

Appendix I – Alternative options and proposals and individual locations within proposed broad locations

Relationship with Appendix E

Some locations were considered and subsequently included in the final broad locations. As such they have been put into Appendix E (Appraisals for Broad Locations). This appendix covers the remaining appraisals including the individual locations within the broad locations at Standish and Golborne and Lowton.

Background

The public examination of the Wigan Core Strategy was suspended in May 2012 due to concerns relating to the supply of land for housing. The Inspector identified a shortfall of some 2,500 dwellings. To address this shortfall, Wigan Council reappraised options for delivery of land for housing. As part of this process, we revisited our Sustainability Appraisal to update it and to include additional options. We did not start afresh with the Sustainability Appraisal as policies have not been reappraised - just locations for housing.

Statutory consultees were informed of the process and no representations were made. We continued to use the scoping opinions as outlined in our initial Scoping Report.

Sustainability Framework

The Sustainability Framework remained the same although adjustments were made to ensure elements are up to date and relevant, in particular to assist with future monitoring. This was to ensure better collection of information for monitoring purposes in the future. The objectives under consideration for appraisal did not change. The revised framework is available as Appendix J to the Final SA Report.

Required information and how this process affected it.

The Sustainability Appraisal continues to meet the requirements of a Strategic Environmental Assessment. We have outlined below where we have met these requirements following the consideration of a shortfall in housing land. For consistency and assistance, we have also outlined where this process of appraising locations for housing provision has had any affect.

The first two columns are reproduced from the Sustainability Appraisal Report. The final column sets out how the process of appraising locations for housing purposes affected this.

Information required in Environment Report	Where can this be found in the main SA?	How did this process affect this?
Outline the contents, main objectives of the plan or programmes, and relationship with other relevant plans and programmes	Summarised in section 3 of the full SA. Full details can be found in Appendix A of the Scoping Report. This provides a review of key documents.	No material affect
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Baseline data and trends are included in each of the topic papers that support the Scoping Report. Appendix F also includes a consideration of the likely evolution without the Core Strategy.	No material affect
The environmental characteristics of areas likely to be significantly affected	Further detail about environmental characteristics can be found in each topic paper, for example, Topic Paper 13 'Natural resources and pollution' outlines areas at risk from flooding.	Further information provided in relation to locations appraised
Any existing environmental problems which are relevant to the plan or programme	The key sustainability issues are summarised in the Scoping Report. Environmental 'constraints' are also summarised in each of the topic papers, for example, Topic Paper 10 'Biodiversity & Nature Conservation' maps the borough's conservation sites and outlines key sustainability issues relating to biodiversity.	Considered where relevant for each of the locations appraised
The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation	Appendix A of the scoping report contains a thorough review of the key policy context. Economic, environmental and social objectives have been drawn from this evidence and have informed both the sustainability appraisal framework and plan preparation process	No affect

The likely significant effects on the environment	Broad options appraisal (section 7) and policy appraisals (section 8). Includes cumulative impacts. See appendices C,D & E to this report for fully completed appraisal tables	Additional appendix extends this for appraised locations for housing
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme	Considered as part of policy appraisal (section 8). See appendices C, D and E for fully completed appraisal tables, which include mitigation measures.	Considered where relevant for each of the locations appraised
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties encountered in compiling the required information	Reasoning behind the inclusion of the broad spatial and thematic options can be found in section 7. Reasons for selecting the preferred policy options are in section 8.	No material affect
A description of the measures envisaged concerning monitoring	Section 10. Topic papers contain baseline indicators. Also see our annual monitoring for contextual indicators that overlap with sustainability issues.	No material affect
A non-technical summary of the information provided under the above headings	This is available as a separate document. It can be downloaded from the council's website at: www.wigan.gov.uk/ldfcorestrategy	No material affect

Conclusion on appraisal of locations for housing

Appraising locations for housing does not materially or fundamentally affect the Sustainability Appraisal and should be treated as an addendum to the initial appraisal. The requirements of a Strategic Environmental Assessment continue to be met.

The Sustainability Appraisal is not intended to be the decisive factor in taking forward a location for development. It is intended to highlight risks and opportunities as well as indicate potential mitigation and enhancement.

The authority will reserve its right to consider Environmental Impact Assessments (EIA) for development in keeping with the Directive and Regulations. Findings as part of the SA/SEA do not negate this.

Appraisal of locations for housing development

Sustainability Appraisal – North of Rectory Lane, Standish

Key negative impacts are identified for soil and minerals (due to the majority of the site being greenfield and some parts being best and most versatile agricultural land), and landscapes as the character will be detrimentally affected by development. There is a key negative impact for community as it is unlikely to help address the inequality gap in tackling deprivation. Other negative impacts will be seen in biodiversity (designated sites and species issues), congestion issues, neighbourhood quality as a result of the effects on amenity, and waste. Key positive impacts are identified in housing as the site is attractive for such development but also in recreation and health as development would help sustain improvements.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Barrowcroft Wood Site of Biological Importance within the site is identified as Ancient Woodland. There is also a number of Tree Preservation Orders within the site.	xx	Avoid direct impact to SBI/Ancient Woodland/TPO. Need to consider buffer zones. Still likely to have negative impact overall.	x
	b) Species	Great crested newts have been recorded as present and there are records for a range of species including water vole and bats on/in close proximity to the site. Detailed surveys are required including of birds and hedgerows.	xx	Species mitigation will be required. Habitats supporting protected or priority species should be retained in situ.	x
2. Air quality	a) Air quality assessment	Access to site likely to be by private vehicle as public transport links are poor. Air quality could be affected in Standish town centre and along routes towards the M6 and M61 motorways and towards Wigan town centre.	x	Retaining tree cover and improving sustainable travel access and promotion would assist here.	0/x
	b) Potential for proposed infrastructure to mitigate or enhance	Infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield except for Site of Biological Importance which is brownfield.	xx	Retain existing tree cover within the development and enhance as appropriate	xx
	b) Impact on 'agricultural' land	Slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands.	xx?	Top soil could be conserved and put to alternative use on/off site.	xx?

		<p>Rough grassland to the west and south, woodland in the centre and pasture to the east. Drainage is impeded with moderate fertility.</p> <p>Parts of the site are classified as grade 3a (best and most versatile). Development of the site would likely lead to the loss of this land. Other parts are grade 3b with the remainder being classified as land primarily in non-agricultural use.</p>			
4. Water	a) Flood risk	The site is within flood zone 1 with parts of the site identified as being vulnerable to surface water flooding (5%) but these are dispersed across small areas.	0	Areas vulnerable to flooding can be designated as public open space/water compatible uses only. Surface water runoff can be maintained through mitigation to maintain runoff rates.	0
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Part of the Rectory Farm/Bradley Brook Spur where the agricultural character comprises large-scale arable fields and large blocks of deciduous woodland. The main sensitivity is their exposure to views, particularly from the urban areas of Wigan. Any development here would lead to a loss or reduction in the quality of this attribute.	xxx	Mitigation measures would be necessary to soften any impacts. Woodland management and conservation should be encouraged. Character is likely to change for the worse overall.	xx
6. Built environment	Historic designations	There is one known heritage asset at Rectory Farmhouse – Grade II Listed, immediately north of Rectory Lane.	x	The impact of development could be positive, provided clear guidelines that respect the setting of, and the impact on, the heritage asset are incorporated into scheme proposals.	0

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre - Close to Standish town centre but this does not have significant crime rates. Cross Border Offending - Access for cross boundary offences is not expected to be a particular problem. Major Traffic Routes - Rectory Lane (B5239) is an important local route accessing the A49 Preston to Wigan route and is close to the M6 Junction 27. Vulnerable Localities Index - Unlikely to be affected by crime associated with deprived areas as surrounding areas are fairly affluent	0	Development would clearly have to consider access issues and security	0
8. Neighbourhood quality	a) Amenity considerations	Standish is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a slight increase in congestion therefore impacting on the amenity of surrounding communities. Residential development would not be considered likely to have significant impact on amenity. However, those local residents who value the openness of the site as it is at present may perceive the loss of openness itself as a negative amenity impact.	xx	Sustainable design principles should be incorporated into scheme proposals. Engaging in public participation at an early stage in the development of scheme proposals could help to mitigate adverse impacts that might otherwise arise.	x
	b) Environmental gain	The natural environment could be less attractive as a result of development. Built development may result in a negative perception in terms of its impact on environmental quality	x	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach should help to manage impacts arising from development.	0/x
9. Waste	Comments	Housing development will inevitably lead to increased waste production	x	Requiring site waste management plans on new development sites will have a marginal positive impact	x

10. Health	Comments	Approximately 1,400 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to an NHS dentist currently accepting new patients is very poor. Access to fresh food within walking distance is poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas is low as access is directly from the B5239 to the south and existing incidences of poor health in the locality are few.	✓	Potential for investment in doctor and dental services. Potential for additional local shopping centre or improved links to Standish. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	✓✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	Part of site used some time ago as the driving range of a formal Golf Course on Rectory Lane South site but this is no longer in use. Large area of semi-natural greenspace and existing woodland through centre of site. No footpaths or other designations. Within the 3.2km catchment of a principal park (Haigh Country Park) and the 1.2km catchment of a township park (Ashfield Park).	✓	Potential for woodland and some semi-natural greenspace to be retained. A well designed development has the potential to contribute positively to the open space provision in this area. Haigh Country Park and Ashfield Park could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✓✓✓
12. Housing	Contribution to housing delivery targets	Assuming a density of just below 30 dwellings per hectare on a developable area of 17.89 hectares, the broad site option could potentially contribute over 500 dwellings towards meeting the borough's housing requirement.	✓✓✓	Envisage potential for mix of housing types, including smaller and family homes.	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations the broad site option has the potential to deliver around 134 affordable units as part of the overall housing development. Strong housing market in this part of the borough and anticipated high development values are positive factors in	✓✓✓	Affordability problems are high in this location compared to the borough as a whole. Therefore, the delivery of affordable housing is a very important objective in this location.	✓✓✓

		<p>terms of the prospects for affordable housing delivery.</p> <p>A Site of Biological Importance will act as an amenity buffer between new housing and the Bradley Lane Primary Employment Area to the north. West Coast Main Line Railway and Green Belt to the east will physically constrain further development.</p>			
13. Education	Education facilities / capacity	The development is likely to yield around 110 primary and 81 secondary school pupils. The development will require the provision of around 25 additional primary places. There is sufficient capacity in local secondary schools.	×	The modification and/or extension of existing primary schools could address capacity issues	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Very low or low levels of deprivation in the adjoining areas but moderate in one area. Very low or low levels in the surrounding areas.	×××	Even with provision of some affordable homes, there is little to no potential for contribution to measures to improve the outcomes of the residents in areas of deprivation.	×××
15. Energy	a) Capacity	Gas supply in local area including a medium pressure main but no capacity issues Electricity: Spare Capacity not available as at 2011/12. Approved schemes to increase capacity	×	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Reliant on infrastructure investment	0/×
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power may be feasible but not in area of dwellings (6.1 m/s at 35m)			
16. Accessibility	a) Sustainable transport accessibility	2 bus services on B5239 (at least 1 / hr), 2 bus services on A5106 (at least 1 / hr). Nearest station(s) Appley Bridge 4.3km 2 direct bus services & Gathurst 4.3km 4 direct bus services.	0	<p>New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations.</p> <p>New bus service and promotion of existing bus services likely to encourage increase in patronage.</p>	0/✓

	b) Existing peak time congestion	Junctions approaching or over capacity: AM Peak – A49/A5209/B5239; A5209/Green Lane. PM Peak - A49/A5209/B5239; A5209/Green Lane Average speeds < 10mph: PM Peak – A5209 Eastbound (Beech Walk to Standish Crossroads); B5239 (St. Wilfrid's Road to Standish crossroads)	×	Despite sustainable transport improvements / promotion, an increase in the number of peak time car borne trips will occur.	×
	Improvements / mitigation suggestions	Promotion of current bus services would most likely need to be supplemented by provision of new services. Very limited potential to link to rail services. New walking and cycling links would assist the development – especially to key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Located within one of the borough's most affluent areas, development here would not reduce inequalities in the borough.			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – South of Rectory Lane, Standish

Housing development would have key negative impacts on soils and minerals and landscapes as the site is greenfield and would be subject to an inescapable affect on its open character. There is also a key negative impact for community as it is unlikely to help address the inequality gap in tackling deprivation; recreation would be adversely affected due to the current informal use and congestion would remain a key negative impact even after mitigation measures. Other negative impacts are biodiversity (both designated sites and species) and neighbourhood amenity. Key positive impacts centre on housing whilst other positive affects will be seen from support for health improvements.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Fairhurst Lane Site of Biological Importance is within the site and there are a number of Tree Preservation Orders across the site	xx	Avoid direct impact to the Site of Biological Importance and Tree Preservation Order. Need to consider buffer zones. Still likely to have negative impact overall.	x
	b) Species	There are records for a range of species including water vole and bats on/in close proximity. Detailed surveys required including of birds and hedgerows.	x	Species mitigation will be required. Habitats supporting protected or priority species should be retained in situ.	x
2. Air quality	a) Air quality assessment	Access likely to be private vehicle as public transport links are poor. Air quality could be affected in Standish town centre and routes towards the M6 and M61 motorways and towards Wigan town centre.	x	Retaining tree cover and improving sustainable travel access and promotion would assist here.	0/x
	b) Potential for proposed infrastructure to mitigate or enhance	Infrastructure investment at the site would have some impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is majority greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	xxx	Retain existing tree cover and some open space within the development and enhance as appropriate.	xxx
	b) Impact on 'agricultural' land	Slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland and recreation area. Drainage is impeded with moderate fertility.	x	Top soil could be conserved and put to alternative use on/off site.	x

