SP1 - Strategic Spatial Approach

| SA                | Nature of Impacts  |                    | pacts ove          |   |                    | Mitigation/Enhancement   |      |                    | dual Imp           | _                  |
|-------------------|--|--------------------|--------------------|---|--------------------|--|------|--------------------|--------------------|--------------------|
| Objective         | Tracking of impacts  | short              | med                |   | long               | Magation/ Emiliancement  | sh   | ort                | med                | overal             |
| 1 Biodiversity    | Although this spatial option will help to divert development pressure from certain areas with biodiversity value, there are potential negative impacts on other important areas, notably 'Wigan flashes'. Development may also have cumulative impacts on the connectivity of wildlife networks. If development is high quality and backed by strong policies on biodiversity there is potential for enhancement when implementing major developments at strategic sites (other policy principles support this). A focus on Greenheart should complement biodiversity objectives too. Development along the East Lancashire Road corridor has the potential to have negative impacts on Astley Moss.   | impacts identified | impacts identified | ? | impacts identified | Strong core policies on biodiversity / and design can help to mitigate the potential impacts of development. We need to determine what mechanisms will be developed to protect and enhance biodiversity. Further assessment of strategic sites is required to determine potential impacts on biodiversity and to identify mitigation and enhancement measures. Mitigation would be needed for those sites which most affect the Mosses. Individual sites could possibly be addressed through the Environmental Impact Assessment process.  | 2000 | impacts identified | impacts identified | impacts identified |
| 2 Air quality     | The majority of development remains within the East West core with the aim of tackling deprivation, improving infrastructure and creating sustainable communities. Currently, these areas suffer from congestion and high levels of traffic emissions, which affects air quality in some residential areas. Therefore, exposure to poor air quality could be an enhanced issue if further development occurs in these localities. Some housing development in Standish and Golborne and Lowton may help improve sustainable travel options but congestion is likely to increase in these car dependent areas. Overall infrastructure investment would be directed to the 'core' of the borough where it is most needed. Certain parts of the borough would not see improvements in terms of air quality and increased trips to the 'regenerating core' may result. Although the policy approach supports the role of neighbouring centres such as Liverpool and Manchester, access to employment opportunities in these areas is likely to be via car, particularly from residents in outer parts of the borough, and along new development proposed in the East Lancs Road area. However, in terms of air quality, exposure is not as great if traffic is directed away from inner routes in the borough. | impacts identified | impacts identified |   | impacts identified | The impacts will not be positive unless substantial infrastructure development is secured that promotes sustainable modes of travel throughout the Borough. The consideration of sustainable design as an integral part of all development would help to reduce our overall contribution of greenhouse gas emissions/air quality issues. It is important to enhance public transport links to and from the outer parts of the borough and from east to west to discourage potentially increased car trips to new employment/cultural opportunities in the core of the Borough. The application of the core policy on accessibility should help to mitigate some of the negative impacts and enhance the positives, particularly if electric vehicle networks are established in the longer term. |      | impacts identified | impacts identified | impacts identified |
| 3 Soil and minera | The majority of development will be focused away from where most of the best and most versatile agricultural land is and mineral resources such as peat, sand and gravel are located. A focus on previously used or degraded land, and support for town centre growth also relieves pressure on land/soil resources and could contribute to significant remediation of land contamination in the long term as much of this is located on land previously used for industrial purposes (throughout the core of the borough). Despite these positive impacts, some permanent loss of land that could in the future be used for agricultural purposes is highly likely to occur (for example, on safeguarded sites - not a big issue). Although much of this land is not high quality soil, this still amounts to a minor negative impact in the medium term and longer term.   | impacts identified | impacts identified |   | impacts identified | None identified  |      | impacts identified | impacts identified | impacts identified |

| SA                  |  |                    | pacts ov           |                    | Datiai Policies June 2013  |            | Resi               | idual Imp          | acts               |
|---------------------|--|--------------------|--------------------|--------------------|--|------------|--------------------|--------------------|--------------------|
| Objective           | Nature of Impacts  | short              |                    | <br>long           | Mitigation/Enhancement   | sl         | ort                |                    | overall/           |
| 4 Water             | Increased development could have a negative impact on water objectives. Demand for water would increase, as would pressure on surface water and waste water drainage systems. Decreased permeability could also lead to increased flood risk for some parts of the borough. The impacts could get worse over time as more development is secured and the impacts of climate change exacerbate problems. Development in and around the centres of Wigan, Leigh, Atherton, and Platt Bridge could also all increase exposure to flood risk as many of these areas fall within flood zones (careful siting is required for new development). Some sites in the south of the borough would also require careful mitigation of flood risks. The application of national policy and supporting CS policy principles should help to reduce the negative impacts of development and maximise the benefits. The requirement for SUDs is particularly important and may actually help to improve water resources and infrastructure in the longer term. Other positive impacts could arise from the focus on stronger Green Infrastructure networks.   | impacts identified | impacts identified | impacts identified | Flood risk policy has been developed to ensure that these issues are carefully managed. Previous rounds of appraisal also resulted in stronger core policies for sustainability. Strong application of these policies would help to ensure that impacts were minimised. The major issue is likely to be water consumption. |            | impacts identified | impacts identified | impacts identified |
| 5 Landscapes        | Development has the potential to have an adverse impact on open space and landscape character, and also result in higher levels of traffic. However, the impact is only minor in the medium term and moderate in the longer term, because there is also a focus on previously developed land and town centres, which helps to divert pressure for development away from areas of higher landscape value, green and open space. Some negative impacts will remain as housing is promoted in the softer urban fringe and outer parts of the borough. The policy also promotes the enhancement of Green Infrastructure, notably through Greenheart Regional Park, which offers considerable opportunities for enhancement of landscape, open space and countryside in the longer term. In fact, development actually presents an opportunity to enhance open space and landscape character in parts of the Borough where it may be considered 'poor quality'. (It should be noted however that many areas will have intrinsic value for local communities). Adverse impacts in the short term have been determined as negligible/minor as levels of development are anticipated to be low in light of current economic conditions (however, we are unsure of how the market will respond to the economic downturn - so this is an uncertainty). | impacts identified | impacts identified | impacts identified | Ensure that masterplans for strategic sites seek to enhance local landscape character and provision of open and green space.   |            | impacts identified | impacts identified | impacts identified |
| 6 Built environment | There are concentrations of the borough's important built heritage in the inner areas (town centres in particular), which could be degraded by inappropriate development. Conversely, they could be exploited positively with appropriate development (which is what our core strategy promotes).  | impacts            | identified         | impacts            | Implementation of policy principles covering design and historic environment. Design policy principles should help to enhance the built environment and mitigate negative impacts.   | identified | impacts            | impacts            | impacts            |

Sustainability Appraisal of Wigan Core Strategy

|                 | Appendi  |                          |                    |                      | atial Policies June 2013   |              |         |                    |                    |     |
|-----------------|--|--------------------------|--------------------|----------------------|--|--------------|---------|--------------------|--------------------|-----|
| SA<br>Objective | Nature of Impacts  | lm <sub>i</sub><br>short | pacts over<br>med  | _                    | Mitigation/Enhancement   | G!           | _       | dual Imp           | oacts<br>overa     | 11/ |
| 7 Community saf | Appropriate development focused in the inner areas of the borough could help to create more attractive, viable and safe environments - helping to reduce actual and perceived levels of crime and anti-social behaviour. Housing and economic development can have wider socio-economic benefits. These impacts are more likely to accrue over the longer term. However, inappropriate development could actually worsen inequalities by creating pockets of wealth in areas of deprivation (this is reflected by a minor negative impact as policy principles should help to minimise these issues).  | impacts identified       | impacts identified | e impacts identified | Promote mixed use development and mixed tenure housing in and around deprived areas of the borough. Ensure deprived areas are well linked to new employment opportunities. Ensure proactive action on crime prevention though planning and design. This can generate massive cost savings for the public sector in the longer term | in pace luci |         | impacts identified | impacts identified |     |
| 3hbourhood q    | Development for housing could help to improve neighbourhood quality in the inner areas of the borough by helping to remediate dereliction, enhance open space, and encourage a mix of uses. A focus on development of green infrastructure could also add to the greenness of neighbourhoods and urban areas, but this needs to be linked to Greenheart initiatives. For some sites in the south of the borough, the impact on neighbourhood quality is unlikely to be positive, because the areas are already fairly attractive.  | impacts                  | impacts            | identified           | None identified  | identified   | impacts | impacts            | identified         |     |
| 9 Waste         | Development of this scale will produce waste both during construction and when 'operational'. The extent of the impacts will depend upon application of other policies and working practices. Extra resources may be required to increase recycling rates in the inner areas that are the focus of growth, as these traditionally recycle less. Energy from waste may be a more attractive option in denser areas that produce a lot of waste and can benefit from waste heat. Most of the borough's waste treatment facilities are located within the east west core, so further growth here is broadly in line with the proximity principle. | impacts                  | impacts            | identified           | Ensure that waste treatment facilities are well located and reduce any detrimental effects on local communities. Ensure that procedures and plans for increasing recycling rates are promoted in the inner core. Ensure that energy from waste is produced in the appropriate place to maximise the benefits.                      | identified   | impacts | impacts            | impacts            |     |

