careful design of new developments.
4.2	Thameside West Area of Change	Although much of the area appears to be modern warehousing, some existing houses are present. Development could enhance area, or have an adverse impact of diffusing the community structure.	M – L	?	M	Expert judgement	Careful design of new developments.
4.3	Silvertown Quays Development Area	NA as PO continues to support development already permitted.					
4.4	Royal Docks Recreational Area	A number of Grade II listed buildings are found around the Royal Docks area, all but	S – M	+	M	Expert judgement; Buildings at Risk register	Encourage re-occupation of listed buildings.

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		one of which are registered vacant. Re-use of these buildings would be beneficial.					
4.5	Excel Mixed Use Zone	NA as PO continues to support development already permitted.					
4.6	Landmark Site Mixed Use Development Zone	Risk of the high amount of new development in the area not being able to maintain historic character of area within the new communities.	M – L	?	L	Expert judgement	Careful design of new developments.
4.7	Royal Business Park Zone	NA as PO continues to support development already permitted.					
4.8	University of East London (UEL) Education Growth Zone	NA as PO continues to support development already permitted.					
4.9	City Airport Development Zone	NS					
4.10	King George V Southside Mixed Use Development Zone	Risk of the high amount of new development in the area not being able to maintain historic character of area within the new communities.	S – L	0	M	Expert judgement	Careful design of new developments.
4.11	Silvertown Triangle Mixed Use Zone	Risk of the high amount of new development in the area not being able to maintain historic character of area within the new communities.	S – L	0	M	Expert judgement	Careful design of new developments.
4.12	Britannia Village	Risk of the high amount of new development in the area not being able to maintain historic character of area	S – L	0	M	Expert judgement	Careful design of new developments.

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		within the new communities.					
4.13	Thames Barrier Park East	Risk of the high amount of new development in the area not being able to maintain historic character of area within the new communities.	S – L	0	M	Expert judgement	Careful design of new developments.
<p>Cumulative Effects: The quantity of development planned has the potential to overwhelm the remaining historic environment in Newham and the AAP area. If new communities are not designed with care, characteristic features of Newham could be lost.</p>							
<p>Summary: There is potential to integrate structures of historical interest into new development. The re-use of Grade II listed buildings in a suitable manner is to be encouraged. New development must try to strengthen cultural community structure.</p>							