		Majority of the site is grade 3b. The remainder being land primarily in non agricultural use.			
4. Water	a) Flood risk	The site is within flood zone 1. However, 6% of the site is identified as being of intermediate / high vulnerability to surface water flooding but this is very sporadic across the site.	0	Areas vulnerable to flooding can be designated as public open space/water compatible uses only. Surface water runoff can be maintained through mitigation. Run off into watercourses can also be controlled in terms of quality.	0
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible	0
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Part of the Rectory Farm/Bradley Brook Spur comprising a former golf course and a mixture of agricultural and recreational uses with a number of woodland blocks. The main sensitivity is their exposure to views, particularly from the urban areas of Wigan. Any development here would lead to a loss or reduction in the quality of this attribute.	xxx	Mitigation measures would be necessary to soften any impacts. Woodland management and conservation should be encouraged. Character is likely to change for the worse overall.	xx
6. Built environment	Historic designations	There are no known historic designations. However, 'The Owls at Standish' restaurant, to the south of Rectory Lane, is a building of local interest.	0/x	Development need not present negative impact provided development schemes incorporate clear design guidelines that respect the setting of the heritage asset.	0

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre -Close to Standish town centre but this does not have significant crime rates. Cross Border Offending - Access for cross boundary offences is not expected to be a particular problem. Major Traffic Routes - Rectory Lane (B5239) is an important local route accessing the A49 Preston to Wigan route and is close to the M6 Junction 27. Vulnerable Localities Index - Unlikely to be affected by crime associated with deprived areas as surrounding areas are fairly affluent	0	Development would clearly have to consider access issues and security	0
8. Neighbourhood quality	a) Amenity considerations	Standish is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a notable increase in congestion therefore impacting further on the amenity of surrounding communities. Residential development would not be considered likely to have significant impact on amenity. However, those local residents who value the openness of the site as it is at present may perceive the loss of openness itself as a negative amenity impact.	xx	Sustainable design principles should be incorporated into scheme proposals. Engaging in public participation at an early stage in the development of scheme proposals could help to mitigate adverse impacts that might otherwise arise.	x
	b) Environmental gain	The former golf course and club house is currently in a state of neglect. The remainder of the site is of good environmental quality. The natural environment could be less attractive as a result of development. Built development may result in a negative perception in terms of its impact on environmental quality	0/x	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach should help to manage impacts arising from development.	0/x
9. Waste	Comments	Housing development will inevitably lead to increased waste production	x	Requiring site waste management plans on new development sites will have marginal positive impact	x

10. Health	Comments	Approximately 4,600 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to an NHS dentist currently accepting new patients is very poor. South east corner of site is adjacent to Greenheart. Access to fresh food within walking distance is poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be low as access to the location is directly from the B5239 to north or from the A49 via existing estates where existing incidences of poor health are few.	×	Potential for investment in doctor and dental services. Potential for additional local shopping centre or improved links to Standish. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	Several footpaths through the site. Part of site used as former Golf Course. The south east corner of site is adjacent to Greenheart. The majority (more than 80%) of the site is covered by open space including semi-natural greenspace, woodland, and outdoor sports facilities although the golf club has ceased trading. Two Public Rights of Way and one separate bridleway cross the site, including a traffic free cycle route with a rough surface. The site is within the 3.2km catchment of a principal park (Haigh Country Park) and the 1.2km catchment of a township park (Ashfield Park).	×	Potential for some of the semi-natural greenspace, plus woodland, water and outdoor sports facilities to be retained. Private golf club currently ceased trading. Informal use of site would be lost. Haigh Country Park and Ashfield Park could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	×
12. Housing	Contribution to housing delivery targets	Assuming a density of just below 30 dwellings per hectare on a developable area of 49.28 hectares, the broad site option could potentially contribute approximately 1,400 dwellings towards meeting the borough's housing requirement.	✓✓✓	Envisage potential for mix of housing types, including smaller and family homes. Greenfield. The location would make a significant contribution towards meeting the borough's longer term housing needs.	✓✓✓

	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations the broad site option has the potential to deliver around 370 affordable units as part of the overall housing development.</p> <p>Strong housing market in this part of the borough and anticipated high development values are positive factors in terms of the prospects for affordable housing delivery.</p> <p>Like for like development costs would be anticipated to be lower than for brownfield.</p>	✓✓✓	<p>The broad site option straddles two Wards. The majority is in the Standish with Langtree Ward where affordability problems are high compared to the borough as a whole. A smaller portion is in the Aspull New Springs Whelley Ward where affordability problems are moderate to high compared to the borough as a whole.</p> <p>Therefore, the delivery of affordable housing is considered a very important objective in this location.</p> <p>Opportunities for improvement/enhancement of services and infrastructure to support additional housing in this location.</p>	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 310 primary and 220 secondary school pupils. The development will require the provision of a new 1 form entry primary school or equivalent. There is sufficient capacity at local secondary schools.	✗✗	The provision of a new 1-form entry primary school could address capacity issues	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Very low or low levels of deprivation in the adjoining areas but moderate in one area. Very low or low levels in the surrounding areas.	✗✗✗	Even with provision of affordable homes, there is little to no potential for contribution to measures to improve the outcomes of the residents in areas of deprivation and little impact on the economy in areas of deprivation.	✗✗✗

15. Energy	a) Capacity	Gas supply in local area including medium pressure main but no capacity issues. Electricity: Spare Capacity not available as at 2011/12. Approved schemes to increase capacity	×	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Reliant on infrastructure investment.	0/×
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power may be feasible but not in area of dwellings (6.2m/s at 35m)			
16. Accessibility	a) Sustainable transport accessibility	2 bus services on B5239 (at least 1 per hour), 4 bus services on A5106 (at least 1 per hour). Nearest station(s) Appley Bridge 4.3km 2 direct bus services & Gathurst 4.3km 4 direct bus services. 4 footpaths cross the site. Traffic free cycle route crosses east–west through the site.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. New bus service and promotion of existing rail services likely to encourage increase in patronage.	0/✓
	b) Existing peak time congestion	Junctions approaching or over capacity: AM Peak – A49/A5209/B5239; A5209/Green Lane; A49/A5106; B5239/Canal at Red Rock. PM Peak – A49/A5209/B5239; A5209/Green Lane; A49/A5106; B5239/Canal at Red Rock. Average speeds < 10mph: PM Peak – A5209 Eastbound (Beech Walk to Standish Crossroads); B5239 (St. Wilfrid’s Rd to Standish Crossroads)	×	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	×
	Improvements / mitigation suggestions	Promotion of current bus services would most likely need to be supplemented by provision of new services. Very limited potential to link to rail services. New walking and cycling links would assist the development – especially to key local destinations.			
17. Sustainable economy	a) ‘Appropriate’ employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Located within one of the borough’s most affluent areas, development here would not reduce inequalities in the borough.			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – Rectory Lane Combined, Standish

The absence of any impact on addressing the inequality gap means that there is a key negative impact on community. Similarly, key negative impacts are identified due to adverse impacts on landscapes, where character will be detrimentally affected; congestion in the area despite mitigation; and soils the loss of which would be difficult to mitigate. Other negatives are the loss of agricultural land, biodiversity issues in relation to sites of biological importance and particular species, the loss of amenity and an overall adverse impact on recreation, although this can be mitigated to an extent especially supporting areas off site. Key positives are clearly seen around housing provision and the attractiveness of the location to deliver as well as other positive impacts due to supporting health outcomes and provision of sustainable travel infrastructure.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Barrowcroft Wood and Fairhurst Lane Sites of Biological Importance are within the site. There are 25 Tree Preservation Orders within the site, in the north, the west and along the south western boundary. Barrowcroft Wood is identified as Ancient Woodland; this is a UK priority biodiversity habitat.	xx	Mitigation measures could help protect habitats somewhat, but there would still be a negative impact overall. Mitigation should be developed in conjunction with the specific development design.	x
	b) Species	Great crested newts have been recorded and there are records for a range of species including water vole and bats on/in close proximity. Detailed surveys required including of birds and hedgerows.	xx	Species mitigation will be required. Habitats supporting protected or priority species should be retained in situ.	x
2. Air quality	a) Air quality assessment	Access to site likely to be by private vehicle as public transport links are poor. Air quality could be affected in Standish town centre and routes towards the M6 and M61 motorways and towards Wigan town centre.	x	Retaining tree cover and improving sustainable travel access and promotion would assist here.	0/x
	b) Potential for proposed infrastructure to mitigate or enhance	There is potential for Infrastructure investment at the location to have an impact on air quality issues, as size allows a network-wide approach.			0/✓
3. Soil and minerals	a) Brownfield / greenfield proportion	Site majority greenfield. Impact would be permanent loss of greenfield, difficult to mitigate.	xxx	Retain existing tree cover and some open space within the development and enhance as appropriate.	xxx?

	b) Impact on 'agricultural' land	<p>Slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland and recreation areas. Drainage is impeded with moderate fertility.</p> <p>Large parts of site classified as 3b, although some of this is now a currently disused golf course. Parts of the site to the north are classified as grade 3a (best and most versatile). Development of the site would likely lead to the loss of this land.</p>	×	Top soil could be conserved and put to alternative use on/off site.	×
4. Water	a) Flood risk	The site is within flood zone 1. However, 6% of the site is identified as being of intermediate / high vulnerability to surface water flooding but this is very sporadic across the site.	0	Areas vulnerable to flooding can be designated as public open space/water compatible uses only. Surface water runoff can be maintained through mitigation. Run off into watercourses can also be controlled in terms of quality.	0?
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			

5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Elevated enclosed farmland. A spur of high land, characterised by a broken, intricate topography. Views are channelled to the south and south east towards the urban areas of Wigan. The main sensitivity is their exposure to views, particularly from the urban areas of Wigan. Largely agricultural character, both softening and contrasting with the adjoining heavily developed areas. Any development here would lead to a loss or reduction in the quality of this attribute. Loss of hedgerows would also have negative impacts. Views from surrounding area are both external and internal and from several viewpoints.	xxx	Mitigation measures will be necessary to soften the impacts, and for some features could lead to an improvement. However, character is likely to change for the worse overall.	xx
6. Built environment	Historic designations	There is one known heritage asset at Rectory Farmhouse – Grade II Listed, immediately north of Rectory Lane. 'The Owls at Standish' restaurant, to the south of Rectory Lane, is a potential building of local interest.	0/x	There is the potential for the setting of identified heritage assets to be maintained and/or enhanced, provided sustainable design principles are incorporated into scheme proposals.	0/✓
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre - Close to Standish town centre but this does not have significant crime rates. Cross Border Offending - Access for cross boundary offences is not expected to be a particular problem. Major Traffic Routes - Rectory Lane (B5239) is an important local route accessing the A49 Preston to Wigan route and is close to the M6 Junction 27. Vulnerable Localities Index - Unlikely to be affected by crime associated with deprived areas as surrounding areas are fairly affluent.	0	Development would clearly have to consider access issues and security	0

8. Neighbourhood quality	a) Amenity considerations	Standish is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a notable increase in congestion therefore impacting further on the amenity of surrounding communities. Residential development would not be considered likely to have significant impact on amenity. However, those local residents who value the openness of the site as it is at present may perceive the loss of openness itself as a negative amenity impact.	xx	Sustainable design principles should be incorporated into scheme proposals. Engaging in public participation at an early stage in the development of scheme proposals could help to mitigate adverse impacts that might otherwise arise.	x
	b) Environmental gain	The former golf course and club house is currently in a state of neglect. The remainder of the site is of good environmental quality. The natural environment could be less attractive as a result of built development. Built development would be likely to be perceived negatively in terms of its impact on environmental quality.	0/x	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach should help to manage impacts arising from development.	0
9. Waste	Comments	Housing development will inevitably lead to increased waste production	x	Requiring site waste management plans on new development sites will have marginal positive impact	x

10. Health	Comments	Approximately 6,000 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is very poor. Access to fresh food within walking distance is poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be low as access is through areas of moderate density to the west, several points of access are possible from the A49 and B5239 and existing incidences of poor health in the locality are few.	✗	Potential for investment in doctor and dental services. Potential for additional local shopping centre or improved links to Standish. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to the site.	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	Several footpaths through the site. Part of site was used as a private golf course but this has ceased trading. The area to the north of Rectory Lane could be more suitable for development than the southern area due to the absence of open space designations and current lack of public access. The location is within the 3.2km catchment of a principal park (Haigh Country Park) and the 1.2km catchment of a township park (Ashfield Park).	✗	Potential for much of the open space to be retained but the former golf course would likely be lost. Haigh Country Park and Ashfield Park could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✗
12. Housing	Contribution to housing delivery targets	Assuming a density of just below 30 dwellings per hectare on a developable area of 67.17 hectares, the broad site option could potentially contribute approximately 1,900 dwellings towards meeting the borough's housing requirement. Concentration of development here would place increased demands on existing services and infrastructure.	✓✓✓	Envisage potential for mix of housing types, including smaller and family homes. Greenfield. The cumulative location would make a major contribution towards meeting the borough's longer term housing needs.	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations the broad site option has the potential to deliver over 500 affordable homes as part of the overall	✓✓✓	Affordability problems in this cumulative location are high compared to the borough as a whole.	✓✓✓