| SA            |  |                    | oacts over         |                    | Datial Policies June 2013  |                    | Residua | al Impa            | cts                |
|---------------|--|--------------------|--------------------|--------------------|--|--------------------|---------|--------------------|--------------------|
| Objective     | Nature of Impacts  | short              | med                | long               | Mitigation/Enhancement   | sho                | rt n    | ned                | overall/           |
| 10 Health     | Provided that development is of a high quality, with the right mix of uses, then focusing the development mainly on the inner areas of the borough could help to improve health and wellbeing in many of our most deprived areas - by improving access to good quality, affordable housing, employment opportunities, leisure and recreation, and enhancing the environment. A focus on more sustainable modes of travel should also contribute to better accessibility to a range of services, and promote healthier lifestyles. However, there is also a danger that development could exacerbate problems in deprived areas if it is not delivered in a way that includes and enhances existing communities. Some of the patterns of development could also be counter-productive in promoting active travel, as some areas are not the most accessible. Housing development here would also probably be too expensive for communities of need to take advantage of, even if 'affordable' housing targets are applied.  | impacts identified | impacts identified | impacts identified | Ensure development is integrated with and enhances existing communities in the 'core' of the borough.  | impacts identified |         | impacts identified | impacts identified |
| 11 Recreation | The overall spatial policy for the Borough promotes the enhancement of our town centres, including as places for leisure and entertainment. A key element of the approach is also substantially improved infrastructure and access to public transport, walking and cycling. This should help improve access to leisure facilities, as well as creating opportunities for recreation in itself (walking / cycling). A focus on Green Infrastructure should also enhance opportunities for outdoor leisure and recreation in the 'countryside', particularly for residents in the 'inner areas' of the borough close to Greenheart Regional Park. Overall, these positives amount to a significant positive impact in the long term. Although increased housing and economic development could lead to the direct loss of open space, there is to be a primary focus on previously developed or degraded land, which would minimise any negative impacts. Housing development also offers the opportunity to enhance open space, or ensure adequate compensation for any loss of open space. Access to new or enhanced facilities from some areas might be difficult. However, current access to facilities is not a particular issue in most of the borough. | impacts identified | impacts identified | impacts identified | None identified  | impacts identified |         | impacts identified | impacts identified |
| 12 Housing    | Focusing housing in some deprived areas will help benefit from improved infrastructure, increasing a focus on sustainable communities and potentially tackling deprivation. However, these areas suffer from current deprivation, congestion and high levels of traffic emissions, which can affect their desirability for residential development as well as their potential for sustainable travel. In the current market, delivery of these sites is uncertain, so it would be difficult to achieve infrastructure improvements and higher quality schemes. This is a major constraint in the short term. Some sites, however, will be more attractive such as Golborne and Lowton and Standish. These would be unlikely to benefit deprived communities directly. Having said this, if such development can be used to contribute to infrastructure improvements in the core of the borough, however limited, the positive impacts would be greater in the long term.  | impacts identified | impacts identified | impacts identified | Infrastructure provision is the key to success. A comprehensive approach that enables development to contribute to strategic infrastructure needs is required. | impacts identified |         | impacts identified | impacts identified |

| SA                        |  |                    | acts ove           |                    | patial Policies June 2013   |                    | Resid   | lual Impa          | acts               |
|---------------------------|--|--------------------|--------------------|--------------------|---|--------------------|---------|--------------------|--------------------|
| Objective                 | Nature of Impacts  |                    | med                |                    | Mitigation/Enhancement  | sho                | rt      | med                | overall/           |
| 13 Education and learning | Development in more deprived parts of the borough it is hoped that the gap in attainment and skills between neighbourhoods is narrowed. A key element of the Core Spatial Policy is to improve accessibility and transport infrastructure, which should further support the sustainability objective for 'education and learning'. A focus on schools and colleges, and improved facilities available for community-wide use should also improve opportunities for quality lifelong learning. Access to a range of employment opportunities could also help to raise aspirations and 'get people on the employment ladder'. The impacts are positive over all time scales, but likely to get stronger over time. Increased housing provision may lead to pressure on capacity at schools, of which a proportion is provided out of the borough at the moment.  | impacts identified | impacts identified | impacts identified | Investment in school provision in some areas to support any significant housing development.  | impacts identified |         | impacts identified | impacts identified |
| y developmer              | Deprived communities may benefit from development and this may help improve community identity and pride. However, there remains a possibility of social tensions if development is not integrated appropriately. Strengthened town centres and community facilities, provision of green infrastructure and improved schools and colleges could greatly add to communities' sense of identity and provide opportunities for different social groups to come together and engage in community activities. Providing sufficient housing of mixed types would be positive for vulnerable, excluded and low income groups and could help secure greater community cohesion, assuming equal opportunity of access. However it is possible that some existing communities would react negatively to new development. Securing and retaining jobs through economic development proposals could help to revitalise the more deprived local communities and foster a greater sense of community pride. Development of high quality housing in already less deprived areas could increase the 'inequality gap' between affluent and deprived communities, although this is only a small amount of the total. | impacts identified | impacts identified | impacts identified | Ensure development is integrated with and enhances existing communities. A comprehensive approach that enables development to contribute to strategic infrastructure needs is required.   | impacts identified |         | impacts identified | impacts identified |
| 15 Energy                 | Focuses the majority of development in areas that are already served by infrastructure. New development could present opportunities to implement low carbon district energy schemes, linking to existing buildings in denser areas of the borough. Promoting and strengthening sustainable transport networks is also positive in terms of carbon reductions. Development per se will lead to increased demand for energy and could have serious implications for the electricity and gas networks if not carefully planned for and reinforced as necessary. In the long term, these issues may become more problematic.   | impacts            | impacts            | impacts            | Needs strong influence on development helping to deliver improved energy, design and climate change measures. Infrastructure planning needs to take account of capacity constraints. Third party investment may be necessary to fund energy schemes as developments will not necessarily have the value to provide up front capital for energy networks (particularly for marginally viable sites). | identified         | impacts | impacts            | impacts            |

| SA                         | Nature of Impacts   | lmp                      | oacts c            | over t | time                    | Mitigation/Enhancement  |                    |     | dual Imp           | _                       | -11.4 |
|----------------------------|---|--------------------------|--------------------|--------|-------------------------|---|--------------------|-----|--------------------|-------------------------|-------|
| Objective 16 Accessibility | Some areas suffer from congestion and high levels of traffic emissions, which can affect travel choices. More deprived areas also have higher road safety casualty rates. Therefore, exposure to traffic could be an enhanced issue if further development occurs in these localities. Although a key element in the delivery of these sites would be to secure improvement of transport infrastructure to relieve congestion from residential areas and promote sustainable patterns of travel, these improvements are not a given as they depend upon capturing the value of development sites. If successful, then in the long-term this could lead to substantial improvements in accessibility and road safety. However, there may be increased accessibility issues in the short-medium term, and there is no guarantee that improvements would be secured. Therefore, the impacts are potentially very negative despite positive intentions. By establishing lower levels of development in some parts of the borough, these areas are likely to remain car-based in terms of accessibility. Certain parts of the borough would not see improvements in terms of accessibility and increased trips to the 'regenerating core' may result. Although the policy approach supports the role of neighbouring centres such as Liverpool and Manchester, access to employment opportunities in these areas is likely to be via car, particularly from residents in outer parts of the borough. However, in terms of congestion, levels may not be as great if traffic is directed away from inner routes in the borough. | short impacts identified | impacts identified |        | long impacts identified | Infrastructure is key to ensuring that the preferred spatial option delivers on commitments to sustainable travel and transport. It will require a partnership approach with key organisations and service providers. The consideration of sustainable design as an integral part of all development would help. It is important to enhance public transport links to and from the outer parts of the borough too, to discourage potentially increased car trips to new employment/cultural opportunitie in the core of the Borough. Individual development impacts should be considered alongside the overall implications for the borough. We need to recognise, however, that not everywhere will benefit from greater accessibility by all modes. Inner sites are not likely to generate the value needed to deliver the scale of infrastructure improvements necessary to support sustainable modes of transport and less congestion. Service improvements such as the Leigh Salford Manchester Busway, electrification of the Chat Moss rail line and associated new services will also help. | Impact             | ort | impacts identified | over impacts identified |       |
| 17 Sustainable economy     | Clusters of environmental technologies and services could be achieved due to the capacity available through this option, and some sites are fairly attractive to knowledge economy sectors. It is difficult to determine what business practices would be adopted at this stage. However, our emerging policy framework helps to ensure that sustainable business practices are implemented (Supplementary planning documents for development and air quality, development and protected species and travel plans). A focus on deprived areas would also provide opportunities to reduce inequalities. However, it is important that we tackle any skills shortage issues if deprived communities are to get the most out of development  | impacts identified       | impacts identified | 5      | impacts identified      | None identified   | impacts identified |     | impacts identified | impacts identified      |       |
| 18 Economy and employment  | There is good capacity for focused development with a number of sites that would be attractive to businesses. There are also several existing primary employment areas that are to be retained or have been identified as suitable for modernisation; giving opportunity for land and premises that meet modern business needs. This option provides opportunities for the main employment areas such as Wigan and the associated sustainable transport but also provides opportunities for Leigh and Ashton in particular. If the employment opportunities brought by new business match local skills, it could also help tackle worklessness in some of the most deprived parts of the borough. Further job opportunities would be accessible in each of the city regions, although levels of out-commuting are already high. The loss of some sites which would have been attractive for employment is an issue. In the short term it may be more difficult to attract business to the sites in the core of the borough.   |                          | impacts identified |        | impacts identified      | Support development by creating attractive business locations thorough design principles and infrastructure improvements.   | impacts identified |     | impacts identified | impacts identified      |       |

