

# Appendix B Sustainability Assessment

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## 1 Introduction

- 1.1 This Sustainability Assessment document provides an assessment of the Peterborough South Bank Masterplan (SBM). It should be read alongside the South Bank Masterplan Report (August 2008) and the CCAAP Sustainability Appraisal Scoping Report (February 2008).
- 1.2 In February 2008, EDAW completed a Sustainability Appraisal Scoping Report as part of the development of a Consultants Recommended Option for the City Centre Area Action Plan. The study area and scoping report includes and covers the South Bank Masterplan Study Area.
- 1.3 Based upon the statutory Sustainability Appraisal methodology, this report does not cover the requirements of a Strategic Environmental Assessment or formal Sustainability Appraisal but is important in measuring the sustainability of the masterplan and is sufficient should Peterborough City Council wish to take forward this masterplan as the basis of a Supplementary Planning Document (SPD) The assessment set out in this report adds value by being integrated into the thinking and decision making on the SBM at an early stage, and has been used to help define the final masterplan. The SBM is being delivered alongside the Peterborough City Centre Area Action Plan (CCAAP), and therefore it is appropriate to use the Sustainability Appraisal (SA) objectives, set out in the CCAAP Sustainability Appraisal Scoping Report.
- 1.4 This Sustainability Assessment approach involves an assessment of the Masterplan against the SA objectives.

### The SA Objectives

- 1.5 The SA objectives are summarised in the Sustainability Appraisal Scoping Report February 2008 and shown in the table below. These objectives are used to determine the likely impacts of a plan. The objectives provide a yardstick with which to assess the effects of the plan.

Sustainability appraisal objectives	
Social	
1	To improve health, reduce health inequalities and promote healthy living
2	To provide good education and training opportunities which build skills and capacity of the population
3	To foster a vibrant and cohesive community that participate in decision-making
4	To provide everyone with the opportunity to live in a decent affordable home
5	To encourage sustainable development that is compact and includes a mix of uses where appropriate, with provision of key local services and amenity that will reduce the need to travel
6	To reduce crime and the fear of crime
Environment	
7	To maintain and enhance the historic environment and cultural assets of Peterborough
8	To protect, maintain and enhance the quality of formal and natural open spaces and ensure effective access to open space
9	To preserve and enhance the urban and rural landscape, in keeping with the character of the wider area
10	To conserve, protect and enhance diversity and abundance of natural habitats within the AAP area
11	To reduce car dependency by improving transport choice and thus increasing the proportion of journeys made by public transport, by bicycle and by foot
12	To increase accessibility to and within the city centre and promote connectivity with the surrounding areas

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13	To promote a high quality of urban design in conjunction with sustainable design and construction principles and techniques in harmony with the existing environment
14	To follow the reduce, reuse and recycle principles for both water and waste reduction in Peterborough City
15	To reduce the impact of flooding to people and property of the City Centre
16	Reduce greenhouse gas emissions
17	To minimise noise pollution, especially around land use interfaces
18	Deliver more sustainable use of land
<b>Economic</b>	
19	To ensure local people have access to satisfying opportunities for employment and occupation
20	To revitalise town centres to promote sustainable urban living
21	To ensure indigenous and inward investment which is environmentally, socially and economically sustainable

## 2. Appraisal of the Masterplan

The key principles of the Masterplan are outlined in the South Bank Masterplan Report (August 2008)

The Masterplan process involved a range of consultation techniques including a stakeholder and public workshop which were held in Peterborough in March 2008. The intention of the workshops was to provide the various community groups and individuals of Peterborough an opportunity to feed their aspirations and desires into the emerging Masterplan.

The community consultation findings combined with stakeholder aspiration formed the basis of the Masterplan vision. To ensure the deliverability of the Masterplan that emerged from the vision was grounded in reality a study of existing baseline issues and opportunities was undertaken. The findings of this study are captured in the "Peterborough South Bank interim Report" (April 2008).

The Masterplan has been prepared alongside the CCAAP which was itself subject to a rigorous process of baseline studies, community consultation, and testing of numerous options. The Masterplan is informed by and responds to the findings and objectives outlined in the CCAAP.

The Masterplan appraisal is assessed against each SA objective the assessment is captured in the Masterplan assessment matrix. The assessment is a qualitative exercise based on professional judgement, taking into account the information gathered in the Scoping Report and the background information set out in the South Bank Masterplan Report.

The significance of the impacts of the options on each objective is defined using a scoring system as shown below.