		<p>development.</p> <p>An historically strong housing market in this part of the borough and anticipated high development values are positive factors in terms of the prospects for affordable housing delivery.</p> <p>Like for like development costs anticipated to be lower than for brownfield sites.</p> <p>Proximity to M6 motorway Junction 27, Bradley Lane Primary Employment Area and existing services in Standish town centre.</p>		<p>Therefore, the delivery of affordable housing is a very important objective in this location.</p> <p>Opportunities for improvement/enhancement of services and infrastructure to support additional housing in this location.</p> <p>Higher development values likely to support opportunities for low carbon technologies and higher standards of sustainability in design.</p>	
13. Education	Education facilities / capacity	The development is likely to yield around 420 primary and 300 secondary school pupils. The development will require the provision of two 1-form entry primary schools or equivalent and an additional 50 secondary places.	xx	The provision of 2 new 1-form entry primary schools and the modification and/or extension of existing secondary schools could address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Very low levels of deprivation in the majority of surrounding areas. Housing development is unlikely to benefit deprived communities at all.	xxx	Even with provision of affordable homes, there is little to no potential for contribution to measures to improve the outcomes of the residents in areas of deprivation and little impact on the economy of areas of deprivation.	xxx
15. Energy	a) Capacity	Gas supply in local area including medium pressure main but no capacity issues Electricity: Spare Capacity not available as at 2011/12. Approved schemes to increase capacity	x	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Reliant on infrastructure investment	0/x
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power may be feasible but not in area of dwellings (6.1+m/s at 35m)			

16. Accessibility	a) Sustainable transport accessibility	2 bus services on B5239 (at least 1 per hour), 4 bus services on A5106 (at least 1 per hour). Nearest station(s) Appley Bridge 4.3km 2 direct bus services & Gathurst 4.3km 4 direct bus services. 5 footpaths cross the sites. Traffic free cycle route cross east-west through the south site.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. New bus service and promotion of existing bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	Junctions approaching or over capacity: AM Peak – A49/A5209/B5239; A5209/Green Lane; A49/A5106; B5239/Red Rock Canal Bridge. PM Peak – A49/A5209/B5239; A5209/Green Lane; A49/A5106; B5239/Red Rock Canal Bridge. Average speeds < 10mph: PM Peak – A5209 Eastbound (Beech Walk to Standish Crossroads); B5239 (St. Wilfrid's Rd to Standish Crossroads)	xxx	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	xxx
	Improvements / mitigation suggestions	New bus service to be provided, promotion of existing bus and Gathurst & Appley Bridge stations services. Existing walking and cycling routes to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Located within one of the borough's most affluent areas, development here would not reduce inequalities in the borough.			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – Almond Brook, Standish

The key negative impacts identified are for community (potential to address the inequality gap) as housing development here will probably not contribute to that, although some affordable housing provision may help a little; soil and minerals due to the site being designated as greenfield; landscapes due to unavoidable changes on character of the area and accessibility as existing congestion issues are exacerbated. Other negative impacts include the impact on agricultural land, biodiversity (with regards to site of biological importance and species in the locality), neighbourhood quality where current amenity and environmental gain would be adversely affected; and waste. Key positives are that the site is very attractive for housing and could also help enhance recreation provision in the area as well as health outcomes. Other positive outcomes are likely for sustainable travel provision and support.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Site of Biological Importance (Ponds at Robin Hill Farm West) is within the site to the north west. Another Site of Biological Importance is immediately adjacent to the south eastern edge of the site.	xx	With mitigation, enhancement or compensation, impacts may be reduced, although some element of disturbance would likely remain. Mitigation should be developed in conjunction with the specific development design.	x
	b) Species	Detailed site survey required. Great crested newts are recorded within the ponds at the Sites of Biological Importance. A variety of species including a number of priority birds and bats are recorded near the site.	xx	With mitigation, enhancement or compensation, impacts may be reduced, although some element of disturbance would likely remain. Mitigation should be developed in conjunction with the specific development design.	x
2. Air quality	a) Air quality assessment	Access from motorway through Shevington Moor. Likely to worsen air quality along major routes in this area only. Good access to east of site via public transport but poor access elsewhere, so likely to involve increased car travel.	x	Incorporating tree cover along the major routes into the Borough and within the development will help offset decrease in air quality as a result of increasing use of private vehicle. Improved public transport, walking and cycling access and promotion between this location and Standish	0/x

				and Wigan town centres may help.	
	b) Potential for proposed infrastructure to mitigate or enhance	Infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is majority greenfield. Impact would be permanent loss of greenfield, not possible to mitigate.	xxx	Retain existing, footpaths and tracks and associated hedgerows and trees.	xxx
	b) Impact on 'agricultural' land	Seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland. Drainage is impeded with moderate fertility. The majority of land is classified as grade 3b whilst other parts of the site are not in agricultural use.	x?	Top soil could be conserved and put to alternative use on/off site.	x?
4. Water	a) Flood risk	Site and surrounding areas are in flood zone 1. However, 15% of the site is identified as being of intermediate / high vulnerability to surface water flooding.	x	Areas vulnerable to flooding can be designated as public open space/water compatible uses only. Surface water runoff can be maintained through mitigation.	0/?
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0

	Other comments	There is a culvert on site and the Environment Agency – in line with the Water Framework Directive – would likely want to see this opened up. Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Elevated enclosed farmland. The surrounding landscape forms a spur of high land, characterised by a relict parkland landscape. The main sensitivity is their exposure to views, particularly from the urban areas of Wigan. Although this site is less sensitive as it is surrounded by development, it does help to soften and contrast with the surrounding developed areas of Standish and Shevington Moor. Any development here would lead to a loss or reduction in the quality of this attribute, although other examples are present in the vicinity.	xx	Mitigation measures may soften the impact, but there are still likely to be unavoidable changes to the character of the area.	xx
6. Built environment	Historic designations	There are no known historic designations. However, buildings at Robin Hill Farm East & Robin Hill Farm West are of local interest.	0/x	Development proposals should respect the setting of buildings of local interest. Scheme proposals should incorporate archaeological desk top surveys in order to identify further potential historic remains.	0
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Close to Standish town centre but this does not have significant crime rates. Cross Border Offending – Access for cross boundary offences is not expected to be a particular problem. Major Traffic Routes – Almond Brook Road (A5209) is main access to M6 Junction 27. Vulnerable Localities Index – Unlikely to be affected by crime associated with deprived areas as surrounding areas are fairly affluent.	0	Development would clearly have to consider access issues and security	0

8. Neighbourhood quality	a) Amenity considerations	<p>Standish is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a notable increase in congestion therefore impacting further on the amenity of surrounding communities.</p> <p>Housing development is not considered likely to have significant adverse impact on existing levels of amenity. However, local residents who value the openness of the site as it is at present may perceive the loss of openness itself as an adverse amenity impact.</p>	<p>✗✗</p>	<p>Mitigation could be achieved by incorporating sustainable transport alternatives into the design and layout of scheme proposals.</p> <p>Sustainable design principles should be incorporated into scheme proposals. Engaging in public participation at an early stage in the development of scheme proposals could help to mitigate adverse impacts that might otherwise arise.</p>	✗
	b) Environmental gain	<p>The site is not in need of improvement. The natural environment could be less attractive as a result of built development. Built development would likely to be perceived as having a negative impact on environmental quality.</p>	✗	<p>Mitigation could be achieved by incorporating existing natural and new environmental features in the design and layout of scheme proposals. The approach should help to manage impacts arising from development.</p>	✗
9. Waste	Comments	Housing development will inevitably lead to increased waste production	✗	Requiring site waste management plans on new development sites will have a marginal positive impact	✗

10. Health	Comments	<p>Approximately 2,800 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is very poor. Access to fresh food within walking distance is good. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be low as access is through areas of low density surrounding the site, several points of access are possible from the A49 and the A5209 and existing incidences of poor health are few in the locality.</p>	0	Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to the site.	✓✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	<p>Existing playing fields associated with school. These would need to be safeguarded to ensure there are no negative impacts. Also public footpaths, a bridleway and traffic free cycle route run through the site, which are used for informal recreation and if these were lost, there could be a minor negative impact associated with development. Conversely, development presents opportunities to enhance provision of open space and sports facilities.</p> <p>There is an area of semi-natural greenspace including a water feature in the centre of the site and another area adjacent. There is also an area of amenity greenspace adjacent.</p> <p>Outside the catchment area for all categories of park.</p>	✗	Potential for amenity greenspace, woodland and some semi-natural greenspace to be retained and Rights of Way and outdoor sports facility to be retained and improved or relocated as a condition of development. A well designed development has the potential to contribute positively to the open space provision in this area. Potential to address gap in park provision. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✓✓
12. Housing	Contribution to housing delivery targets	Assuming a density of just below 30 dwellings per hectare on a developable area of 35.55 hectares, the broad site option could potentially contribute over 1,000 dwellings towards meeting the borough's housing requirement.	✓✓✓	Envisage potential for mix of housing types and tenures, including smaller and family homes.	✓✓✓

	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations the broad site option has the potential to deliver around 260 affordable units as part of the overall housing development.</p> <p>Strong housing market in this part of the borough and anticipated high development values should help the prospects for delivery of affordable housing.</p> <p>Development here would create an enclosed urban form and would involve the “infilling” of existing development located on the A49 Preston Road, Pepper Lane, Old Pepper Lane, and the A5209 Almond Brook Road. Broad site option also adjacent to Junction 27 of the M6 motorway.</p> <p>Primary Employment Area at Bradley Lane Industrial Estate is 1.1km away.</p>	✓✓✓	<p>The broad site option straddles two Wards where affordability problems range from high to very high compared to the borough as a whole. The majority of the broad site option is within the Standish with Langtree Ward (high affordability problem) while a small portion is within the Shevington with Lower Ground Ward (very high affordability problem).</p> <p>Therefore, the delivery of affordable housing is considered a very important objective in this location.</p>	✓✓✓
13. Education	Education facilities / capacity	<p>The development is likely to yield around 225 primary and 160 secondary school pupils. The development will require the provision of around 135 additional primary places. There is sufficient capacity in local secondary schools.</p>	××	<p>The provision of a new 1-form entry primary school or the modification and/or extension of existing primary schools could address capacity issues</p>	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	<p>Low levels of deprivation in surrounding areas. Areas of the borough in greatest need less likely to benefit from development here. Low or very low levels of deprivation in the adjoining areas and very low levels in the surrounding areas but moderate in one area.</p>	×××	<p>Even with provision of some affordable homes, there is little to no potential for contribution to measures to improve the outcomes of the residents in areas of deprivation.</p>	×××
15. Energy	a) Capacity	<p>Gas supply in local area including medium pressure main but no capacity issues Electricity: Spare Capacity not available as at 2011/12. Approved schemes to increase capacity</p>	×	<p>Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Reliant on infrastructure investment</p>	0/×

	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (6.3m/s at 45m)			
16. Accessibility	a) Sustainable transport accessibility	5 bus services on A49 (every 10-20 mins), 4 bus services on A5209 (at least 1 / hr), 3 bus services on Pepper Lane (at least 1/hr). Nearest station(s) Appley Bridge 2.5km 2 direct bus services & Gathurst 3.3km 4 direct bus services. 3 footpaths cross the site. Traffic free cycle route north – south through the site.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. New bus service and promotion of existing public transport services likely to encourage some increase in patronage	✓
	b) Existing peak time congestion	Junctions approaching or over capacity: AM Peak – A49/A5209/B5239; A5209/Green Lane. A49/Pepper Lane. PM Peak - A49/A5209/B5239; A5209/Green Lane; A49/Pepper Lane. Average speeds < 10mph: PM Peak – A5209 Eastbound (Beech Walk to Standish Crossroads); B5239 (St. Wilfrid's Rd to Standish Crossroads).	✗✗	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	✗✗
	Improvements / mitigation suggestions	Promotion of current bus services would most likely need to be supplement by provision of new services. Limited potential to link effectively to rail services. New walking and cycling links would assist the development – especially to key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Located within one of the borough's most affluent areas, development here would not reduce inequalities in the borough. The site is also some distance from a major employment location. The site's close proximity to Junction 27 of the M6 is likely to attract professionals commuting outside the borough for work.			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – Land at Rothwell’s Farm, Lowton Road, Golborne

Key negatives centre on soil and minerals with the loss of greenfield land which would be difficult to mitigate, as well as the loss of agricultural land. Other negatives arise from landscapes as the undulated enclosed farmland would be detrimentally affected even after mitigation. Key positives are identified in housing due to attractiveness; potential impacts on Greenheart and other recreational support and a key positive in community (deprivation) as development could positively impact on neighbouring areas of deprivation. Other positive impacts are identified in health due to health infrastructure improvements, and sustainable travel.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are no designated sites within or close to the site. However, Lightshaw Limebeds are within 60m.	0/×	Development is unlikely to result in direct impact on the Sites of Biological Importance. However indirect impact will need to be assessed and considered within detailed design.	0
	b) Species	There are Great Crested newts recorded at Lightshaw Limebeds. The site is likely to support good bird species assemblage. Hedgerow could be important. Surveys needed including of birds and hedgerows.	×	Species mitigation will be needed if surveys indicate significant bird or bat interest. This may need to be through off-site mitigation measures.	0/×
2. Air quality	a) Air quality assessment	No particular air quality issues in the immediate locality. Some issues as a result of traffic on the A573 and B5207, which development in this location may detrimentally affect. Currently open land, this can help alleviate adverse air quality issues. This would be lost if the location was developed unless mitigation measures put into place. Access to the location will be predominantly via the East Lancashire Road rather than through the borough.	×	Incorporating tree cover along the major routes into the borough and within the development site will help offset adverse air quality impacts arising from the increased use of private motor vehicles.	0/×
	b) Potential for proposed infrastructure to mitigate or enhance	The promotion of new and/or upgraded walking and cycling links will offer sustainable access whilst not detrimentally affecting air quality. No large scale infrastructure associated with development.			0