#### SP2 - Town Centres

| SA                  | Nature of Impacts   |            | Impa    | acts       | over    | time       |         | Mitigation/Enhancement   |              | Res     | idual      | lmpa    | cts          |
|---------------------|---|------------|---------|------------|---------|------------|---------|--|--------------|---------|------------|---------|--------------|
| Objective           | Nature of impacts   | sho        | ort     | m          | ed      | lo         | ng      | wittigation/Emiantement  | sh           | ort     | me         | d       | overa        |
| 1 Biodiversity      | Planting of street trees in our town centres would have a minor positive impact on biodiversity by improving connectivity. The policy also helps to direct development away from greenfield sites which is positive for biodiversity, particularly over the longer term.  | identified | impacts | identified | impacts | identified | impacts | Promote urban biodiversity through application of measures such as Green<br>Roofs. Policies for Green Infrastructure and Design can be used as a 'hook' for<br>such measures.  | identified   | impacts | identified | impacts | identified   |
| 2 Air quality       | Much of our town centres and routes in/out fall within Air Quality Management Areas. The policy aims to strengthen our town centres' roles as places for employment, retail, service provision and leisure. This may lead to a slight increase in trips if the area becomes more attractive to visit (for various reasons). However, public transport links are generally good and the policy aims to enhance rail, bus, walking and cycling; which would all help to reduce reliance on cars (hence minimising increased emissions of air pollutants). In the short-term there could be negative impacts as it may take time to secure infrastructure improvements to support new development. |            | impacts |            |         |            | impacts | Make links with climate change adaptation measures such as green roofs and vegetation for cooling to help improve air quality in town centres (particularly around the proposed 'Civic Quarter' and the 'Wigan Hub'. Discourage traffic passing through areas of our town centres. These measures would be positive, but would require action through possible future town centre policies in the allocations plan | d identified |         |            |         | d identified |
| 3 Soil and minerals | Negligible impact on soil and mineral resources. Focusing development in the town centre promotes reuse of existing buildings on brownfield land, which minimises the use of minerals and soil resources.   | identified | impacts | identified | impacts | identified | impacts | Promote allotments / urban gardens.  | identified   | impacts | identified | impacts | identified   |

| SA                  | Nature of Impacts   |            | Imp     | acts          | over    | time         |           | Militarian / Enhancement  |            | Resi    | idual I    | mpa     | cts                |
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| Objective           | Nature of Impacts   | sh         | ort     | m             | ned     | lo           | ng        | Mitigation/Enhancement  | sh         | ort     | me         | d (     | overall/           |
| 4 Water             | Development is focused into areas that are well served by infrastructure. However, parts of our town centres (such as the Eastern Gateway in Wigan, and Parsonage in Leigh) fall within areas at risk of flooding. Development in such areas needs to be appropriate and designed to cope with potential flood events in the future. On the whole, development will involve modernisation on brownfield land, therefore the effect on surface water run-off should be minimal or positive dependent upon application of core policies.  | identified | impacts | ·· identified | impacts | · identified | impacts   | The application of policyies on flodding and natural resources should help to mitigate any negative impacts. Any new development or refurbishment should promote permeable surfaces / SUDs. Development may actually present opportunities to improve surface water management in our town centres. | identified | impacts | identified | imports | impacts            |
| 5 Landscapes        | Development is to be focused in areas that are almost entirely urban in nature. There will be minimal impact on landscape character and countryside. Focusing on our town centres may help to relieve pressure on greenfield sites around the borough, which amounts to a minor positive impact in the longer term, but this impact is uncertain.   | identified | impacts | identified    | impacts | identified   | · impacts | None identified.  | identified | impacts | identified | imports | impacts identified |
| 6 Built environment | Although large-scale redevelopment could potentially have a negative impact on character in some areas, development would generally help to regenerate and enhance the built / historic environment as it would help to tackle dereliction and modernise and enhance streets and public space. On the other hand, overly prescriptive planning in these areas could actually stifle redevelopment. Good design is essential to ensure there are no negative impacts. Seeking to redress the balance of retail across Wigan town centre would have a positive impact on areas that are less well used. It will be necessary to ensure that 'town cramming' does not affect character, this could be an issue in Leigh in particular. |            | impacts | identified    | impacts | identified   | impacts   | Design public spaces so that they are well adapted for climate change. For example areas for cooling. Ensure strong application of policies for design and the historic environment to ensure that character is not adversely affected and development is facilitated. Address vacancies.           | identified | impacts | identified |         | impacts identified |

| SA                      | Natura of Impacts   |               | Impa      | acts         | over      | time         |         | Minister / Fahan assault   |               | Res     | idual         | Imp       | acts                  |
|-------------------------|---|---------------|-----------|--------------|-----------|--------------|---------|--|---------------|---------|---------------|-----------|-----------------------|
| Objective               | Nature of Impacts   | sh            | ort       | m            | ed        | lo           | ng      | Mitigation/Enhancement   | sh            | ort     | m             | ed        | overall/              |
| 7 Community safety      | Making the town centre more vibrant and varied and promoting improved walking and cycling links should create more attractive places and promote civic pride - which would enhance feelings of safety. Better integration of parts of our town centres that are underused will also make these areas more welcoming and safer for users. Allowing some residential in and around town centres also promotes varied activity and natural surveillance. In the longer term, increased facilities for culture, education and employment in our town centres could have a positive impact in terms of reduced antisocial behaviour. | identified    | impacts   | identified   | impacts   | identified   | impacts | Care needs to be taken to ensure that development does not exacerbate fear of crime. For example, walking routes that are secluded and parts of town centres lacking use for long parts of the day / night. A stronger emphasis on the cultural and leisure offer of our town centres is needed. | identified    | impacts | identified    | impacts   | impacts               |
| 8 Neighbourhood quality | Opportunities to improve environmental quality in and around the town centre through development. Cumulatively, impacts could be significant in the longer term. Tree planting and improved walking and cycling links would have a positive impact too.   | identified    | impacts   | identified   | impacts   | identified   | impacts | Ensure that street furniture and layouts are designed to facilitate cleansing and waste management regimes. Design policy has a hook to allow for this, but it is uncertain if measures would be secured.  | identified    | impacts | identified    | impacts   | ·- impacts identified |
| 9 Waste                 | Town centres produce a lot of waste. Further development could add to this, but this is not an issue unique to town centres. Having said this, there may be problems with waste storage / management in dense urban areas. On the other hand it could make it easier to coordinate waste collection and explore opportunities for schemes such as energy from waste. Uncertain impacts.   | ?. identified | · impacts | • identified | · impacts | · identified | impacts | Explore opportunities to manage waste locally. For example, symbiosis, energy from waste.  | ?. identified | impacts | ?. identified | · impacts | impacts identified    |

| SA            | Notice of Imports  |            | Impa    | icts       | over    | time       |           | Mitigation/Enhancement  |            | Res     | idual      | Impa    | cts                |
|---------------|--|------------|---------|------------|---------|------------|-----------|---|------------|---------|------------|---------|--------------------|
| Objective     | Nature of Impacts  | sho        | ort     | m          | ed      | lo         | ng        | Mitigation/Enhancement  | sh         | ort     | me         | d       | overall/           |
| 10 Health     | Promotes vibrant areas and enhanced accessibility, including to existing health facilities via active modes of transport and public transport. This could have a positive effect on wellbeing and health in the medium to longer term. However, focusing on retail, employment and leisure services in the three largest 'town centres' could act as a barrier to the establishment of health care facilities in locations that are desirable for service provision (this may become more of an issue in the medium to long term). The fact that community facilities are promoted in smaller centres somewhat compensates for this issue.   | identified | impacts | identified | impacts | identified | impacts   | Consider health and other community facilities as viable uses of floor space in prime town centre locations. This change would mitigate the negative impacts.   | identified | impacts | identified | impacts | impacts            |
| 11 Recreation | Supports town centres as the prime locations for cultural activities. In particular seeks to make better links from Leigh town centre to Leigh Sports Village and Pennington Flash, enhance the pier quarter and improve walking and cycling links. Some areas, such as Leigh, have a low level of leisure and culture provision compared to other areas, and as they are starting from a 'low base', there are opportunities for substantial improvements to be made.   | Ξ.         | impacts | identified | impacts | identified | impacts   | A stronger emphasis on the cultural and leisure offer of our town centres is needed. In particular sporting heritage, evening entertainment etc If these issues are tackled through later plans then there would be the potential for greater positive impacts over time. | identified | impacts | identified | impacts | impacts            |
| 12 Housing    | Housing development in town centres is generally 'sustainable' as it offers good access to services, employment and recreation. Development round the outer edges of our town centres can help contribute to our housing targets, which has cumulative positive impacts over time. (albeit a minor amount). Although Ashton is a 'sustainable' location in terms of having fairly good accessibility via public transport, there is a lack of services and a limited retail offer, which makes it likely for many residents to travel via car outside the Township. The policy aims to make the area more 'viable' in this respect, which would be positive for new and existing home owners in the longer term. | identified | impacts | identified | impacts | identified | · impacts | Make the emphasis on the delivery of housing in sustainable central locations more explicit in later plans.   | identified | impacts | identified | impacts | impacts identified |