++	The Masterplan will result in a positive impact on the SA objective
+	The impact on the SA Objective is dependent on implementation, but if there were to be an impact it would most likely be positive
0	Natural or negligible effect
?	The relationship between the Option and the SA Objective is unknown, or there is not enough information to make an assessment
x	The impact on the SA Objective is dependent on implementation, but if there were to be an impact it would most likely be negative
xx	Option will result in a negative impact on the SA Objective

Masterplan Assessment Matrix

SA Objectives		Comments
<b>Social</b>		
1	+	<ul style="list-style-type: none"> <li>Provision of health care facilities are not an integral component of the Masterplan however the creation of an extensive network of walking and cycle ways, play spaces and other facilities that encourage healthy lifestyles and provide opportunities for sport and recreation.</li> </ul>
2	+	<ul style="list-style-type: none"> <li>The aspirational Masterplan includes provision for a number of educational facilities including primary school, university uses, innovation centre, allotments/community gardens. Full details of the education and training opportunities will not be certain until proposal come forward but if all the aspirations are met the Masterplan will result in a very positive impact on this SA objective.</li> </ul>
3	++	<ul style="list-style-type: none"> <li>The Masterplan will bring about significant improvements to the South Bank and broader Peterborough that will see the South Bank become a destination. Attractors will include riverfront mixed use including hospitality services, community, event and leisure space; new high quality river side public open space and riverside walk; the Carbon Challenge sustainable community initiative. Depending upon future proposals the following might also be included: university uses, innovation centre and the redevelopment of the Peterborough United Football Club. All of these uses respond to community desires and will foster a sense of pride in the neighbourhood.</li> <li>The riverside active uses will create a vibrancy along the currently underutilised river frontage, the range of services to be provided within the Masterplan will not only serve to benefit the new South Bank residential population but it will support the neighbouring communities and act as a destination for residents of wider Peterborough.</li> <li>The creation of numerous new public open spaces and improvements to the pedestrian network will make new facilities easily accessible to residents while the arrangement of mixed use and residential buildings to front new spaces or pathways will ensure a sense of security through passive surveillance by ensuring a large number of 'eyes on the street'.</li> </ul>
4	+	<ul style="list-style-type: none"> <li>The Masterplan advocates a mix in housing tenure and type. The mix of housing types illustrated include 1,2,3 and 4 bedroom apartments, townhouses and live work units.</li> <li>affordable housing will be provided. Affordable housing will be 'pepper-potted' throughout any future development and will not be distinguished in any form to differentiate it from conventional market housing.</li> </ul>
5	++	<ul style="list-style-type: none"> <li>The Masterplan is compact and includes a mix of uses including residential, retail, educational, leisure, event and recreation uses. All these services are well connected by a legible, permeable, pedestrian network.</li> <li>The introduction of a pedestrian bridge over the River Nene and a second pedestrian bridge over the railway ensure good connectivity between the South Bank and the City Centre. More significantly these new bridge links will allow residential areas south of the Masterplan site direct and safe pedestrian access to the city centre over these existing movement barriers.</li> <li>The South Bank will expand the existing Peterborough offer of cultural, recreational and leisure facilities while also supporting the recreational facilities directly north of the River Nene such as the Quay Theatre, the Lido, the Embankment etc.</li> </ul>
6	+	<ul style="list-style-type: none"> <li>Implementation of the South Bank Masterplan is essentially a piece of urban infill and will benefit the community through bringing vitality to the streets and open spaces within and surrounding these former brownfield sites.</li> <li>New pedestrian connections and the creation of a number of shared surface areas will increase pedestrian priority and make for safer connections across and through the site.</li> <li>The provision of activity along the waterfront will increase levels of surveillance and the sense of security at the river's edge and will increase the sense of security for people using the walking trail along the southern edge of embankment.</li> </ul>