3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	xxx	Existing sections of hedgerow abutting residential development along the site perimeter, together with internal field parcel hedgerow remnants, could be retained and improved as landscape features in development proposals. Existing mature trees should be retained as features where possible as trees are not greatly in evidence across the site as a whole.	xx
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland. Drainage is impeded with moderate fertility. The land is classified as grade 3b agricultural land.	xx?	Top soil could be conserved and put to alternative use on/off site.	xx?
4. Water	a) Flood risk	Flood Risk is considered low. All the site is located within flood zone 1	0	Not applicable	0
	b) Water supply	United Utilities observes that a number of infrastructure assets cross this site, including Rivington Raw Water Aqueduct, which is considered a 'critical water supply asset'.	x	The layout of proposed new development will need to take this into account. Easements and access strips will be required for operational and maintenance work. Building over or adjacent to these assets will not be permitted.	0
	c) Waste water	United Utilities reports that current wastewater infrastructure is at capacity. Significant investment will be required to improve the sewerage infrastructure and the wastewater pumping station at the A580 East Lancashire Road before work planned new development commences.	xx	Infrastructure investment is required. Use of sustainable drainage systems should be encouraged where possible.	x

	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	<p>Undulating enclosed farmland. Consists of an old landscape of distinctly small to medium size fields supporting a variety of farming types. Some agricultural land is at risk of being lost and possibly some hedgerows.</p> <p>The site is generally flat, with minor localised undulations within. The raised embankment of a former mineral railway line bounds the site to the north.</p>	xx	Conserve and manage remaining hedgerows, and plant new where possible. Consider native planting to screen new development.	x
6. Built environment	Historic designations	There are no known historic designations. Traditional farm buildings at Rothwell's Farm have the potential to be of historic or architectural interest (subject to further investigation).	0/x	Further investigation of buildings of potential interest required.	0/?
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	<p>Proximity to Town Centre – Close to Golborne Town Centre.</p> <p>Cross Border Offending – Good access to borough boundary via East Lancashire Rd.</p> <p>Major Traffic Routes – Good access to East Lancashire Rd.</p> <p>Vulnerable Localities Index – Some middle scoring areas on the index.</p>	0/x	Development would clearly have to consider access issues and security.	0/x
8. Neighbourhood quality	a) Amenity considerations	<p>Some minor impact on residents of Lowton and Golborne would arise as a result of vehicular access.</p> <p>There would be localised adverse amenity impact on residents who appreciate the openness of the area at present. With no significant levels of built development currently on the site, there would be a perception of visual amenity loss for the surrounding area.</p>	x	Mitigation could be achieved by promoting sustainable transport alternatives. The approach could help to manage impacts arising from development.	0/x
	b) Environmental gain	<p>The natural environment could be less attractive as a result of new built development.</p> <p>Development would be likely to be perceived negatively in terms of its impact on environmental quality.</p>	x	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme	0/x

				proposals. The approach should help to manage impacts arising from development.	
9. Waste	Comments	Housing development will inevitably lead to increased waste production	✗	Requiring site waste management plans on new development schemes will have marginal positive impact	✗
10. Health	Comments	Approximately 1,000 additional residents would require access to GP and dental services. The site is wholly within Greenheart. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is very poor. Access to fresh food within walking distance is reasonable. The health impact of additional traffic (generated by new residents) on existing residents in the immediate surrounding areas would be severe, as access to the location is through a dense urban area to the south-east, with existing severe health problems (Derby Road). Impact would be minimal elsewhere as incidences of poor health are few.	✗	Potential to provide a gateway to Greenheart and improvements to the township park (The Bonk). Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	The site could present opportunities for enhanced formal recreation facilities. Overall, a neutral impact can be assumed until further detail comes forward. Site is within/adjacent to Greenheart. No open space designations on site. Outdoor sports facility immediately adjacent to site. Within 200m of township park (The Bonk). Also within 3.2km catchment of principal park (Pennington Flash Country Park) Two Public Rights of Way within site.	✓	Potential to provide a gateway to Greenheart and improvements to The Bonk township park. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✓✓✓

12. Housing	Contribution to housing delivery targets	Assuming a density of 25 dwellings per hectare on a developable area of 17.10 hectares, the site could potentially contribute approximately 428 dwellings towards meeting the borough's housing requirement.	✓✓✓	Potential for a mix of general housing market types. Site is greenfield. Some infrastructure capacity issues (e.g. foul drainage) will need to be resolved in order to enable housing development to proceed.	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations the site has the potential to deliver around 107 affordable units as part of the overall housing development.	✓✓✓	Set against the general affordability problem which exists borough-wide, housing affordability is less of a problem in this location. That said, the delivery of affordable housing remains an important objective in the borough-wide context. May be opportunities for provision of low carbon technologies and higher standards of sustainability in design.	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 90 primary and 65 secondary school pupils. With no existing capacity at local primary schools, the development will require the provision of an additional 90 primary places. There is sufficient capacity at local secondary schools.	✗	The modification and/or extension of existing primary schools could address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	High levels in levels of deprivation in the Derby Road estate and moderate levels in the adjoining areas. Low levels in the surrounding areas.	✓	Potential for contribution to measures to improve outcomes for residents on the Derby Road estate including supporting local economic and education infrastructure.	✓✓

15. Energy	a) Capacity	Gas supply in local area – no capacity issues Electricity: Spare Capacity as at 2011/12	0	Development needs to ensure it is as energy efficient as possible in order to retain future capacity.	0
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in an area of dwellings (6.4m/s at 45m)			
16. Accessibility	a) Sustainable transport accessibility	2 bus services on B5207 (high frequency route), 1 bus service A573 at least 1 per hour. Nearest rail station Newton-le-Willows 4.7km, 1 direct bus service. 2 footpaths cross the site.	0	Incorporating new and/or upgraded walking and cycling links will offer more attractive, sustainable access to key locations. Promotion of existing public transport services likely to encourage some increase in patronage.	✓
	b) Existing peak time congestion	Junctions approaching or over capacity: AM Peak – A580/B5207; A580/A573; B5207/Slag Lane. PM Peak – A580/B5207; A580/A573. Average speeds < 10mph: AM Peak – B5207 Southeast bound to A580. PM Peak – A573 Northbound to A580.	✗	Despite sustainable transport improvements and promotion, an increase in the number of peak time car borne trips will occur.	✗
	Improvements / mitigation suggestions	Promotion of current bus services needed but limited potential to link to rail services. New walking and cycling links would assist the development – especially to key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens.			✓
	Other Comments	<p>Whilst the site is not proposed for employment development it is located within a relatively deprived community within the top 30% most deprived in England (Lowton Road East). The key employment location at Stone Cross Park and other employment areas in Golborne are in close proximity and within easy walking and cycling distance, and quality housing development may help long term sustainability of this area.</p> <p>The site is only 1.5km from the A580 East Lancashire Road Corridor which is a key transport link to the Manchester and Liverpool City Regions. Provision of higher quality housing could attract businesses looking to accommodate highly skilled staff to these employment areas.</p>			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – Land east of Stone Cross Lane, Lowton

Key negative issues focus on soil and minerals. The loss of greenfield land is difficult to mitigate, and the location is best and most versatile agricultural land. Other negatives arise from the impact on air quality and congestion issues which are linked. However, despite the potential negative impact on air quality, an overall positive impact may be achieved through infrastructure which could help the overall network. Key positive impacts are also identified in housing as the site is attractive and there may be lower development costs making affordable homes more likely; and in recreation as key local recreation sites are supported. Sustainable travel is another positive area.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are no designated sites within or close to the site. There are a number of Tree Preservation Order trees and veteran oaks within and bounding the site.	×	Retention of trees and provision of additional native planting to strengthen existing value and protect important trees.	0
	b) Species	No existing records for the site. There are a number of waterbodies but their condition is unknown. Loss of breeding bird habitat and foraging habitat for bats. Number of good hedgerows on site, priority habitat. Surveys will be required.	0/×	Avoid loss of hedgerows and hedgerow trees. Consider potential to provide on and off site mitigation/enhancement depending upon development specific proposals.	0/×
2. Air quality	a) Air quality assessment	There is an Air Quality Management Area running along the south of the site on the East Lancashire Road as well as by the site access on Church Road. Some issues as a result of traffic on the A580 which runs adjacent to the site and which a development in this location may detrimentally affect. Currently open agricultural land. This can help alleviate some air quality issues, which would be lost if developed unless mitigation measures put into place. Access to the location will be predominantly via the East Lancashire Road rather than through the borough. Travel is likely to be by private vehicle.	×	Incorporating tree cover along the major routes into the Borough and within the development will help offset decrease in air quality as a result of increasing use of private vehicle. Improve bus services to residential estates.	×

	b) Potential for proposed infrastructure to mitigate or enhance	There is a potential new link road proposed to run through the site (perhaps with specific public transport measures) connecting Stone Cross Lane to B5207 Church Lane (opportunity to capture 'relieved' B5207 area for sustainable transport / community). New bus service through the site and promotion of existing bus and Newton-le-Willows rail station services. Potential for improving walking, cycling and public transport access – including links to nearby industrial development. This would have network-wide implications and therefore assist with air quality issues if modal shift is secured.			✓✓?
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	×××	Existing sections of perimeter hedgerow that abut residential development to the west, north and east, could be retained as part of development proposals. Existing internal hedgerow sections and mature trees could also be incorporated into open space within housing schemes as landscape features.	××?
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland in agricultural use mainly for arable and grazing. Drainage is impeded with moderate fertility. The site is currently classified as Grade 3b agricultural land.	××?	Top soil could be conserved and put to alternative use on/off site.	××?
4. Water	a) Flood risk	The majority of the site is within flood zone 1. However, 3% of the site area falls within flood zone 3 and 11% is at intermediate to high risk of surface water flooding	×	Development should not occur within flood zone 3 areas and the parts of the site which are at intermediate to high risk of surface water flooding. These areas can be designated as open space /water compatible uses only. Surface water runoff can be maintained through mitigation.	0

	b) Water supply	United Utilities reports the security of the water supply in this area is presently at risk until there is investment in local infrastructure.	×	Infrastructure investment is needed and any development should ensure it is as water efficient as possible.	0/×
	c) Waste water	United Utilities reports that the existing foul sewer at junction with Stone Cross Lane and Yew Tree Way is sufficient to take the foul water for the proposed development. Mining subsidence in the area affects the integrity and security of service for water infrastructure assets in this location.	×	Foul water flows from development will be pumped via a pumping station within the development Use of sustainable drainage systems should be encouraged.	0
	Other comments	A sewer crosses the location (to the south-west) and building-over, or adjacent to, this asset may not be permitted. The layout of future development will need to consider these assets. Although water supply can be provided (at a cost), the overall impact on water resources is likely to remain negative in the context of rising demand and climate change.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Undulating enclosed farmland with medium to large-scale field pattern consisting of mainly arable land with poorly maintained remnant hedgerows with few hedgerow trees. Ringed on northern side by housing and A580 is visually dominant along the southern boundary. Some existing areas of woodland and/or scrub.	×	Provision of landscape open space and woodland planting to soften impact of new development.	0/×
6. Built environment	Historic designations	There are no known historic designations. However, existing farmsteads at Thompson's Farm, Little Lowes Fold and Stirrup's Farm are potential of significant interest.	0/×	Further investigation of these assets of interest should be sought as a component of future development schemes.	0/?
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Close to Golborne Cross Border Offending – Right on borough boundary Major Traffic Routes – Direct access to East Lancashire Road Vulnerable Localities Index – Some relatively average scoring areas on index but predominantly low vulnerability.	×	Development would clearly have to consider access issues and security.	0/×

8. Neighbourhood quality	a) Amenity considerations	There is likely to be some minor impact affecting residents of Lowton as a result of vehicular access. There would be some likely localised adverse amenity impact for those residents who appreciate the openness of the area at present	×	Mitigation could be achieved through the promotion of sustainable transport alternatives. The approach could help to manage impacts arising from development.	0/×
	b) Environmental gain	The natural environment could be less attractive as a result of development. Development could result in a negative perception in terms of its impact on environmental quality.	×	Mitigation could be achieved by incorporating natural and new environmental features in the layout and design of scheme proposals. The approach should help to manage impacts arising from development.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact.	×
10. Health	Comments	Approximately 1,600 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is very poor. Access to fresh food within walking distance is reasonable. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be notable although access to the site is unlikely to be through the denser urban area to the north-west which has existing severe health problems (Derby Road).	×	Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	0

11. Recreation	Impact on existing recreational space and opportunity for enhancement	<p>There are opportunities for enhanced formal recreation facilities. Overall, a neutral impact can be assumed until further detail comes forward.</p> <p>No open space designations on site. Two Public Rights of Way within site. Traffic free cycleway with good surface on the other side of the East Lancashire Road adjacent to site. Within 3.2km catchment of principal park (Pennington Flash Country Park) and small part of site within 1.2km catchment of township park (The Bonk, Golborne)</p>	0	<p>A well designed development has the potential to contribute positively to the open space provision in this area. Pennington Flash Country Park and The Bonk could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.</p>	✓✓
12. Housing	Contribution to housing delivery targets	<p>Assuming a density of 28.6 dwellings per hectare on a developable area of 22.72 hectares, the broad site option could potentially contribute approximately 650 dwellings towards meeting the borough's housing requirement</p>	✓✓✓	<p>Greenfield, therefore likely to have lower development costs than equivalent brownfield land.</p> <p>Potential for mix of general market housing.</p>	✓✓✓
	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations the site has the potential to deliver around 163 affordable units as part of the overall housing development.</p> <p>Proximity to A580 East Lancs. Road and development values may lead to increased viability of affordable housing provision.</p> <p>Development would represent an urban extension of existing development to the north and north-east. Primary Employment Area at Stonecross Park lies immediately to the west of the broad site option.</p> <p>Proximity to A580 and adjacent employment uses likely to require amenity mitigation measures.</p>	✓✓✓	<p>Set against the background of general affordability problems borough-wide, the housing affordability problem is high in this particular location compared to the borough as a whole. Therefore, affordable housing delivery is a very important objective here.</p> <p>Opportunities for provision of low carbon technologies and higher standards of sustainability in design.</p>	✓✓✓