| SA                        | Notice of Lorents   |            | Imp     | acts       | over    | time       |         | Million Conference of  |            | Res     | idual      | Impa    | cts      |
|---------------------------|---|------------|---------|------------|---------|------------|---------|--|------------|---------|------------|---------|----------|
| Objective                 | Nature of Impacts   | sh         | ort     | m          | ied     | lo         | ong     | Mitigation/Enhancement   | sh         | ort     | me         | ed      | overall/ |
| 13 Education and learning | Although the policy supports education facilities as a town centre use, there is no explicit clause to ensure that facilities are enhanced. Therefore, impacts are negligible in this respect. However, improved connections will make educational institutions, jobs and training more attractive and accessible by sustainable means of traffic. The links between Leigh and Leigh Sports Village would have a particular positive impact in the east of the borough.                                 |            | impacts | identified | impacts | identified | impacts | A focus of later plans could set out more explicit measures for enhancing education and learning facilities in partnership with providers. This would have a greater positive impact in the longer term.   | identified | impacts | identified | impacts | impacts  |
| 14 Community development  | Will help to maintain and enhance the identity and role of Wigan's key centres. More vibrant civic squares and better accessibility will promote community pride and involvement in a wider range of activities. Maintaining the role of local centres for their 'convenience' function is positive in respect of retail provision. However, the role of community services and a shift to neighbourhood services is not really reflected in this policy.   | identified | impacts | identified | impacts | identified | impacts | The role of local and neighbourhood centres for provision of wider community services needs to be considered. This is picked up to an extent in other policies, notably those for education, health and 'community facilities'. It would be beneficial to include consideration of community facilities in subsequent development plans.   | identified | impacts | identified | impacts | impacts  |
| 15 Energy                 | Development in general usually creates increased carbon emissions (this is considered as part of the overall spatial approach and for each core policy principle). However, town centres are well serviced by infrastructure and may be suitable for the development of district heat and power schemes in the medium to longer term. Wigan town centre is easily accessible via public transport from most parts of the borough, and Leigh / Ashton are accessible in the east and south respectively. | identified | impacts | identified | impacts | identified | impacts | There may be a need to site 'energy centres' and other energy technologies in our town centres. Although there are principles for implementing such schemes, it would be beneficial to highlight the appropriateness of such land uses in our town centre policies and subsequent plans. This would give a greater degree of certainty that heat networks and other energy schemes are supported in central locations. |            | impacts | identified | impacts | impacts  |

| SA                        | Nature of Impacts   |            | Imp     | acts       | over    | time       |         | Mitigation/Enhancement   |            | Resi    | idual      | lmpa    | cts      |
|---------------------------|---|------------|---------|------------|---------|------------|---------|--|------------|---------|------------|---------|----------|
| Objective                 | Nature of Impacts   | sh         | ort     | m          | ned     | lo         | ong     | Witigation/Emiantement   | sh         | ort     | me         | d       | overall/ |
| 16 Accessibility          | Promoting local centres for convenience goods could help to reduce travel for such items. Focusing the main retail, office and leisure facilities into town centres should help to discourage car use and encourage public transport. Specific schemes mentioned such as the Leigh Guided Busway and Wigan Hub will help to promote public transport use, but the positive impacts are likely to be medium-long term in nature.   | identified | impacts | identified | impacts | identified | impacts | Car use is a particularly 'convenient' option (sometimes the only viable option) in the east and outer parts of the borough at the moment. Development could simply add to the problems here unless infrastructure improvements and a coherent transport strategy are implemented. | identified | impacts | identified | impacts | impacts  |
| 17 Sustainable economy    | Currently our town centres have low representation from knowledge-based sectors. Investment in and around these areas could help to make them a more attractive location for such businesses.   | identified | impacts | identified | impacts | identified | impacts | None identified.   | identified | impacts | identified | impacts | impacts  |
| 18 Economy and employment | The policies support and aim to enhance the role of our 3 town centres as the focus of economic activity. Development opportunities could provide a number of job opportunities for local residents, potentially benefiting people from areas of multiple deprivation, especially in Leigh. The policy could also help to retain spending on goods and services locally by enhancing the offer to local residents. However, improved accessibility will be key to securing successful economic development. | identified | impacts | identified | impacts | identified | impacts | Ensure that employment opportunities benefit local residents wherever possible in line with policy CP5 on econmy and employment.   | identified | impacts | identified | impacts | impacts  |

SP3 - North Leigh Park, Strategic Site

| SA                  | Nature of Impacts   |            |         |            |         | time       |         | Mitigation/Enhancement   |            |         | idual      |         |            |
|---------------------|---|------------|---------|------------|---------|------------|---------|--|------------|---------|------------|---------|------------|
| Objective           |   | sh         | ort     | m          | ied     | lo         | ng      |  | sh         | ort     | me         | d       | over       |
|                     | The north western part of the development area is adjacent to an SBI (Disused   |            |         |            |         |            |         |  |            |         |            |         |            |
| 1 Biodiversity      | railway line at Hindley Green). There may be some disturbance in the short term during construction, but permanent effects are unlikely. The site of development itself has the potential for some priority habitats and species to be  |            |         |            | ?       |            | ?       | Design principles need to ensure that any potential adverse impacts are minimised and enhancements are made when possible. |            |         |            | ?       |            |
| rsity               | present, so impacts may be possible here too. Development also offers the opportunity for enhancements to local biodiversity, but the impacts would only be positive once schemes are completed.  | identified | impacts | identified | impacts | identified | impacts |  | identified | impacts | identified | impacts | identified |
|                     | Access to the site could involve car travel along a congested road network, much of which is designated as AQMAs. New housing and employment here   |            |         |            |         |            |         |  |            |         |            |         |            |
| 2 Air quality       | could create significant amounts of traffic; worsening pollution levels and human exposure in this area. The impact may be heightened by the development of the 'South of Hindley' strategic site outlined in policy SP4. A focus on sustainable modes of transport would offset the impact to a degree.  |            |         |            |         |            |         | Provision of infrastructure will be vital if negative impacts on air quality are to be kept to a minimum.                  |            |         |            |         |            |
| lity                | Provision of key infrastructure would help to improve accessibility and relieve congestion slightly, with knock on impacts on air quality. The inclusion of strategic green infrastructure and the promotion of walking and cycling would help to offset the negative impacts on air quality somewhat.  | identified | impacts | identified | impacts | identified | impacts |  | identified | impacts | identified | impacts | identified |
| <i>a</i> v          |   |            |         |            |         |            |         |  |            |         |            |         |            |
| 3 Soil and          | Parts of the site are previously developed whilst others are predominantly greenfield, so there will be some permanent loss of soil resources. Having said this, the land is classified as primarily non-agricultural use so the impacts in real some search and primarily non-agricultural use so the impacts in real some search and with page. |            |         |            |         |            |         | Alletments could be provided as part of site development   |            |         |            |         |            |
| 3 Soil and minerals | terms are negligible. In fact, development will help to remediate land with poor ground conditions, which is a positive impact when considered alongside the provision of strategic open space as part of the development. Construction impacts may occur in the short term.  | identified | impacts | identified | impacts | identified | impacts | Allotments could be provided as part of site development.  | identified | impacts | identified | impacts | identified |