Economic		
7	++	<ul style="list-style-type: none"> <li>The adaptive reuse of the listed railway buildings and the mill buildings will help retain aspects of the site's industrial heritage.</li> <li>The urban SUDS feature in 'university plaza' will reference the historic alignment of the quays that existed at this location in the 17<sup>th</sup> and 18<sup>th</sup> century.</li> <li>Two street alignments have been determined by sightlines to the Cathedral. This structuring device will allow new development to celebrate the significant presence of the Cathedral within Peterborough.</li> </ul>
8	+	<ul style="list-style-type: none"> <li>Ecology surveys have not recorded any significant ecological habitats. However scrubland observed on site will undoubtedly be habitat to a number of species that will be impacted upon by future development. The Masterplan proposes pockets of urban forest/ urban ecology, as well as green roofs however there is a risk if these measures are not properly implemented, the potential result being a negative impact upon the overall biodiversity of the site.</li> </ul>
9	++	<ul style="list-style-type: none"> <li>The development of this brownfield land as a medium density urban development will reduce pressure on Greenfield land surrounding Peterborough.</li> </ul>
10	?	<ul style="list-style-type: none"> <li>The extent of existing biodiversity on this brownfield site can not be fully determined until full ecological studies have been completed.</li> </ul>
11	++	<ul style="list-style-type: none"> <li>Improved pedestrian and cycle linkages will benefit South Bank users and will also benefit north-south connectivity between the city centre and southern residential areas. The more attractive and easy to use these connections are then the greater the incentive for people to use these sustainable modes of transport and reduce vehicular carbon emissions.</li> <li>Improved bus links and a new bus stop will allow the majority of the development to be serviced within a 400m (5 minute walk) of public transport. The success of the proposed new bus stop (in the Carbon Challenge site) for the Fletton Quays site is the provision of a connection immediately north of the bus stop that allows pedestrians access across the railway line.</li> <li>The highest density development in the north east of South Bank is approximately a 1km or 10-15minute walk of Peterborough Station.</li> <li>Proposed car clubs on the Carbon Challenge site will encourage a reduction in private vehicle ownership.</li> </ul>
12	+	<ul style="list-style-type: none"> <li>Isolation of the suburbs to the south and east of the development will be reduced through the implementation of the South Bank development.</li> <li>The SouthBank development will improve connectivity to the city centre by sustainable modes of transport including walking, cycling and public transport.</li> <li>Connectivity to the city centre by private car is likely to be compromised due to increased congestion along London Road.</li> <li>The main structuring elements of the Masterplan create strong north-south and east-west connections. This positive impact is dependant upon the delivery of the bridges over the railway and over the river.</li> </ul>
13	++	<ul style="list-style-type: none"> <li>The South Bank development will provide a rich mix of uses, improve connectivity, and create a high quality urban environment in a currently degraded brownfield location.</li> <li>The urban form and range of uses will greatly improve the townscape quality of the South Bank but will also benefit neighbouring communities through the provision of additional services.</li> <li>The Carbon Challenge initiative will be a national environmental exemplar and the benefits provided to the South Bank from this project will be all the greater if lessons learnt from the early implementation of the Carbon Challenge are incorporated into subsequent phases of development. In particular a site wide energy strategy that would see later phases of development benefiting from the on-site production of renewable energy on the Carbon Challenge site.</li> <li>Adaptive reuse of the mill building and the listed railway sheds is a positive integration of existing building stock into the masterplan. The retention and reuse of other buildings would be encouraged if appropriate. Retention or reuse of the mural adorning the London Road edge of Bridge House would be beneficial in terms of local place making.</li> </ul>