13. Education	Education facilities / capacity	The development is likely to yield around 140 primary and 100 secondary pupils. With primary schools at capacity in the locality, the development will require the provision of around 140 additional primary places. There is sufficient capacity at local secondary schools.	×	The modification and/or extension of existing primary schools could address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	High levels of deprivation in the Derby Road estate (not immediately adjacent albeit in close proximity) but low or very low levels in the adjoining areas, and low or very low levels in the surrounding areas.	0	Limited potential for contribution to measures to improve the outcomes of the residents in areas of deprivation including local economic, transport and education infrastructure.	0/✓
15. Energy	a) Capacity	Gas supply in local area including medium pressure main – no capacity issues Electricity: Spare Capacity as at 2011/12	0	Development needs to ensure it is as energy efficient as possible in order to retain future capacity.	0
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (6.3m/s at 45m)			
16. Accessibility	a) Sustainable transport accessibility	4 bus services on B5207 (high frequency route). Nearest rail station Newton-le-Willows - 4.7km, no direct bus services. 2 footpaths cross the site.	0	Incorporating and promoting new or upgraded walking and cycling links will offer more attractive sustainable access to key locations. Provision of new bus service and promotion of existing bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	Junctions approaching or over capacity: AM & PM Peaks - A573/A580; A580/B5207; A580/A572 Average speeds < 10mph: AM Peak – B5207 Southeast bound to A580; A572 Southwest bound to A580 (A579) PM Peak – A573 Northbound to A580; A579 (A572) Northbound to A580; B5207 Northwest bound to A580	×	A new link road, if managed well and complementary to sustainable transport / community mitigation measures, should reduce negative traffic impact.	×

	Improvements / mitigation suggestions	There is a potential new link road proposed to run through the site (perhaps with specific public transport measures) connecting Stone Cross Lane to B5207 Church Lane (opportunity to capture 'relieved' B5207 area for sustainable transport / community). New bus service through the site and promotion of existing bus and Newton-le-Willows rail station services. Existing walking routes to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	<p>Whilst the site is not proposed for employment development it is in close proximity to a deprived community at Derby Lane Estate (within top 20% most deprived in England).</p> <p>The site is located on the A580 East Lancashire Road which is a key transport link to the Manchester and Liverpool City Regions and adjacent to the key employment location at Stone Cross Park. Provision of quality housing may help the long term sustainability of these employment areas.</p>			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – Land at Pocket Nook Lane, Lowton

Key negative issues are identified for air quality and congestion issues, which are linked and also in the loss of greenfield land which is difficult to mitigate. Other negatives are identified in biodiversity (species), the loss of agricultural land and the impact on landscape character. Water constraints are another negative, as is waste. Key positives are the ability to contribute to recreation so much so as to outweigh the initial negative impacts and in housing, due to the attractiveness of the location. Other positives such as sustainable travel and infrastructure which have a network-wide effect increase the potential to address some of the key negatives.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are no designated sites within or close to the site. Tree Preservation Orders at Brancaster Drive adjacent to northern boundary.	0	Strengthen existing planting by incorporation of new native planting and development of landscape buffer zones.	0
	b) Species	Great crested newts recorded. There are ponds, hedgerows, and wooded areas within the site. Development would result in the loss of breeding bird habitat and foraging habitat for bats. Surveys will be required.	xx	Ensure no net loss of protected or priority species. Mitigation and/or compensation will be required for identified adverse impacts and will need to inform and respond to specific development proposals.	x
2. Air quality	a) Air quality assessment	There is an Air Quality Management Area including the A580 and A579 next to the site (and incorporating some of the site). Therefore, some issues as a result of traffic on the A580, A572 and the A579 which together surround the site and which development in this location may detrimentally affect. Currently open land this can help alleviate some air quality issues. This would be lost if the site was developed unless mitigation measures put into place. Access to the location will be predominantly via the East Lancashire Road rather than through the borough. Travel to and from this site is likely to be by private vehicle.	xx	Incorporating tree cover along the major routes into the Borough and within the development will help offset increase in air quality as a result of increasing use by private vehicles. Improvement in bus services and cycling/walking infrastructure would be required.	xx

	b) Potential for proposed infrastructure to mitigate or enhance	New link road proposed through site connecting A572- A579 (gives an opportunity to capture the 'relieved' A572 area for sustainable transport / community). New bus service through site to link to key destinations possibly including supporting dedicated infrastructure. Promotion of existing bus and Newton-le-Willows rail station services. Existing walking and cycling routes to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations. This would have network-wide implications and therefore assist with air quality issues if modal shift is secured.			✓✓?
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	×××	Existing hedgerow sections that act as natural buffers between the site and existing residential development could be retained and improved. Individual trees and internal hedgerow sections could be retained as features within open-space as part of development proposals. There are opportunities to include 'green buffer' structure planting abutting the line of the A580 East Lancashire Road as the site is very exposed here.	××?
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland mostly used for grazing with potential for agricultural use. Drainage is impeded with moderate fertility. The majority of land within the site is classified as Grade 3b with a small pocket of Grade 4 agricultural land.	×	Top soil could be conserved and put to alternative use on/off site.	×
4. Water	a) Flood risk	Carr Brook runs through the centre of the site and flows eastwards within flood zone 3. This part of the site is also vulnerable to surface water flooding. 11% of the site area is within flood zone 2 and 3.	×	There will be no development within flood zone 3 or areas at intermediate to high risk of surface water flooding. These areas can be designated as public open	0

				space/water compatible uses only. This significantly reduces the risk of flooding to development. Surface water runoff can be maintained through mitigation.	
	b) Water supply	Watercourse running through site. United Utilities reports two critical abstraction boreholes	xx	Requires a buffer zone from boreholes.	x
	c) Waste water	United Utilities identify no or minor capacity / service or cost issues	0/✓	Foul flows only will be allowed into the sewerage network. Capital investment will be required to the Lately Common Wastewater Pumping Station before United Utilities can accommodate the flows from the new dwellings proposed.	0/✓
	Other comments	A Groundwater Protection Zone is located within this broad location. United Utilities would seek a protective buffer zone around these assets and wish to accommodate their future expansion in meeting legislative changes and future development needs. Connecting to the existing water supply network would be problematic, but this can be overcome provided United Utilities is given sufficient demand information and lead-in time to rezone the area.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Undulating enclosed farmland with medium to large-scale field pattern consisting of mainly arable land with poorly maintained remnant hedgerows with few hedgerow trees. Ringed on northern side by housing and the A580 is visually dominant at an elevated level along the southern boundary. The Atherleigh Bypass bounds the site to the east on a raised embankment.	xx	Conserve and manage remaining hedgerows, and plant new where possible. Consider native planting to screen new development.	x

6. Built environment	Historic designations	Fair House Farmhouse is listed Grade II. Other farmsteads including Carr Farm, Pocket Nook Farm and Lower Pocket Nook Farm have the potential to be of architectural or historical interest (subject to further research).	×	Provided development scheme proposals are designed using sustainable principles that take account of buildings of interest and integrate these in the schemes, while in so doing revealing their character and setting, then any development may be positive.	0/✓
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not too close to Golborne. Near to “commuter” housing Cross Border Offending – Right on borough boundary Major Traffic Routes – Direct access to East Lancashire Road Vulnerable Localities Index – No problems associated with vulnerable localities.	0/×	Development would clearly have to consider access issues and security.	0/×
8. Neighbourhood quality	a) Amenity considerations	The local area is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a notable increase in congestion therefore impacting further on the amenity of surrounding communities in Lowton. There could be localised adverse amenity impact experienced by those residents who appreciate the openness of the area as it is at present. With no significant levels of built development currently on the site, there would be a perception of visual amenity loss for the surrounding area.	×	Mitigation could be achieved by promoting sustainable transport alternatives. The approach could help to manage impacts arising from development.	0/×
	b) Environmental gain	There natural environment could be perceived as less attractive as a result of new built development. Development would be likely to be perceived negatively in terms of its impact existing environmental quality.	×	Mitigation could be achieved by incorporating natural and new environmental features in the layout and design of scheme proposals. The approach would help to manage impacts arising from development.	0/×

9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development schemes will have marginal positive impact.	×
10. Health	Comments	Approximately 3,700 additional residents would require access to GP and dental services. The location is wholly within Greenheart. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is reasonable. Access to fresh food within walking distance is also reasonable. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas to the north west would be moderate as access is through a dense urban area which has fewer incidences of poor health.	×	Potential to provide a gateway to Greenheart. Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	0
11. Recreation	Impact on existing recreational space and opportunity for enhancement	Sites could present opportunities for enhanced formal recreation facilities. Overall, a neutral impact can be assumed until further detail comes forward. Within 3.2km catchment of principal park (Pennington Flash Country Park). Western end of site outside catchment for township and local parks. One outdoor sport facility within, and another immediately adjacent to, site. Seven Public Rights of Way within or immediately adjacent to site. One bridleway immediately adjacent to site. Traffic-free cycleway with good surface on the other side of East Lancashire Road adjacent to site.	×	Infrastructure and support needed to maintain current provision. Potential to enhance or relocate the outdoor sports facility as part of new development schemes. Pennington Flash Country Park could benefit from investment. Potential to create local park facility in Lowton.	✓✓

12. Housing	Contribution to housing delivery targets	Assuming a density of 29.5 dwellings per hectare on a developable area of 53.09 hectares, the site could potentially contribute approximately 1566 dwellings towards meeting the borough's housing requirement.	✓✓✓	May be suitable for a mix of general market housing to include smaller and family homes. The site is greenfield, therefore likely to have lower development costs than equivalent brownfield land.	✓✓✓
	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations the broad site option has the potential to deliver around 392 affordable units as part of the overall housing development.</p> <p>Development values in this location may increase the viability of affordable housing provision.</p> <p>Proximity to A580 East Lancs. Road and adjacent employment uses is likely to require amenity mitigation measures.</p>	✓✓✓	<p>Set against the background of general affordability problems borough-wide, the housing affordability problem is high in this location compared to the borough as a whole.</p> <p>Therefore, affordable housing delivery is a very important objective here.</p> <p>Opportunities for designing in amenity mitigation measures and potential for provision of low carbon technologies with higher standards of sustainability in design.</p>	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 330 primary and 235 secondary pupils. With no existing capacity at local primary schools, the development will require the provision of a new 1.5 form entry primary school or equivalent. There is sufficient capacity at local secondary schools.	✗✗	The provision of a new 1.5-form entry primary school will address capacity issues.	0

14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Low levels of deprivation in immediately adjacent areas but some in close proximity (Hesketh Meadows). Areas in greatest need less likely to benefit from development. Low or very low levels of deprivation in the adjoining areas, and very low or moderate levels in the surrounding areas.	×	Limited potential for contribution to measures to improve the outcomes of the residents in areas of deprivation.	0/✓
15. Energy	a) Capacity	Gas supply in local area including medium pressure main – no capacity issues Electricity: Spare Capacity as at 2011/12	0	Development needs to ensure it is as energy efficient as possible in order to retain future capacity.	0
	Renewables: Qualitative assessment	Solar potential is reliant on the construction of dwellings. Wind power probably unfeasible in an area of dwellings (6.1m/s at 45m)			
16. Accessibility	a) Sustainable transport accessibility	Most of site is within 400m of bus services. 8 bus services on A572 (high frequency route). Nearest rail station Newton-le-Willows - 5.2km, no direct bus services. 8 footpaths cross the site. A580 cycle route and A579 Bridleway on the edge of the site.	✓	Incorporating new or upgraded walking and cycling links will offer more attractive sustainable access to key locations. A new bus service and the promotion of existing bus / rail services is likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	Junctions approaching or over capacity: AM Peak - A580/B5207; A580/A572; A572/A579 (Lane Head); A572/A579 (Pennington); PM Peak - A580/B5207; A580/A572; A572/A579 (Lane Head) Average speeds < 10mph: AM Peak – B5207 Southeast bound to A580; A572 Southwest bound to A580 (A579). PM Peak – A579 (A572) Northbound to A580; B5207 Northwest bound to A580	×××	A new link road, if managed well, and complementary to sustainable transport / community mitigation, should reduce negative traffic impact.	×
	Improvements / mitigation suggestions	New link road proposed through site connecting A572- A579 (gives an opportunity to capture the 'relieved' A572 area for sustainable transport / community). New bus service through site to link to key destinations possibly including supporting dedicated infrastructure. Promotion of existing bus and Newton-le-Willows rail station services. Existing walking and cycling routes to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations.			