| SA                  | Nature of Impacts  |            | Imp     | acts       | over      | time       |           | Mitigation/Enhancement  |            | Res     | idual      | Impa    | cts     |
|---------------------|--|------------|---------|------------|-----------|------------|-----------|---|------------|---------|------------|---------|---------|
| Objective           | Nature of Impacts  | sh         | ort     | m          | ed        | lo         | ng        | Wittigation/Enhancement   | sh         | ort     | me         | d       | overal  |
| 4 Water             | Fluvial flood risk is unlikely to be an issue on the site. However, there may be issues with surface water and waste water, which would have significant cost implications. The development is also likely to increase demand for water overall, which will contribute to cumulative impacts on supplies. The application of Sustainable Drainage Systems could help to regulate surface water run-off from the site, having positive impacts in the wider area.   | identified | impacts | identified | impacts   | identified | impacts   | It will be possible to tackle constraints on drainage and wastewater at cost. Care needs to be taken during remediation and construction that water resources are not contaminated. |            | impacts | identified | impacts | impacts |
| 5 Landscapes        | The development area is enclosed by suburban housing on all sides. It has been used unofficially for tethered horse grazing, subject to fly tipping and misused by motorbikes. It is used for general public recreation / leisure. The site is a former quarry, then landfill, which has been capped with colliery spoil. Parts of the site have been previously reclaimed. The area appears to be unmanaged, disrespected, underused and parts require land reclamation. Negative impacts on landscape character and areas of greenspace are likely to be minor at most. In fact, there is potential for improvements to the appearance and management of the area through appropriate landscaping and green infrastructure schemes. It should be noted that the site is overlooked by residential areas and has intrinsic value for recreation, leisure and wildlife. In the short term construction may affect landscape value. | identified | impacts | identified | impacts   | identified | impacts   | Application of Core Policies on design, green infratructure and landscape.  | identified | impacts | identified | impacts | impacts |
| 6 Built environment | There are no designated heritage features or buildings in the vicinity of the development area and the site is somewhat 'hidden' / enclosed. The character of surrounding areas is not particularly distinct and is unlikely to be affected significantly in any event. In fact, high quality design could create areas with new positive identities. The policy stipulates that 'high standards' in energy efficiency and design should be attained. Although this is a positive intention, it is not specific enough to ensure that sustainable, low carbon development would actually be secured.   | identified | impacts | identified | · impacts | identified | · impacts | An energy strategy could be produced for the strategic development to ensure that carbon reductions are achieved in practice.   | identified | impacts | identified | impacts | impacts |

| SA                      | Nature of Imports  |            | Imp     | acts          | over    | time          |         | Mikingkian / Enhancement   |            | Res     | idual        | Impa    | acts               |
|-------------------------|--|------------|---------|---------------|---------|---------------|---------|--|------------|---------|--------------|---------|--------------------|
| Objective               | Nature of Impacts  | sh         | ort     | m             | ed      | lo            | ng      | Mitigation/Enhancement   | sh         | ort     | me           | ed      | overall            |
| 7 Community safety      | Due to its location along a major route, there may be some small risk posed from offenders travelling from elsewhere. Surrounding communities suffer from above average levels of deprivation and crime, and the potential impact this may have on any new development should also be considered (these impacts are uncertain and not long term). Job creation at the site may have a positive impact in terms of diversionary activities, with impacts being noticed in the medium to long term. The site currently has potential for antisocial behaviour due to its underused and degraded nature. Appropriate development could make the area safer and more attractive. |            | impacts | identified    | impacts | identified    | impacts | Application of design measures to ensure that development is secure and reduces the opportunity for anti social behaviour and crime.     | identified | impacts | identified   | impacts | impacts            |
| 8 Neighbourhood quality | The area is currently regenerating, unkempt, poorly managed and poorly accessible in parts. Development therefore presents opportunities for strong levels of improvement to environmental quality. A third of the site is to be enhanced in terms of open space and green infrastructure, so there is good potential for positive impacts to be achieved in the longer term. In the short to medium term construction and site access may present amenity, noise and other problems though. It is uncertain how long such impacts would last. Those associated with employment may be longer lasting or permanent.  | identified | impacts | · identified  | impacts | · identified  | impacts | Apply Considerate Constructors standard to manage construction stage impacts Apply design measures to minimise impacts on amenity.       | identified | impacts | · identified | impacts | impacts identified |
| 9 Waste                 | Impacts during construction depend upon the practices of contractors and the application of core policies on waste, natural resources and design. Overall, development at this scale is likely to produce significant waste streams both during construction and its operation. However, a site waste management plan will be required during construction, and design measures should help to ensure that waste can be managed sustainably afterwards. There is considerable uncertainty about these impacts at this stage.   |            | impacts | ?- identified | impacts | ?- identified | impacts | Potential for waste management facilities to be developed on the industrial element of the site or to support such facilities elsewhere. | identified | impacts | · identified | impacts | impacts identified |

| SA            | Nature of Impacts   |            | Imp     | acts          | over    | time         |         | Mitigation/Enhancement   |            | Resi    | idual      | lmpa      | cts                |
|---------------|---|------------|---------|---------------|---------|--------------|---------|--|------------|---------|------------|-----------|--------------------|
| Objective     | Nature of impacts   | sho        | ort     | m             | ied     | lo           | ng      | witigation/Ennancement   | sh         | ort     | me         | d         | overall/           |
| 1             | Community and health facilities provided in the masterplan will benefit the locality marginally in the long term. The significant level of housing development proposed could put pressure on other existing facilities in the  |            |         |               |         |              |         |  |            |         |            | <u> </u>  |                    |
| 10 Health     | locality. The provision of open space could have a minor positive impact on the wellbeing of communities, and help in terms of resilience to climate change if green infrastructure is secured to assist in shading for example, and if design measures take account of climate change impacts. Impacts are uncertain at this stage until development is progressed.  | identified | impacts | ?- identified | impacts | · identified | impacts | Some limited health service provision. Potential provision of community allotments as part of the open space offer. This would promote local food growth.  | identified | impacts | identified | impacts   | impacts identified |
| 11 Recreation | Site development would result in significant loss of natural / semi natural greenspace. Whilst this is not of particularly high quality, it is important locally for informal recreation and may be perceived as negative. Conversely, site development would provide some higher quality open space with better connectivity and sports fields. There are also good links with Westleigh park to be made. Positive impacts are realised in the longer term when all phases of the scheme have been implemented.  | identified | impacts | identified    | impacts | identified   | impacts | It is important to ensure that existing local communities have good access to the open space as part of the new development and it is not seen as an asset for new homeowners only   |            | impacts | identified | · impacts | impacts            |
| 12 Housing    | Development would help to deliver a significant number of housing units in a fairly accessible location. Given the constraints on the site in terms of ground conditions, affordability requirements and other obligations, it may be difficult to seek higher standards of sustainability for developments. If this was the case, it would be a missed opportunity to develop a flagship site in terms of sustainability. Access to improved housing choice and affordable units should be an outcome of the development in any case, with particular benefits for residents based in the east of the borough. | =-         | impacts | identified    | impacts | identified   | impacts | Ensure that sustainability measures are secured as part of the masterplan for the development. This may involve third party partnerships and finance arrangements due to the lack of value in the site / costs incurred. Without a forward thinking approach to sustainability at this site, it is only likely to be 'more of the same'. | identified | impacts | identified | impacts   | impacts            |

| SA                       | Nature of Impacts   |            | lmp     | acts         | ove     | r time     | 9       | Mitigation/Enhancement  |      | F          | Resid    | lual Ir               | mpa           | icts                  |
|--------------------------|---|------------|---------|--------------|---------|------------|---------|---|------|------------|----------|-----------------------|---------------|-----------------------|
| Objective                | Nature of Impacts   | sh         | ort     | n            | ned     | le         | ong     | wittigation/ Enhancement  |      | shor       | t        | med                   | d             | overall/              |
| 13 Education a           | Housing development could put pressure on secondary places in the area, which are currently running close to capacity. It may be necessary to seek  |            |         | ?            |         | ?          |         | None identified   |      |            |          | ?                     |               | ?                     |
| and learning             | contributions for more places. A small number of jobs would be created by the development, which could benefit local communities in the longer term.  | identified | impacts | identified   | impacts | identified | impacts |   |      | identified | ii<br>ii | impacts               | in the second | impacts<br>identified |
| 14 Commu                 | Many areas immediately adjacent to the site fall within the 20% most deprived. There are also significant areas falling within the 10% most deprived (e.g. Westleigh). To the north of the site deprivation is lower with several areas only falling within 51-60% most deprived. Other than formal open space, community   |            |         |              |         |            |         | _   | _    |            |          |                       |               | <u> </u>              |
| 14 Community development | facilities are not a specific feature of the masterplan, so the opportunities for community development activities may be limited. It will be important to ensure that communities in existing areas can access the open space of the new development and the site is well integrated with surrounding areas. Otherwise, there could be tensions between new residents and existing communities. The provision of affordable mixed-use housing should help to minimise these potential impacts. | identified | impacts | ? identified | impacts | identified | impacts | None identified   |      | identified |          | · identified          | imports       | impacts<br>identified |
| 15 Energy                | Although the policy sets out the requirement to achieve high standards of energy efficiency and carbon reductions, it is uncertain if this will be achieved in practice given the costs associated with other aspects of development, and the necessity to reinforce the local electricity network. Site development will also require significant amounts of energy consumption during construction. There is  |            |         |              |         |            |         | Work to develop an energy strategy for the site that helps to achieve stror cuts in carbon emissions. In the long term, the development of and/or sup | port |            |          |                       | 3//           |                       |
| rgy                      | also the issue of an overall increase in carbon emissions once the development is complete. Therefore, the overall impact is likely to be negative unless the scheme takes a flagship approach and seeks to reduce emissions in the wider community too.  | identified | impacts | identified   | impacts | identified | impacts | for strategic energy networks could have benefits for the wider communit  |      | identified |          | impacts<br>identified | impact:       | impacts<br>identified |