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14		+	<ul style="list-style-type: none"> <li>The Carbon Challenge site is being developed to meet very high targets for the efficient use of water and waste.</li> <li>Integration of a site wide SUDS strategy will benefit the efficient use of water resources, reduce potable water demand and reduce pollution of the River Nene from runoff water.</li> <li>Phases of development other than the Carbon Challenge site should produce a waste strategy as part of their planning application.</li> </ul>
15		?	<ul style="list-style-type: none"> <li>The low lying topography and the location of the site adjacent the River Nene make flooding a real risk. Flood defenses will need to be provided as northern parts of the site are subject to flooding in high water events. The provision of river walls will have impacts in other locations that increase flood risk in surrounding low-lying areas. Further studies are required to determine the impact of these effects and mitigation measures.</li> </ul>
16		+	<ul style="list-style-type: none"> <li>The Carbon Challenge site is being developed to meet very high targets of energy minimisation, energy efficiency and renewable energy production.</li> <li>Phases of development other than the Carbon Challenge would benefit from providing an energy strategy as part of their planning application. Lessons should be learnt from the Carbon Challenge site in terms of what technologies are appropriate for Peterborough South Bank.</li> </ul>
17		?	<ul style="list-style-type: none"> <li>Noise from transport corridors (railway, park way and London Road) as well as existing uses while they remain in operation (mill, football club) will be an issue. Further study will be require as part of the development applications to mitigate against these potential sources of noise pollution.</li> <li>Buffers of green space or live/work units have been incorporated into the masterplan to aid in the minimisation of residential development immediately adjacent noise sources. Along London Road, to reduce the impact of noise and achieve an active frontage as suggested in the masterplan residential units should be discouraged from being provided on the ground floor.</li> </ul>
18		++	<ul style="list-style-type: none"> <li>The masterplan will result in a great improvement to the existing character of the South Bank. This is an appropriate location for medium density development being in close walking distance of the city centre and well serviced by public transport. Delivery the rail and river bridges will improve connectivity to the recreational resource provided by the 'Embankment'. Implimentation of the masterplan would create a 'missing' piece of Peterborough City with an appropriate urban form that helps connect residential areas and services on its interface. Development of this brownfield land will relieve pressure upon Greenfield fringing Peterborough. Development on greenfield land, as well as encroaching on arable land or ecological habitat, presents other problems such as poor integration and connectivity to the city centre.</li> </ul>
Economic			
19		+	<ul style="list-style-type: none"> <li>The masterplan proposes new spaces to house employment opportunities. The potential range of employment offer includes retail, teaching, research, recreational, leisure, event or community. Education uses could potentially compliment other aspects of the masterplan, the university/ innovation centre/ carbon Challenge exemplar/ livework units could have a powerful synergy related to environmental innovation – however the full benefit will be the result of successful implementation and good communication between stakeholders. There is also a potential synergy between the school/university and the allotments/community gardens – with the opportunity for 'learning by doing'.</li> </ul>
20		++	<ul style="list-style-type: none"> <li>The masterplan provides for a good balance of uses that support the local community (existing and new) and also creates a destination within Peterborough. The mix of uses proposed in the masterplan should create a desirable riverside urban living environment that will encourage more people to live in the city centre.</li> <li>The right mix of services, recreation, leisure and community services on the riverfront will create a strong desirability to be part of the South Bank. Preservation and enhancement of view lines to the Cathedral will help to build upon the historic sense of place of Peterborough.</li> <li>Increased activity on the ground and improvements to the public realm will help</li> </ul>

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			<p>vitalise the South Bank and the riverside precinct to the north, increasing the sense of safety and security in this currently sparsely populated area.</p> <ul style="list-style-type: none"> <li>• Creation of a series of managed open spaces including pocket parks, plazas and community gardens will help create a sense of community and civic pride.</li> </ul>
21		+	<ul style="list-style-type: none"> <li>• Improved educational facilities including the university and innovation centre coupled with opportunities for retail, business and live/work units will help to encourage entrepreneurship and high standards of skilled jobs.</li> </ul>

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### 3. Summary and Conclusion

Overall the Masterplan scores positively in relation to the sustainability objectives of the SA Scoping Report. The objective that aims to improve health, reduce health inequalities and promote healthy living fares well across the board. The Masterplan aims to improve the general streetscape, public realm, pedestrian environment and green links to the surrounding countryside all score very well. Likewise objectives that aim to revitalise the town receive positive scores.

The new routes and bridges proposed by the Masterplan will satisfy a range of sustainability objectives relating to improving connectivity, promoting the uses of sustainable transport modes and the reduction of private vehicle use. This coupled with other improvements to pedestrian facilities and links will have the effect of giving greater priority to the pedestrian and cyclist, reducing the dominance of the private car. It also aims to reduce the level of car parking within the city in association with the introduction of car clubs and enhanced bus services, a positive attempt to encourage modal shift towards public transport.

The greatest level of uncertainty within the masterplan is in relation to the impact of increased development density upon natural systems. In particular, ecology and flooding issues should be considered when preparing detailed development proposals. Other uncertainty relates to the delivery of certain non-residential land-use elements – reduction in the educational, live-work or innovation centre component will impact upon the economic sustainability indicators. While a reduction in the ‘destination’ elements, leisure, event, community, retail and hospitalities would impact upon the social and economic sustainability indicators. Overall design quality of the delivered scheme, both in terms of built form and public realm, will impact upon the urban design indicators.

Any development will have the effect of increasing noise and/or air pollution, even if temporarily during the construction phase. However, mitigation and a considerate construction scheme should help to counter these negative impacts.

Negative impacts upon the vehicular movement along the London Road corridor due to increased traffic congestion will hopefully be offset by improvements to sustainable transport modes including, foot, cycle and bus. Increased congestion along London Road coupled with improvements to sustainable transport modes will add to the attractiveness of a modal shift to the more sustainable transport modes.