17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	<p>Whilst the site is not proposed for employment development it is in close proximity to a deprived community at Hesketh Meadows (within top 20% most deprived in England).</p> <p>A Primary Employment Area at Newton Road is adjacent to the broad site option and Moss Industrial Estate is immediately to the north across the A572 Newton Road.</p> <p>The site is located on the A580 East Lancashire Road which is a key transport link to the Manchester and Liverpool City Regions and adjacent to the key employment location at Stone Cross Park. Provision of quality housing may help the long term sustainability of these employment areas.</p>			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – North West of Standish Lower Ground, Wigan

The key negative issue is landscapes due to the unavoidable change of character and the sensitive nature of the area. This is also seen in the other negatives such as biodiversity (designated sites) with the existence of a site of biological importance and ancient woodland. The loss of recreational space and the inability to mitigate is another negative as are congestion issues in the locality. Energy concerns arise from the need for infrastructure investment. Key positives are seen in housing due to the attractiveness of the site and it being a potential urban extension of Standish Lower Ground. This site is majority brownfield and there is opportunity for increasing sustainable travel options which are also positives.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Follient Wood Site of Biological Importance (Grade B) is within the site boundary and includes Ancient Woodland. Woodland to the west of Linley Close is protected by a Tree Preservation Order. It is identified as a potential UK and local Biodiversity Action Plan habitat.	xx	Avoid direct impact upon Site of Biological Importance and Tree Preservation Order. Buffer zones required.	x
	b) Species	There are waterbodies and watercourses which will require surveys. Detailed habitat surveys are also required to determine the impact upon breeding birds and bats.	x	Survey results will need to inform the details of any mitigation, compensation or enhancement depending upon detailed development proposals.	0
2. Air quality	a) Air quality assessment	Access would be via roads in the borough, although reasonable proximity to junction 27 of the M6 would potentially alienate traffic impact arising elsewhere. Air Quality Management Areas on main roads close to the site are patchy but which development in this location may have a detrimental affect. Currently open land and this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures are put into place. Travel is likely to be by private vehicle.	x	Incorporating tree cover along the major routes into the Borough and within the development will help offset increase in air quality as a result of increasing use by private vehicle. Improve public transport including frequency of buses would help	0

	b) Potential for proposed infrastructure to mitigate or enhance	Potential for new and/or upgraded / promoted walking and cycling links would offer sustainable transport benefiting affect air quality.			0/✓
3. Soil and minerals	a) Brownfield / greenfield proportion	Majority brownfield	✓	Retain playing fields offer Retain existing tree cover	✓
	b) Impact on 'agricultural' land	Slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland. Drainage is impeded with moderate fertility. Land is primarily in non agricultural use and urban fringe in character. There is a small area of grade 3b land close to the properties off Flockton Avenue and Christopher Park playing fields.	0	Potential for development to include gardens and allotments, although this is not a priority area for allotment provision.	0/✓?
4. Water	a) Flood risk	Site is wholly within flood zone 1 and is not identified as being a site vulnerable to surface water flooding.	0	Surface water runoff can be maintained through mitigation.	0
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Steep-sided wooded valleys with a small area of elevated enclosed farmland to the east. Dense wooded areas containing mature and veteran trees and fast flowing valley streams. The natural recolonisation of much of the area has made it sensitive to adverse change and disturbance.	× ×	This area would be extremely sensitive to development particularly a loss of woodland and impact upon recreational use which may be softened with mitigation measures but would still be likely to result in unavoidable changes to the character of the area.	× ×

6. Built environment	Historic designations	Standish Hall Historic Park abuts the land to the north.	0/✗	Important views in all should be carefully identified and mitigated. Local ecology, existing trees, and the sense of openness lend opportunities for further enhancement measures.	0
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre - In between Shevington and Wigan. Close to Crooke and Standish Lower Ground. Cross Border Offending - Not close to border. Major Traffic Routes - Comparatively inaccessible from major routes. Vulnerable Localities Index – Low score on index	0	Site design should contribute to improved safety in the area.	0/✓
8. Neighbourhood quality	a) Amenity considerations	There are likely to be impacts on residents of Standish Lower Ground as a result of vehicular access arrangements. There may be localised impact on amenity for those residents who appreciate the openness of the area at present. With no development currently on the site, the sense of visual amenity would be lost for the surrounding area.	✗	Mitigation through the promotion of sustainable transport alternatives could help to manage the otherwise adverse impacts that would arise.	0/✗
	b) Environmental gain	Natural environment could be less attractive as a result of development. Development likely to have a perceived negative impact on environmental quality.	✗	Mitigation could be achieved by incorporating existing natural and new environmental features within layouts and scheme designs. The approach should help to manage the otherwise adverse impacts that could arise.	0/✗
9. Waste	Comments	Housing development will inevitably lead to increased waste production	✗	Requiring site waste management plans on new development sites will have marginal positive impact	✗

10. Health	Comments	Approximately 1,200 additional residents would require access to GP and dental services. The nearest GP is currently accepting patients. Access to a NHS dentist currently accepting new patients is poor. Access to fresh food within walking distance is also poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas to the east would be moderate as access is through a less dense urban area with moderate incidences of poor health.	×	Potential for investment in doctor and dental services. Potential to create additional local shopping centre. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	0
11. Recreation	Impact on existing recreational space and opportunity for enhancement	The majority (80%) of the site is natural and semi-natural greenspace, woodland and an outdoor sports facility. The area is within the 3.2km catchment of a Principal park (Mesnes Park) but outside the 1.2 km catchment for a township park and the 600m catchment for a local park.	×	Potential for some semi-natural greenspace to be retained as a condition of development. The outdoor sports facility could be relocated or retained. Potential to create additional park space to meet catchment gap. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	×
12. Housing	Contribution to housing delivery targets	Assuming a density of 30 dwellings per hectare on a developable area of 14.46 hectares, the broad site option could potentially contribute approximately 434 dwellings towards meeting the borough's housing requirement. Anticipated development costs associated with remediation of past coal mining activity.	✓✓✓	Close to existing infrastructure and services. Potential for mix of housing types and tenures, including smaller and family homes. Abuts existing residential development to the south east in Standish Lower Ground.	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations, the broad site option has the potential to deliver around 108 affordable units as part of the overall	✓✓✓	Set against the background of general affordability problems borough-wide, the housing affordability	✓✓✓

		housing development. Would represent a sustainable pattern of growth as an urban extension to dwellings in Standish Lower Ground.		problem is moderate in this particular location compared to the borough as a whole. Therefore, affordable housing delivery is a more critical objective in this location. Opportunities for low carbon technologies to improve sustainability further.	
13. Education	Education facilities / capacity	The development is likely to yield around 90 primary and 65 secondary school pupils. With little capacity at local primary schools, the development would require the provision of around 80 additional places. There is sufficient capacity in secondary schools.	×	The modification and/or extension of existing primary schools could address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	There are moderate levels of deprivation in the adjoining areas and moderate to low levels in the surrounding areas, but high levels in the Beech Hill estate which is not directly accessible by road from this area.	0	Despite provision of affordable housing, there is limited potential for contribution to measures to improve the outcomes of the residents in areas of deprivation. Some potential in supporting wider community infrastructure for Beech Hill area.	0/✓
15. Energy	a) Capacity	Gas supply in local area – no capacity issues Electricity: Spare Capacity not available as at 2011/12. Approved schemes to increase capacity	×	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Reliant on infrastructure investment	×
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (5.9m/s at 45m).			

16. Accessibility	a) Sustainable transport accessibility	3 existing bus services run close to the site on B5375, frequency at least every 10-20 mins. Nearest station(s) Gathurst 1.5km, no direct bus services & Wigan Wallgate is 2.9km away from the site with 3 direct bus services. One footpath crosses the site.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. Promotion of bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	B5375 / Beech Hill Ave junction is over or approaching capacity in both peak hour periods. B5375 (westbound) approaching Beech Hill Ave / Scot Lane junction has average speeds < 10mph during PM peak.	xx	Despite sustainable transport improvements / promotion, an increase in the number of peak time car borne trips will occur.	✗
	Improvements / mitigation suggestions	Existing walking route within the site to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations including the canal. Existing bus services to be promoted and existing Wigan station(s) services to be promoted.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Whilst the site is not proposed for employment development it is in proximity to deprived areas (within the top 30% most deprived) at Beech Hill. The key employment location at Martland Park in close proximity and within easy walking and cycling distance and quality housing development may help long term sustainability of this area.			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – North of Beech Hill, Wigan

Key negative impacts are likely in landscapes where the loss of agricultural character would be difficult to mitigate. Health is another key negative impact due to strain on infrastructure. Recreation is also adversely affected; while congestion is also negatively impacted upon. Key positives are provision of housing due to attractiveness for housing development, and also the contribution development at the location could make to neighbouring areas of deprivation as evidenced in the community section.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are no designated sites within or close to the site.	×	Consider creating buffer zones and native planting.	0/×
	b) Species	Waterbodies and/or watercourses; large area of young plantation; and loss of breeding bird habitat and foraging habitat for bats is likely: surveys required.	×	Need to look at opportunities for biodiversity enhancement both on and off site depending upon results of surveys and specific detailed development proposals.	0?
2. Air quality	a) Air quality assessment	Access would be via roads in the borough, although reasonable proximity to junction 27 of the M6 would potentially alienate traffic impact elsewhere. No particular air quality issues in the immediate locality. The Air Quality Management Areas on the main roads close to the site are patchy but development in this location may have a detrimental affect. Currently open land and this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures are put into place. Good public transport links to the site.	×	Incorporating tree cover along the major routes into the Borough and within the development will help offset air quality issues that would arise as a result of the increased use of private vehicles.	0/×
	b) Potential for proposed infrastructure to mitigate or enhance	New, upgraded / promoted walking and cycling links will offer sustainable access whilst not detrimentally affecting air quality. No large scale infrastructure associated with development.			0

3. Soil and minerals	a) Brownfield / greenfield proportion	Mix of brownfield and greenfield but majority brownfield	×	Retain existing tree cover and incorporate small wooded area/s.	0
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet acid loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable forestry. Drainage is impeded with low fertility. There is a small pocket of grade 2 best and most versatile agricultural land north west of Giants Hall Farm. Development would result in the loss of this land. The remainder is grades 3b (majority), and 4.	×	Top soil could be conserved and put to alternative use on/off site.	0/×
4. Water	a) Flood risk	The site is wholly within flood zone 1 and is not identified as being a site vulnerable to surface water flooding.	0	Surface water can be attenuated to reflect at least existing run-off rates.	0
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible	0
	c) Waste water	No waste water issues	0		0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Eastern section is part of a wider character assessment of undulating enclosed farmland with large fields of cereal crops and managed hedges in reasonable condition. It forms part of the Standish spur which is a visually important landmark and would be extremely sensitive to encroachment by development from the south. The western section is elevated enclosed farmland with large blocks of deciduous plantation interspersed with large-scale arable fields.	×	This area would be extremely sensitive to development due to the overwhelmingly agricultural character which softens and contrasts with the adjoining heavily developed areas of Wigan to the south. Even with mitigation the impact would remain.	×
6. Built environment	Historic designations	Giants Hall Grade II* listed within site. Upper Standish Wood Fold Cottages Grade II, approximately 100 metres to the north. Standish Hall Historic Park immediately adjacent to the north.	×	If the setting of the heritage assets can be maintained or enhanced, for example by use of buffer zones, development may be positive	0/×

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre -In between Standish and Wigan. Not close to Standish but close to Beech Hill. Cross Border Offending - Not close to border. Major Traffic Routes -Not very accessible from major routes in comparison. Vulnerable Localities Index – Some areas close by identified as being in highly vulnerable locality.	0/×	Little needed for mitigation/ enhancement although development design will play a part in assisting with community safety. Development could assist with tackling deprivation issues.	✓
8. Neighbourhood quality	a) Amenity considerations	Likely to be impacts on residents of Beech Hill estate as a result of vehicular access. Some localised impact on amenity for those residents that appreciate the openness of the area at present. With no development currently on the site, new development would mean a loss of visual amenity for the surrounding area.	×	Mitigation could be achieved through the promotion of sustainable transport alternatives.	0/×
	b) Environmental gain	The natural environment could be less attractive as a result of development. Development could be perceived to have a negative impact on environmental quality.	×	Mitigation could be achieved by incorporating both existing natural and new environmental features in layout and scheme designs. The approach would help in managing otherwise adverse impacts arising from development.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact	×

10. Health	Comments	<p>Approximately 5,000 additional residents would require access to GP and dental services. The nearest GP is currently accepting patients. Access to an NHS dentist currently accepting new patients is very poor. The area is identified by the Allotment Strategy as one of priority for improved provision. There is reasonable access to fresh food within walking distance. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas may be high as access to the location is through a dense urban area to the south with existing incidences of poor health.</p>	xxx	<p>Potential to provide allotments to improve the health of existing residents in an area identified by the Allotment Strategy as an area of priority. Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to the location.</p>	xx
11. Recreation	Impact on existing recreational space and opportunity for enhancement	<p>There are existing areas of semi-natural greenspace on the site. Gidlow Cemetery is within 50m of the site. The area is within the 3.2km catchment of a Principle park (Mesnes Park) but outside the 1.2km catchment for a township park and the 600m catchment for a local park.</p>	xx	<p>Potential for semi-natural greenspace to be retained. Potential to create additional park space to meet catchment gap. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.</p>	x
12. Housing	Contribution to housing delivery targets	<p>Assuming a density of 30 dwellings per hectare on a developable area of 64.92 hectares, the broad site option could potentially contribute approximately 1,948 dwellings towards meeting the borough's housing requirement.</p> <p>The broad site option is in proximity to existing residential development to the south at Beech Hill and to the west at Standish Lower Ground.</p>	✓✓✓	<p>May have lower development costs due to nature of site.</p> <p>Potential for mix of housing types and tenures, including general market housing, smaller and family homes.</p> <p>In proximity to existing infrastructure and services. Scope to improve these to better serve existing and new local communities.</p>	✓✓✓

	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations, the broad site option has the potential to deliver around 480 affordable units as part of the overall housing development.</p> <p>Sustainable pattern of growth as an urban extension to Beech Hill and Standish Lower Ground.</p>	✓✓✓	<p>Compared to housing affordability borough-wide, the problem is moderate in this particular location.</p> <p>Opportunities for low carbon technologies to improve sustainability further.</p>	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 400 primary and 300 secondary school pupils. There is little capacity at local primary schools resulting in the development requiring a new 2-form entry primary school or equivalent. There is sufficient capacity in existing secondary schools.	✗✗	The provision of a new 2-form entry primary school will address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	There are high levels of deprivation in the adjoining Beech Hill estate and moderate to low levels in the surrounding areas.	✓	Large potential for contribution to measures to improve the outcomes for residents on the Beech Hill estate.	✓✓
15. Energy	a) Capacity	Gas supply in local area – no capacity issues Electricity: Spare Capacity as at 2011/12	0	Development needs to ensure it is as energy efficient as possible in order to retain future capacity.	0
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (6m/s at 45m).			