| SA                        | Nature of Impacts  |            | Impa    | cts        | over    | time       |         | Mitigation/Enhancement   |               | Resi    | dual I     | mpac    | ts      |
|---------------------------|--|------------|---------|------------|---------|------------|---------|--|---------------|---------|------------|---------|---------|
| Objective                 | Nature of impacts  | sho        | ort     | m          | ed      | lo         | ong     | Witigation/Ennancement   | sho           | ort     | me         | d c     | verall/ |
| 16 Accessibility          | South western and eastern peripheries are within a 5 minutes walk of a bus stop with high frequency services to Wigan and Leigh and linking with areas of deprivation. However, parts of the site are not readily accessible by public transport. Levels of congestion are currently moderate at peak, but development could add pressure to the surrounding areas. The provision of a link road should help to alleviate some of the potential traffic problems, but behaviour change will be important. Negative Impacts may be more pronounced during construction phases before infrastructure has been fully completed. |            | impacts | identified | impacts | identified | impacts | None identified.   | identified    | impacts | identified | impacts | impacts |
| 17 Sustainable economy    | Many areas immediately adjacent to the site fall within the most deprived 10% (for example Westleigh). There are also several areas of 'moderate' deprivation in proximity (top 21-40%). Expansion of commercial development could provide job opportunities for some deprived communities. It is not possible to determine whether sustainable practices will be promoted as part of new development.   | identified | impacts | identified | impacts | identified | impacts | Operational issues should be considered as part of proposals for and employment. The potential for the development of business carbon economy should be explored and promoted if viable. | es in the low | impacts | identified | impacts | impacts |
| 18 Economy and employment | Development would deliver approximately 8 hectares of industrial space, helping to attract some inward investment and potentially creating jobs for local communities. Employment elements of the site are not significant and are unlikely to attract knowledge based industries, so the positive impacts are only moderate.  |            | impacts | identified | impacts | identified | impacts | Help to ensure that jobs created are accessible to local communit priority.  |               | impacts | identified | impacts | impacts |

#### **SP4 - Broad Locations**

| SA                  | Nature of Impacts   | I                  | mpac    | ts ove             | r time     | е                  | Mitigation/Enhancement   |            | Res                | idual I            | npact      | s                  |
|---------------------|---|--------------------|---------|--------------------|------------|--------------------|--|------------|--------------------|--------------------|------------|--------------------|
| Objective           | Nature of Impacts   | sho                | rt      | med                | k          | ong                | ivittigation/Enhancement   | sh         | ort                | med                | ov         | erall              |
| 1 Biodiversity      | Development of this scale has the potential to have significant impacts on biodiversity. However, the majority of strategic sites are not within close proximity to any designated habitats so loss of protected species should be minimal. South of Hindley is an exception, as it contains several SBIs, but these are likely to be protected through mitigation measures anyway. The cumulative effects on wildlife habitats from this level of development may put pressure on surrounding habitats, as all these areas are greenfield in nature, and act as habitats or linkages between areas. Locations in the south of the borough has the potential to have negative impacts on Astley Moss. Although these are uncertain impacts, the precautionary principle must be followed. | impacts identified |         | impacts identified |            | impacts identified | Enhancement measures in areas that are degraded and have little value for wildlife. Development may actually provide opportunities to make improvements that otherwise would not occur.  |            | impacts identified | impacts identified | ?          | impacts identified |
| 2 Air quality       | Exposure to poor air quality is an issue along some of the borough's major road routes. This is more of an issue where residents and public spaces are affected. Development of several broad locations could exacerbate congestion and air quality issues until infrastructure was complete. South of Hindley could be a particular issue. In the longer term, supporting infrastructure could help to improve air quality slightly, but this is an uncertainty and comprehensive measures are constrained by lack of funding. Strategic sites close to the motorway and outer edge of the borough are also likely to increase emissions from traffic, but exposure here is not as much of an issue.   | identified         | impacts | impacts            | identified | impacts            | None identified. Investment constraints are likely to be a barrier to the development of a more comprehensive infrastructure network that is needed to support new development and ease congestion on current networks.  | identified | impacts            | identified         | identified | impacts            |
| 3 Soil and minerals | All of the broad locations are predominantly greenfield. Development will result in the permanent loss of some soil resources. Although this is not 'best or most versatile', there are some pockets that are used for agriculture. Much of the land also has the potential to be used for crop growth, but this would be lost with development. In the longer term the cumulative impacts could be fairly negative.  | identified         | impacts | impacts            | identified | impacts            | Provision of allotments at each site would offset the loss of potentially productive land to some extent. Where any Grade 3 or better land is affected, conserving topsoil would help to mitigate impacts too. Unfortunately, there is going to be unavoidable permanent impacts as a result of development. | identified | impacts            | identified         | identified | impacts            |

| SA                  | Nation of Immarks  |            | Impa    | icts       | over    | time       |         | Misiration (Enhancement   |            | Res     | sidual     | Impa    | icts    |
|---------------------|--|------------|---------|------------|---------|------------|---------|---|------------|---------|------------|---------|---------|
| Objective           | Nature of Impacts  | sh         | ort     | m          | ed      | lo         | ng      | Mitigation/Enhancement  | sl         | hort    | me         | ed      | overall |
| 4 Water             | Avoidance and mitigation would ensure that flood risk did not pose a problem in those areas affected. It would be anticipated that increased development across greenfield sites would have an adverse impact upon patterns of drainage across the borough, which could have impacts downstream in terms of flooding. The careful application of SUDs would need to be ensured. Even if new development is more water efficient this scale of development is likely to increase demands for water overall. The main positive aspect of development is the promotion of green infrastructure and leisure facilities, which includes water features such as ponds at several sites - this amounts to a minor positive impact on the longer term. | identified | impacts | identified | impacts | identified | impacts | None identified. Design policies should help to promote resource efficiency.  | identified | impacts | identified | impacts | impacts |
| 5 Landscapes        | Some broad locations are not considered to be sensitive or 'valuable' landscapes, and therefore development presents an opportunity to improve the overall quality of those areas. A number of locations do have value and act as buffers between the countryside and urban areas. Development at these locations is likely to have a detrimental impact upon landscape quality. The broad locations policy does not encourage the efficient use of land and buildings in terms of reuse, so must be marked poorly in this respect as it accounts for about a third of all development over the next 15 years.   | identified | impacts | identified | impacts | identified | impacts | Some of the broad locations could have landscape character enhanced or former features restored as a condition of development. For example, tree cover on sites | identified | impacts | identified | impacts | impacts |
| 6 Built environment | Few heritage assets at broad locations means significant character impacts are less likely. The design and quality of buildings will be dependent upon thematic policies, specifically those for design, sustainability and open space, so it is difficult to assume the impact. Development on greenfield sites usually has greater value, and should present better opportunities for higher quality design and sustainability measures to be secured. In practice this is uncertain, because other factors will play a part, such as viability. Green infrastructure development at the broad locations should help to secure more attractive built environments that are more attractive and more resilient to climate change.             | identified | impacts | identified | impacts | identified | impacts | Strong application of policies on design and sustainability / energy.   | identified | impacts | identified | impacts | impacts |

| SA                      | Network flowers   |            | Imp     | acts         | ovei    | r time     |         | Minimaton / Tuberrane  |            | Re      | sidual        | Imp     | acts    |
|-------------------------|---|------------|---------|--------------|---------|------------|---------|--|------------|---------|---------------|---------|---------|
| Objective               | Nature of Impacts   | sh         | ort     | m            | ed      | lo         | ong     | Mitigation/Enhancement   | sl         | ort     | m             | ed      | overal  |
| 7 Community safety      | None of the broad locations are likely to create through routes into town centres so crime issues would not be anticipated in this regard. Cross boundary crime may be an issue for sites close to the motorway or major routes. In the longer term, the positive impacts associated with regeneration should provide some positive impacts in terms of reduced crime and anti-social behaviour.  | identified | impacts | identified   | impacts | identified | impacts | Strong application of design principles relating to situational crime measures.    | identified | impacts | identified    | impacts | impacts |
| 8 Neighbourhood quality | Amenity (e.g. noise nuisance) of existing neighbours is unlikely to be an issue at the majority of the broad locations. However, increased vehicular movements and access issues, likely at all sites, may be an issue. The quality of neighbourhoods in terms of their environment and cleanliness could improve for locations that are currently perceived as poor, but there may be slight negatives in areas perceived to be fairly attractive already. Green infrastructure and open space provision should help in terms of enhancement of these features. Temporary fly-tipping at construction sites may be an issue. | identified | impacts | · identified | impacts | identified | impacts | Some infrastructure improvements would assist in addressing traffic/access issues. | identified | impacts | ·· identified | impacts | impacts |
| 9 Waste                 | Development of this scale will produce waste both during construction and when 'operational'. The extent of the impacts will depend upon application of other policies and working practices. Conversely, with strategic development, there are opportunities to introduce more effective ways of dealing with waste.   | identified | impacts | identified   | impacts | identified | impacts | None identified  | identified | impacts | identified    | impacts | impacts |