16. Accessibility	a) Sustainable transport accessibility	Seven existing bus services run close to the site on Acacia Ave (residential road), Beech Hill Ave and B5375 - combined frequency is possibly < 10 mins. The nearest train station is Wigan Wallgate (2.3km), and there are direct bus services to Wigan town centre. Several footpaths cross the site and traffic free (rough surface) cycle routes run through the site linking to Standish and Crooke / canal.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. Promotion of bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	B5375 / Beech Hill Ave junction is over or approaching capacity in both peak hour periods. B5375 (westbound) approaching Beech Hill Ave / Scot Lane junction has average speeds < 10mph during pm peak.	xx	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	xx
	Improvements / mitigation suggestions	Existing walking and cycling routes within the site would need to be upgraded / promoted (including the canal) and new links provided / promoted to serve key local destinations. Existing bus services should be promoted and existing Wigan rail station(s) services promoted as well.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could potentially include the provision of allotments (see 10 Health).			✓
	Other Comments	Whilst the site is not proposed for employment development it is located adjacent to a community in the top 10% most deprived in England (Beech Hill West) and adjacent to areas in top 30% (Beech Hill East). The key employment location at Martland Park is in close proximity and within easy walking and cycling distance and quality housing development may help long term sustainability of this area.			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – North West of New Springs, Wigan

Key negative impacts are due to the loss of greenfield land which it would be difficult to mitigate, as well as the impact on landscape character which would be lost. Another key negative impact would be on congestion which would also be difficult to mitigate. Other negative issues are the effects on air quality due to private vehicle use, and the impact upon neighbourhood quality, specifically amenity. Energy is another negative due to the lack of spare capacity with no plans to address this. Housing is a key positive not just for provision but the ability to incorporate innovative design and layout. Other positives are seen in health provision and support; recreation support and sustainable travel opportunities.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Haigh Plantations Site of Biological Importance is immediately adjacent (north west) and the Leeds-Liverpool Canal Site of Biological Importance runs along the north-eastern boundary.	×	Avoid direct impact upon the Sites of Biological Importance. Buffer zones required.	0
	b) Species	Mature trees have the potential to support roosting bats. There are extensive areas of plantation woodland and the loss of breeding bird habitat and foraging habitat for bats is probable. Surveys will be required.	×	Impacts can only be assessed once survey results are known. Mitigation or enhancement will have to reflect specific development proposals.	0/×
2. Air quality	a) Air quality assessment	<p>Access would be via roads in the borough, although the site is on a main route out of the borough through more rural locations of Aspull to Blackrod and Horwich where Air Quality issues are more widely dispersed.</p> <p>Some air quality issues as a result of traffic on the B5238 which a development in this location may detrimentally affect. Currently open land with some tree cover and this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures put into place.</p> <p>Good public transport links to the site to and from Wigan town centre. Travel outwards is likely to be by private vehicle.</p>	×	Incorporating tree cover along the major routes into the Borough and within the development will help offset increase in air quality as a result of increasing use by private vehicle.	×

	b) Potential for proposed infrastructure to mitigate or enhance	Potential for improved walking/cycling links. However, infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	xxx	Retain existing tree cover within the development and enhance as appropriate.	xx
	b) Impact on 'agricultural' land	Slowly permeable, seasonally wet, acid loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable forestry. Drainage is impeded with low fertility. Majority classified as land in non agricultural use. There is a very small pocket of grade 3b land at the eastern corner of the site.	0	Top soil could be conserved and put to alternative use on/off site.	0
4. Water	a) Flood risk	The site falls within flood zone 1 and is not identified as being a site vulnerable to surface water flooding. Site is adjacent to the Leeds Liverpool canal and the land lies lower than the canal.	0	Surface water can be attenuated to at least existing runoff rates Mitigation measures to protect development from the risk of overtopping of the canal	0
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	Use of sustainable urban drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Undulating enclosed farmland, horse grazing and crop growing with some remaining hedgerows and hedgerow trees. Immediately adjacent to Haigh Plantations which would be affected.	xx	It would be difficult to mitigate the impact of development upon Haigh Plantations as the rural feel of the adjacent area would be lost.	xx
6. Built environment	Historic designations	There are no known historic designations within the location; however it adjoins the Historic Park and Garden designation for Haigh Hall.	0/x	Development scheme proposals should employ sustainable design principles as a matter of good practice.	0

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not close enough for concern. Cross Border Offending – No. Effectively “buffered” by Aspull. Major Traffic Routes – No. Effectively “buffered” by Aspull Vulnerable Localities Index – Low score on index.	0/✓	Access to the site should take into account security issues.	0/✓
8. Neighbourhood quality	a) Amenity considerations	Whelley is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a notable increase in congestion therefore impacting further on the amenity of surrounding communities. There would be localised adverse impact in terms of the perception of amenity for those residents who appreciate the openness of the area at present.	✗✗	Mitigation could be achieved through the promotion of sustainable transport alternatives. The approach could help to manage the impacts arising from new development.	✗
	b) Environmental gain	The natural environment could be less attractive as a result of new development. New development could have a negative impact on the perception of environmental quality.	✗	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach would help to manage impacts arising from new development.	0/✗
9. Waste	Comments	Housing development will inevitably lead to increased waste production	✗	Requiring site waste management plans on new development sites will have marginal positive impact	✗

10. Health	Comments	<p>Approximately 3,000 additional residents would require access to GP and dental services. The site is adjacent to allotments (privately owned). The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is very poor. The site lies wholly within Greenheart.. Access to fresh food within walking distance of the site is poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be moderate to low as access is through a dense urban area to the west but a less dense area to the east and these areas have fewer incidences of poor health. The attractive surrounding environment would promote wellbeing with excellent links to open space and allotments.</p>	0	<p>Potential to provide gateway to Greenheart. Potential for investment in doctor and dental services. Potential to upgrade shops on Whelley to a local centre. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site. Ensure investment secured for health provision in north Wigan and Aspull. Retaining landscape features would help mitigate against climate change.</p>	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	<p>There are existing areas of mature woodland, natural and semi-natural greenspace on site. The site lies wholly within Greenheart and adjacent to allotments (privately owned), the Whelley Loop Line (National Cycleway Route 55), and canal towpath and within 250m of the boundary of Haigh Country Park and 1.2km catchment threshold of a township park (Aspull Civic)</p>	✗	<p>Potential for woodland and some semi-natural greenspace to be retained and Rights of Way to be retained and improved or relocated as a condition of development. Potential to provide gateway to Greenheart. Haigh Country Park and Aspull Civic Park could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.</p>	✓

12. Housing	Contribution to housing delivery targets	Assuming a density of 30 dwellings per hectare on a developable area of 41.43 hectares, the broad site option could potentially contribute approximately 1,200 dwellings towards meeting the borough's housing requirement.	✓✓	Development costs associated with remediation of past uses. Potential for mix of housing types and tenures, to include smaller and family homes. Topography will afford opportunities for innovative design and layout.	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations the broad site option has the potential to deliver around 300 affordable units as part of the overall housing development. Development costs here may reduce viability of affordable housing provision. Broad site option located on a main route between Wigan and Bolton and is accessible via the B5238.	✓✓	Set against the background of general affordability problems borough-wide, the housing affordability problem is moderate in this particular location compared to the borough as a whole. Therefore, affordable housing delivery is a more critical objective in this location. Site of former coal extraction operations.	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 260 primary and 190 secondary school pupils. This would result in the need for the provision of around 110 additional primary places. There is sufficient capacity in secondary schools.	✗	The modification and/or extension of existing primary schools could address capacity issues	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Moderate levels of deprivation in the adjoining areas and moderate or low levels in the surrounding areas.	0	Limited potential for contribution to measures to improve the outcomes of the residents in areas of deprivation.	0

15. Energy	a) Capacity	Gas supply in local area – no capacity issues Electricity: No spare capacity as at 2011/12	xx	Scheme required to increase electricity capacity may be unfeasible.	x
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power may be feasible but not in area of dwellings (6m/s at 35m)			
16. Accessibility	a) Sustainable transport accessibility	There are 5 bus services on the B5238 (high frequency route) and 3 bus services on Bradshaw Street at least 1 per hour. The nearest rail station is Wigan North Western which is 2.2km and there are 5 direct bus services. A footpath crosses the site. National Cycle Network 55 and canal form parts of site boundary.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. Promotion of existing bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	The junctions approaching or over capacity during AM peak times are the B5238/Plantation Gates and the B5238/Wallace Lane. The junctions with average speeds of < 10mph at AM peak times are the B5238 southbound (Cale Lane to Greenhough Street).	xx	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	xx
	Improvements / mitigation suggestions	Promotion of existing bus and Wigan station(s) services. Existing walking and adjacent NCN55 & canal to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations using NCN 55 and canal.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Not located within a deprived area and at some distance from a key employment location. Primary employment areas at Makerfield Way, Ince and Miry Lane, Springfield are 1.4km and 2.6km away, respectively			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – South East of Hawkley, Wigan

Key negative impacts inevitably arise from the loss of greenfield as well as from the impacts of congestion (though some mitigation would help to a degree). Other negative impacts are identified with regards to the adjacent site of biological importance; loss of agricultural land; the loss of landscape character; the limited impact on deprivation and potential energy constraints. Key positive impacts are seen in housing provision and recreation support.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Ochre Flash Site of Biological Importance is adjacent and Bryn Marsh and Ince Moss Site of Special Scientific Interest are nearby. Rough Wood on the western boundary is protected by a woodland Tree Preservation Order. There is likely to be increased recreational pressure.	xx	Need strong buffer zones to boundaries with the Site of Biological Importance and Rough Wood. Mitigation will also need to ensure footpath linkages do not encourage access to sensitive areas.	x
	b) Species	There are waterbodies and/or watercourses which will require surveys. Development could lead to the possible loss of hedgerows and impact upon breeding bird habitat.	x	Consider hedgerow planting, retention and/or creation of waterbodies	0
2. Air quality	a) Air quality assessment	No particular air quality issues in the immediate locality although there are some issues as a result of traffic on the A49 and B5238, which a development in this location may detrimentally affect. Currently open land and this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures are put into place. Travel is likely to be by private vehicle.	0/x	Incorporating tree cover along major routes and within the development will help offset air quality issues that would arise as a result of the increased use of private vehicles. Improved public transport to cover residential estate at Hawkley would help	0
	b) Potential for proposed infrastructure to mitigate or enhance	Infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach. Better walking/cycle infrastructure would help.			0

3. Soil and minerals	a) Brownfield / greenfield proportion	The site is greenfield. There would be impact from permanent greenfield loss. This would not be easy to mitigate.	xxx	Incorporate tree cover such as small wooded areas and amenity open space	xx?
	b) Impact on 'agricultural' land	Slowly permeable, seasonally wet, acid loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable forestry. Drainage is impeded with low fertility. The site is designated as grade 3b agricultural land.	x?	Top soil could be conserved and put to alternative use on site or elsewhere.	x
4. Water	a) Flood risk	Site is within flood zone 1 and is not identified as being a site vulnerable to surface water flooding.	0	Surface water can be attenuated to reflect at least existing run-off rates	0
	b) Water supply	No water supply issues	0	Development should be designed to ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	The use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Undulating enclosed farmland with fields defined by both ditches and hedgerows creating a medium-scale field pattern. Fields are mostly used for arable crops. The agricultural land forms part of an important 'green' buffer between Wigan to the north and Ashton-in-Makerfield to the south. Development would weaken this separation.	xx	Conserve and manage remaining hedgerows. Recreate important hedgerows defining perimeter boundaries and reintroduce new hedgerow trees. Use native planting to soften and screen the urban edge.	x
6. Built environment	Historic designations	There are no known historic designations. Park House Farm is of potential interest, although technically outside the site, is of architectural/historic.	0/x	Any development proposals would need to respect its setting and relationship with the site. Further research is required.	0/?

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not close enough for concern. Cross Border Offending – Not too close to border. Major Traffic Routes – Would depend on access to the site . Vulnerable Localities Index – Low score on index.	0/✓	Access to the site should take into account security issues.	0/✓
8. Neighbourhood quality	a) Amenity considerations	There are likely to be impacts on those resident in the Hawkley estate as a result of vehicular access. There would be localised impact in terms of the sense of amenity value for those residents who appreciate the openness of the area at present.	✗	Mitigation could be achieved by promoting sustainable transport alternatives and this approach could help to manage the impacts arising from development	0/✗
	b) Environmental gain	The natural environment could be less attractive as a result of new development. There could be a negative perception in terms of the effect of development on environmental quality.	✗	Mitigation could be achieved by incorporating existing natural and new environmental features into scheme layouts and designs. This would help to manage the otherwise adverse impacts that could arise.	0/✗
9. Waste	Comments	Housing development will lead to increased waste production	✗	Requiring site waste management plans in new development schemes will have a marginal positive impact.	✗