| SA            | Nature of Impacts  |              | lmp     | acts         | over    | time         | •       | Mitigation/Enhancement   |            | Res     | idual         | Impa    | cts                |   |
|---------------|--|--------------|---------|--------------|---------|--------------|---------|--|------------|---------|---------------|---------|--------------------|---|
| Objective     | Nature of impacts  | sh           | ort     | m            | ned     | lo           | ong     | Wittigation/Enhancement  | sl         | ort     | me            | ed      | overall            | / |
| 10 Health     | In the longer term, there are likely to be positive impacts on health and wellbeing as a result of wider housing choice and access to employment. New development at the broad locations also offers opportunities to enhance open space provision. The development would be occurring somewhat in areas of deprivation, so those of greatest need could potentially benefit. Having said this, the location of some strategic development may not be the most accessible to health facilities, particularly if congestion increases in the short term.  | • identified | impacts | ? identified | impacts | identified   | impacts | None identified  | identified | impacts | ?- identified | impacts | impacts            |   |
| 11 Recreation | Most of the broad locations are currently unused for formal recreation. Site development therefore presents an opportunity to create better quality open space that could link to surrounding areas and is more accessible to communities. In the longer term, development would also discourage anti-social behaviour such as motorbike scrambling, which is prevalent at several of these broad locations. There is a danger that creation of open space with new development could exclude those who used the site informally before development, therefore good linkages are required.   | identified   | impacts | · identified | impacts | · identified | impacts | Ensure linkages with surrounding areas are required as a condition of development. | identified | impacts | ?- identified | impacts | impacts identified |   |
| 12 Housing    | The broad locations policy will help to deliver a significant number of housing units. The policy also supports a range of housing types for different social groups. Locations are not particularly 'central' and are difficult to access through sustainable modes of transport which requires focus. The value of strategic developments and economies of scale offered should help to deliver higher quality developments in terms of sustainability / energy. However, affordability may be an issue given market conditions and conditions that may be placed upon developers. This could have an adverse impact in terms of fuel poverty in the short to medium term. | ? identified | impacts | identified   | impacts | identified   | impacts | None identified  | identified | impacts | identified    | impacts | impacts            |   |

| SA                        | Nature of Impacts   |                    | Impa    | ects o             | ver t   | ime        |           | Mitigation/Enhancement  |            | Res                | idual              | Impa    | acts                 |
|---------------------------|---|--------------------|---------|--------------------|---------|------------|-----------|---|------------|--------------------|--------------------|---------|----------------------|
| Objective                 | Nature of impacts   | sho                | ort     | me                 | ed      | lo         | ng        | Wittigation/Enhancement   | s          | nort               | m                  | ed      | overall/             |
| 13 Education and learning | Employment opportunities at the broad locations could be linked to learning and skills programmes to help get unemployed communities into work. Improved choice and quality of homes could also have a positive impact in the longer term through better learning environments outside of school. Housing development could put significant pressure on primary and secondary places in some areas, which are currently running close to capacity. It may therefore be necessary to seek contributions for more places or to plan for upgrades to schools. Increase numbers may actually improve the viability of some schools.   |                    | impacts | identified         | impacts | identified | impacts   | None identified   | identified | impacts            | identified         | impacts | impacts              |
| 14 Community development  | The provision of community facilities is not an explicit part of this policy, but the provision of quality open space could facilitate community activities. It will be important to ensure that the benefits of improvements are not only felt by new residents as this could cause resentment amongst existing communities. From a regeneration perspective the policy could help to tackle deprivation in some areas. However, housing in the outer areas would have a limited positive impact on deprived communities after the construction phase as affordability may be an issue. The development of strategic sites over the plan period could benefit communities through a boost in access to construction jobs. It will be important to ensure that the identities of communities close to the locations are enhanced for community cohesion. In the short term, there are positive impacts from involving communities in decisions about their areas. | impacts identified |         | impacts identified |         | ? ? :      | ?         | None identified   |            | impacts identified | impacts identified |         | · impacts identified |
| 15 Energy                 | Strategic development could present opportunities to implement low carbon district energy schemes, linking to existing buildings in denser areas of the borough. However, development at this scale is likely to lead to an increased demand for energy and could have serious implications for the electricity and gas networks if not carefully planned for and reinforced as necessary. In the long term, these issues may become more problematic. In their current form the broad locations policies do not explicitly mention the need to implement low carbon development, and the need for higher carbon targets for strategic opportunities. This is a missed opportunity.   |                    | impacts | identified         | impacts | identified | · impacts | Masterplans for each broad location need to take account of energy planning issues. By setting more challenging targets for strategic opportunities, the negative impacts can be minimised or turned positive in the longer run as energy networks branch out into the existing building stock. Needs application of strong policy principles on energy, design and climate change. |            | impacts            | identified         | impacts | impacts              |

| SA                        | Nature of Impacts  | Imp                | pacts      | over               | time               |    | Mitigation/Enhancement  |                    | Resi    | dual Ir            | npac | cts                |
|---------------------------|--|--------------------|------------|--------------------|--------------------|----|---|--------------------|---------|--------------------|------|--------------------|
| Objective                 | Nature of impacts  | short              | m          | ned                | lo                 | ng | wittigation/Ethiantement  | sho                | rt      | med                | Q    | overall/           |
| 16 Accessibility          | Likely to be some infrastructure improvements in the longer term, but these may only be slight given current market conditions and other pressures. As a result, significant development would be occurring in areas that suffer from congestion and are not the best in terms of sustainable travel options. In the medium term, this could cause some serious impacts. Without other supporting infrastructure, the benefits in the longer term are only likely to be minor at best. Despite an overall neutral or slightly positive impact in the longer term, some areas may actually suffer from poorer accessibility as a result of significant development. Having said this, the value generated from these sites could help to fund improvements in infrastructure elsewhere. | impacts identified |            | impacts identified | impacts identified |    | We may need to accept that there may be some disruption in the medium term. Securing infrastructure before significant development occurs would be ideal, but this is an unlikely scenario.   | impacts identified |         | impacts identified |      | impacts identified |
| 17 Sustainable economy    | The broad locations allocated are not specifically geared towards knowledge based industries, including those that seek to capitalise on the low carbon economy. Business that is part of low carbon supply chains could be supported at industrial sites, but the scope of employment activity may be limited. Construction materials and quality of build is reliant upon design policies so high standards cannot be assumed. Several of the broad locations are well connected to some of the borough's more deprived areas, so there is also potential to tackle inequalities, but this is not the case for all strategic locations. It is also important that we tackle any skills shortage issues if deprived communities are to get the most out of development.               | impacts identified |            | impacts identified | impacts identified |    | Creation of attractive environments can attract knowledge based industries. Setting high standards for design quality and sustainability could also help to attract businesses to the borough, particularly as tenants are increasingly seeking better performing premises and legislation is driving change as well. The borough is well placed to develop business opportunities for low carbon technologies and services, but a clearer strategy needs to be produced, and this will involve allocation of suitable locations for development. | impacts identified |         | impacts identified |      | impacts identified |
| 18 Economy and employment | These broad locations will promote some employment use that could benefit deprived communities. There is an issue of making employment opportunities accessible to communities of need. This scale of development should support the construction sector for a considerable time. Allocating these strategic sites should also help to strengthen and diversify Wigan's economy in the longer term, particularly if high quality uses are secured. Not all the land being made available could be described as the most environmentally sustainable, so there needs to be strong mitigation / enhancement of quality.  | impacts            | identified | impacts            | identified         |    | Ensure that the environmental and built quality of sites is high so that higher profile businesses and emerging low carbon services / industries are attracted to the borough and supported. This could have some negative impacts in the short - medium term if there was resistance to the delivery of such development.  | identified         | impacts | identified         |      | impacts            |

SP5 - Greenheart

| SA                  | Nature of Impacts   |               | Impa    | acts         | over       | time         |           | Mitigation/Enhancement                                       |              | Res        | idual I      | mpa     | cts       |
|---------------------|---|---------------|---------|--------------|------------|--------------|-----------|--|--------------|------------|--------------|---------|-----------|
| Objective           | Nature of Impacts   | sh            | ort     | m            | ed         | lo           | ng        | Wittigation/ Enhancement                                     | sh           | ort        | me           | d (     | overall/  |
| 1 Biodiversity      | The policy compliments Core Policies that contribute to positive impacts on biodiversity. The strategic nature of the policy makes it different to the wildlife policy in that it supports a network of green space throughout the heart of the borough. The impacts on wildlife should be positive in this respect. However, Greenheart has a large human wellbeing focus, and activities such as recreation could have a negative impact on some habitats and species through increased pressure. The impact of Westwood may also be negative in terms of the flashes. The likelihood of negative impacts is uncertain  | · identified  | impacts | · identified | impacts    | ? identified | impacts   | None identified  | ? identified | impacts    | · identified |         | impacts   |
| 2 Air quality       | The impacts on air quality are likely to be minor. Encouraging access to the borough's open space for recreation could be positive in reducing journeys further afield. However, if the mode of choice is private transport, then increased trips to greenheart sites could also have a negative impact on air quality. We are uncertain about these impacts. However the policy does seek to strengthen links for walking and cycling, which should help. Development of Westwood and Bickershaw could have an impact on traffic levels too, but the development would be supported by infrastructure and green infrastructure enhancement would help to offset some of the issues with air pollutants | ?- identified | impacts | · identified | ·· impacts | · identified | · impacts | Limit car parking spaces at gateway sites to the greenheart. | ? identified | ·· impacts | · identified |         | · impacts |
| 3 Soil and minerals | Should have some positive impacts in terms of regeneration of derelict and despoiled land. Cumulatively the impacts would amount to a minor positive impact in the longer term.   | identified    | impacts | identified   | impacts    | identified   | impacts   | None identified  | identified   | impacts    | identified   | impacts | impacts   |

| 4 Water             | Support for wetlands is positive in terms of water quality. The policy also seeks to improve the use of water resources for recreation which supports aspects of the sustainability objective. There could be adverse impacts if resources were over used. The overall impact on water resources is uncertain. Whilst enhancement of resources such as ponds, canals and rivers might take place, increased pressure could also lead to more pollution incidents. If schemes were secured that helped to manage surface water runoff (such as reed beds) then the potential for positive impacts on flood risk and water quality is increased. It is more likely that the overall impacts will be positive. | identified   | impacts | · identified | impacts | · identified | impacts | Core Policies for Environmental Protection and Green Infrastructure should mitigate potential impacts on water resources from increased use/pressure.  | identified   | impacts | identified     | impacts | impacts            |
|---------------------|---|--------------|---------|--------------|---------|--------------|---------|--|--------------|---------|----------------|---------|--------------------|
| 5 Landscapes        | The policy should have a major positive impact on landscape quality throughout the Greenheart. This would be achieved through regeneration of degraded and derelict land, improved footpaths and other access, improving linkages between open space and high quality developments. The impacts would be stronger over time as various schemes came to fruition. Access to the borough's countryside would be greatly enhanced too. It is important to ensure that other important landscapes and open space in the borough does not get 'neglected' or devalued as a result of the focus on the Greenheart. This is an uncertain potential negative.   | · identified | impacts | · identified | impacts | · identified | impacts | None identified  | · identified | impacts | ··· identified | impacts | impacts identified |
| 6 Built environment | Some positive impacts in terms of enhancement of open space and derelict land. There could be positive impacts on heritage assets such as Haigh Hall for example. The built environment should benefit from an improvement in the character of urban fringes as the policy seeks to enhance access and linkages between our urban communities and the greenheart of the borough. It is unlikely that any historic assets will be affected adversely by the focus on Greenheart. In fact, there are more opportunities to restore heritage features such as disused railway lines and derelict countryside buildings.  | identified   | impacts | identified   | impacts | identified   | impacts | There are opportunities to develop high quality housing and economic development sites that link to greenheart, such as Westwood, Bickershaw and South of Hindley. These sites could be developed as environmental business parks and could attract higher profile companies and sectors to the borough. | identified   | impacts | identified     | impacts | impacts            |

|   | 7 Community safety | Access to opportunities for recreation could act - in a limited fashion - as a diversionary measure for potential criminal activity. Creating higher quality environments would also discourage misuse of open space and antisocial behaviour such as motorbike riding on derelict land. The impacts could become more positive in the longer term but there is uncertainty.                        | identified | impacts | identified | impacts     | identified | impacts | None identified  | identified | impacts | identified | impacts | impacts identified |
|---|--------------------|---|------------|---------|------------|-------------|------------|---------|--|------------|---------|------------|---------|--------------------|
| 0 | 풁                  | Greenheart provides an opportunity for improving and enhancing the amenity of some places and protecting the amenity of others locations. Some issues may arise from increased traffic attracted to the Greenheart locations, but in general it is likely to assist with enhancing communities. As it becomes more established as a concept and in localities, this is likely to improve over time. | identified | impacts | identified | impacts     | identified | impacts | None identified  | identified | impacts | identified | impacts | impacts            |
|   | 9 Waste            | There could be some potential to make use of biomass resources throughout the Greenheart area. However, this is not explicit in the policy, and may conflict with the objectives for recreation and wildlife.   | identified | impacts | identified | ··· impacts | identified | ?       | A coherent strategy for biomass supply chain development throughout<br>Greenheart would have positive impacts in terms of managing waste and<br>providing alternative fuels. It may also help where woodland<br>management is necessary. | identified | impacts | identified | impacts | impacts            |

| 10 Health     | Access to recreational opportunities has positive impacts on both physical and mental health and wellbeing. Impacts would be greater over time as projects were implemented and levels of physical activity increased.  |            | impacts | identified | impacts | identified |         | None identified | identified | impacts | identified | impacts identified |
|---------------|---|------------|---------|------------|---------|------------|---------|-----------------|------------|---------|------------|--------------------|
| 11 Recreation | Delivery of this policy will help to enhance areas that are difficult to access, or currently unsuitable or underused for formal recreation. In the long term there could be major positive impacts in terms of opportunities to access a range of recreational activities. The Greenheart caters for a range of groups and leisure pursuits. |            | impacts | identified | impacts | identified | impacts | None identified | identified | impacts | identified | impacts            |
| 12 Housing    | The policy aims to improve the image of the borough and the recreational offer to residents. This could have positive impacts on the attractiveness of housing that benefit from these resources.   | identified | impacts | identified | impacts | identified |         | None identified | identified | impacts | identified | impacts            |

| 13 Education and learning | Improved access and facilities throughout Greenheart provides opportunities for students to experience outdoor learning and recreation in a more organised environment. The area could become important regionally for practical courses dealing with conservation, recreation, agriculture etc Impacts are only minor to reflect the relatively small contribution that this makes to the overall objective for education and learning.   | identified | impacts | identified   | impacts | identified    | impacts | Develop a 'centre of excellence' for outdoor learning. For example in agricultural studies, conservation etc   | identified | impacts | identified   | impacts   | identified    | ? |
|---------------------------|--|------------|---------|--------------|---------|---------------|---------|--|------------|---------|--------------|-----------|---------------|---|
| 14 Community development  | The policy is positive in terms of building community capacity and providing quality locations for community activities. Indeed, communities may actually be involved in improvement schemes. The benefits for the deprived communities of the borough are quite strong, given that many are within short distances to the gateway sites of access. However not all communities are within close distance of the Greenheart by walking, cycling or public transport. Although these areas do have assets of their own, the focus on greenheart could exclude some groups from accessing the best quality locations for recreation. These impacts could be mitigated, but there is a degree of uncertainty. | identified | impacts | ? identified | impacts | ?. identified | impacts | Make sure the areas that are less able to benefit from greenheart due to access issues are not excluded when programmes of environmental improvements are planned. | identified | impacts | · identified | impacts   | ?. identified |   |
| 15 Energy                 | There are likely to be several opportunities for community scale schemes throughout the Greenheart region. Whilst it is necessary to avoid impacts on wildlife, it could act as a barrier to energy schemes. Impacts are uncertain and only minor because the policy does not ensure delivery of energy schemes.   | identified | impacts | ? identified | impacts | ? identified  | impacts | Some recreation and wildlife considerations may restrict development of energy schemes.  | identified | impacts | identified   | · impacts | identified    | ? |

| 16 Accessibility          | Increased visitors to the Greenheart from further afield may produce more car trips. However the policy does seek to strengthen links for walking and cycling, which has the opposite effect. Development of Westwood and Bickershaw could have an impact on traffic levels too, but the development would be supported by infrastructure.                                    | identified | impacts | · identified | impacts | · identified | impacts | Limit car parking spaces at gateway sites to the greenheart. | identified | i delimited | <u>///.                                  </u> | identified |
|---------------------------|---|------------|---------|--------------|---------|--------------|---------|--|------------|-------------|---|------------|
| 17 Sustainable economy    | There are opportunities to develop high quality housing and economic development sites that link to Greenheart, such as Westwood, Bickershaw and South of Hindley. These sites could be developed as environmental business parks and could attract higher profile companies and sectors to the borough. These opportunities are only likely to develop over the longer term. | identified | impacts | identified   | impacts | identified   | impacts | None identified  | impacts    | incontinue  | impacts                                       | impacts    |
| 18 Economy and employment | There are opportunities to develop high quality housing and economic development sites that link to Greenheart, such as Westwood, Bickershaw and South of Hindley. These sites could be developed as environmental business parks and could attract higher profile companies and sectors to the borough. These opportunities are only likely to develop over the longer term. | identified | impacts | identified   | impacts | identified   | impacts | None identified  | identified | i control   | impacts                                       | identified |