10. Health	Comments	<p>Approximately 3,700 additional residents would require access to GP and dental services. The location is wholly within Greenheart. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is reasonable. There is also reasonable access to fresh food within walking distance. The Allotment Strategy identifies Wigan South township as a priority area for allotment provision as health is poor and there is an existing catchment gap. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas to the north west would be moderate as access to the location is through a dense urban area which has fewer incidences of poor health.</p>	×	<p>The site has the potential to provide a gateway to Greenheart. The location is a priority target area for allotment provision and there is potential for investment in doctor and dental services. As part of the mitigation and enhancement measures, there will be a need to ensure that a residential travel plan is in place and appropriate green space and trees are provided on approaches to the site.</p>	0
11. Recreation	Impact on existing recreational space and opportunity for enhancement	<p>The location is wholly within Greenheart. There is a small cluster of trees to the north and adjacent, the site is bounded by trees along with natural and semi-natural greenspace immediately adjacent to the site. The area is crossed or is bounded by 2 Rights of Way and bounded by the greenway network to the south and Wigan Flashes Local Nature Reserve to the east. Part of the site is within the 1.2km catchment of a township park (Three Sisters).</p>	0	<p>Potential for semi-natural greenspace and woodland to be retained and Rights of Way to be retained and improved or relocated as a condition of development. Potential to provide a gateway to Greenheart. Three Sisters could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.</p>	✓✓
12. Housing	Contribution to housing delivery targets	<p>Assuming a density of 30 dwellings per hectare on a developable area of 51.48 hectares, the broad site option could potentially contribute approximately 1,500 dwellings towards meeting the borough's housing requirement.</p> <p>Broad site option is greenfield. Overall broad site option capacity is limited by presence</p>	✓✓✓	<p>Envisage potential for mix of housing types and tenures, including smaller and family homes.</p> <p>Broad site option abuts existing residential development to the north-west at Hawkley Hall and would represent an urban</p>	✓✓✓

		of overhead power lines and a natural gas pipeline consultation zone.		extension to it.	
	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations, the broad site option has the potential to deliver around 386 affordable units as part of the overall housing development.</p> <p>The broad site option is close to existing transport infrastructure and Primary Employment Areas off the A49 Warrington Road/Wigan Road.</p>	✓✓✓	<p>Set against the background of general affordability problems borough-wide, the housing affordability problem is moderate in this particular location compared to the borough as a whole.</p> <p>Therefore, affordable housing delivery is a more critical objective in this location.</p> <p>Opportunities for low carbon technologies to improve sustainability further.</p>	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 325 primary and 230 secondary school pupils. With little capacity at local primary schools, the development would require the provision of a 1.5 form entry primary school or equivalent. The development would result in a marginal capacity issue at local secondary schools.	✗✗	The provision of a new 1.5-form entry primary school will address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	There are low levels of deprivation in the adjoining areas, but high levels in the Worsley Mesnes estates further north.	0	Limited potential for contribution to measures to improve the outcomes of the residents in areas of deprivation.	0
15. Energy	a) Capacity	Gas supply in local area. High pressure transmission pipeline: FM15 Bretherton to Warburton requires consent and advice from the Health and Safety Executive and National Grid but no capacity issues. Electricity: Spare Capacity as at 2011/12	✗	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Large Investment may be needed affecting viability.	✗
	Renewables: Qualitative assessment	<p>Solar potential is reliant on construction of dwellings.</p> <p>Wind power probably unfeasible in area of dwellings (6.2m/s at 45m).</p>			

16. Accessibility	a) Sustainable transport accessibility	There are 3 bus services on Fulbeck Ave at least every 10-20 mins. Most of the site is > 400m from a bus stop. Nearest station is Wigan North Western which is 2.2km away and there are 3 direct bus services. A footpath crosses the site and there is a traffic free cycle route to canal on the edge of the site.	×	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. New bus service and promotion of existing bus / rail services likely to encourage increase in patronage.	0/×
	b) Existing peak time congestion	The junctions approaching or over capacity during the AM Peak times are the B5238/Carr Lane; B5238/Howden Drive; A49/B5238; PM Peak - A49/B5238; B5238/Carr Lane. The junctions with average speeds < 10mph at the AM Peak times are the B5238 Northbound (Marus Bridge Roundabout to Hoyden Drive) and at PM Peak time are the B5238 Southbound (Keats Ave to Carr Lane).	×××	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	××
	Improvements / mitigation suggestions	New bus service to be provided to serve the site and promotion of existing bus and Wigan station(s) services. Existing walking and traffic free cycle route to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations including the canal.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	<p>Whilst the site is not proposed for employment development there are deprived areas (within the top 30% most deprived) at Hawkley North and Worsley Mesnes South further north.</p> <p>The key employment locations in close proximity to Junction 25 of the M6 are within easy walking and cycling distance and quality housing development may help long term sustainability of this area.</p> <p>Provision of higher quality housing could attract businesses to these employment areas looking to accommodate highly skilled staff to the area.</p>			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – South of Winstanley, Wigan

Key negative issues arise through the loss of greenfield which is difficult to mitigate. The lack of impact on deprivation is another key negative as is the congestion issue. Other negative impacts are seen in relation to energy (due to some constraints and current capacity problems) as well as biodiversity (sites); air quality (linked to congestion); loss of agricultural land and landscape character; and loss of amenity for the neighbourhood. Health, despite mitigation, would still present issues. Key positives are seen in housing provision and other positive impacts are likely in recreation (through addressing park provision) and sustainable travel support.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Glead Wood and Tan Pit Slip Site of Biological Importance borders the site to the west and is already under pressure from extensive housing development. There are woodlands protected by a Tree Preservation Order.	✖✖	Avoid direct impact upon the Site of Biological Importance and the trees covered by a Tree Preservation Order. Buffer zones required.	✖
	b) Species	There are a number of waterbodies and/or watercourses which will need a survey. Woodland habitat also exists outside the Site of Biological Importance and the Tree Preservation Order therefore loss of breeding bird habitat and foraging habitat for bats is probable, surveys will be required.	✖	Mitigation, compensation or enhancement proposals will need to be development specific depending upon survey results and detailed design.	0/?
2. Air quality	a) Air quality assessment	<p>Parts of the site (south east and south west areas) are covered by the Air Quality Management Area along the M6 motorway and the spur road of junction 25.</p> <p>There are some issues as a result of traffic on the A49 and Highfield Grange/Holmes House Avenue which a development in this location may detrimentally affect. Currently open land and this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures put into place.</p> <p>Travel is likely to be private vehicle</p>	✖	<p>Limited potential for mitigation. Restrictions for development within the Air Quality Management Area will need consideration.</p> <p>Public transport improvements to and from the town centre may help reduce use of private vehicle. Incorporating tree cover along major routes and within the development will help offset increase in air quality as a result of increasing use by private vehicle.</p>	✖

	b) Potential for proposed infrastructure to mitigate or enhance	Infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	xxx	Incorporate tree cover inc. small wooded areas and amenity open space into new development	xx?
	b) Impact on 'agricultural' land	Slowly permeable, seasonally wet, acid loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable forestry. Drainage is impeded with low fertility. Within the site there is a mix of agricultural land classifications including Grade 3b and 4.	x?	Top soil could be conserved and put to alternative use on/off site.	x
4. Water	a) Flood risk	The majority of the site falls within flood zone 1. However, the very north western tip is within a narrow band of flood zone 3. Less than 1% of the site is identified as being vulnerable to surface water flooding.	0/x?	Development would be avoided on the area of the site which lies within flood zone 3 Surface water can be attenuated to at least existing runoff rates	0
	b) Water supply	No water supply issues	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Enclosed farmland which retains a rural character with mainly arable farming. Some hedgerows remain but with few hedgerow trees. The M6 forms a dominant element imposed on the landscape with extensive cuttings and embankments. There are a number of plantation woodlands within and surrounding the site.	xx	Significant screening would be required from the M6 using native planting.	x?

6. Built environment	Historic designations	There are no known historic designations. Cranberry Farm is of potential interest	0/×	Development of the site does not affect any known historic designations. Further research required.	0/?
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not close enough for concern. Cross Border Offending – readily accessible from border depending on access points. Major Traffic Routes – very close to major routes such as M6 and A49. Vulnerable Localities Index – Low score on index	0/×	Access to the site should consider security	0
8. Neighbourhood quality	a) Amenity considerations	The local area is presently adversely affected by traffic congestion, particularly at peak times. New housing development would result in a notable increase in congestion therefore impacting further on the amenity of surrounding communities in Winstanley and Marus Bridge. There could be localised adverse perceived impact on amenity for those residents who appreciate the openness of the area as it is at present.	×	Mitigation through promoting sustainable transport alternatives could help to manage impacts.	×
	b) Environmental gain	The natural environment could be less attractive as a result of new built development. New development could create a perception of negative impact in terms of environmental quality.	×	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout design of scheme proposals. This would help to manage the impacts arising from new development.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact	×

10. Health	Comments	Approximately 5,700 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to an NHS dentist currently accepting new patients is reasonable. Access to fresh food within walking distance is also reasonable. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be moderate as access to the locality is through a dense urban area to the north which has fewer incidences of poor health.	×××	Site outside catchment area for all categories of parks. Potential to address this catchment gap. Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site and to act as buffer to M6 and slip road.	×
11. Recreation	Impact on existing recreational space and opportunity for enhancement	There are existing areas of mature woodland within and adjacent to the site. The area is crossed by 6 Rights of Way, one of which is identified as a traffic free cycle route with a rough surface and is included in the greenway network. There could be negative implications for users of the network. The site is outside the catchment area for all categories of parks.	0/×	Potential for woodland to be retained and Rights of Way to be retained and improved or relocated as a condition of development. Potential to address catchment gap in park provision. An increase in population would create demand making other sports and cultural facilities in the area more sustainable. There may also be potential for better links to Greenheart.	✓
12. Housing	Contribution to housing delivery targets	Assuming a density of 30 dwellings per hectare on a developable area of 75.91 hectares, the broad site option could potentially contribute approximately 2,270 dwellings towards meeting the borough's housing requirement. The broad site option abuts existing residential development to the north in Winstanley and would represent an urban extension of it. Proximity of the M6 motorway, the associated spur road and adjacent employment uses will require environmental/amenity	✓✓✓	Envisage potential for mix of housing types and tenures, including smaller and family homes. Broad site option is greenfield. Although capacity is reduced due to the presence of overhead power lines and a natural gas pipeline, the broad site option will be capable of making a major contribution towards the borough's overall housing supply.	✓✓✓

		buffer zones adjacent to these features.			
	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations the broad site option has the potential to deliver around 570 affordable units as part of the overall housing development.</p> <p>Broad site option is close to existing transport infrastructure and Primary Employment Areas EM1A 32, EM1A 33, EM1A 34 and EM1A 35.</p>	✓✓✓	<p>Set against the background of general affordability problems borough-wide, the housing affordability problem is moderate in this particular location compared to the borough as a whole.</p> <p>Therefore, affordable housing delivery is an important objective in this location.</p> <p>Opportunities for low carbon technologies to improve sustainability further.</p>	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 480 primary and 340 secondary school pupils. Primary schools in the area are currently overcrowded (by 64 places) and the development would result in the need for three 1-form entry primary schools or equivalent. The development would also result in a marginal capacity issue at local secondary schools.	×××	The provision of 3 new 1-form entry primary schools or equivalent and the modification and/or extension of existing secondary schools could address capacity issues	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Low levels of deprivation in the adjoining areas and low or very low levels in the surrounding areas.	××	No potential for contribution to measures to improve the outcomes of the residents in areas of deprivation.	××
15. Energy	a) Capacity	<p>Gas supply in local area. High pressure transmission pipeline: FM15 Bretherton to Warburton require consent and advice from the Health and Safety Executive and National Grid before development but no capacity issues</p> <p>Electricity: Spare Capacity not available as at 2011/12. Approved schemes to increase capacity</p>	××	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Large Investment may be needed affecting viability.	×

	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power may be feasible but not in area of dwellings (6.3m/s at 25m)			
16. Accessibility	a) Sustainable transport accessibility	There are 3 bus services on Highfield Grange Ave every 10-20 mins and 3 bus services on A49 Warrington Rd (high frequency). Nearest train station is Pemberton which is 1.6km away, and there are 2 direct bus services to the station. 5 footpaths cross the site and there is a traffic free cycle route within the site linking to North Ashton.	0	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. New bus service and promotion of existing bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	Junctions approaching or over capacity during the AM Peak times are the A49/B5238; A571/Holmes House Ave and at PM Peak times, the junction of A49/B5238 is approaching or over capacity. Average speeds < 10mph during AM Peak times are seen at the junction – B5238 Northbound (Marus Bridge Roundabout to Howden Drive) and at PM Peak times at the B5238 (Southbound approach to Marus Bridge Roundabout).	×××	Despite sustainable transport improvements / promotion, substantial number of peak time car borne trips will be generated by the site.	××
	Improvements / mitigation suggestions	New bus service would need to be provided to serve the site and promotion of existing bus and Wigan station(s) services. Existing walking routes and traffic free cycle route should be upgraded / promoted and new walking/cycling links provided/promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment as part of this option.	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	<p>Whilst the site is not proposed for employment development as part of this option it is in close proximity to deprived areas (within the top 30% most deprived) at Landgate.</p> <p>The key employment locations in close proximity to Junction 25 of the M6 are within easy walking and cycling distance and quality housing development may help long term sustainability of this area.</p> <p>Provision of higher quality housing could attract businesses to these employment areas looking to accommodate highly skilled staff to the area.</p>			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – North East of Bedford, Leigh

There are no key negatives following mitigation. However, some negatives do remain. Biodiversity issues due to tree preservation orders; air quality and congestion (which are linked); water issues due to the presence of a watercourse; the loss of greenfield (albeit limited); landscape character impacts and waste are all negative issues. Key positives centre on housing provision and the impact on deprivation in the area (specifically Higher Folds). Other positives are identified for sustainable travel and support for health outcomes, as well as a slight positive impact on recreation.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are woodland and individual trees covered by Tree Preservation Orders. There are areas of young plantation at Colliers Wood/Higher Folds (Forestry Commission).	xx	Avoid direct impact upon Tree Preservation Orders /areas of young plantation. Buffer zones required.	x
	b) Species	No existing records. Development could result in a loss of breeding bird habitat and foraging habitat for bats. Surveys will be required.	x	Mitigation/compensation or enhancement proposals will need to be development specific depending upon survey results and detailed design.	0/x
2. Air quality	a) Air quality assessment	There are some air quality issues as a result of traffic on the A572 which a development in this location may detrimentally affect. Currently open land and this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures put into place.	x	Incorporating tree cover along major routes and within the development will help offset increase in air quality as a result of increasing use by private vehicles.	x
	b) Potential for proposed infrastructure to mitigate or enhance	Large scale infrastructure is unlikely to be associated with development. Potential for improved walking/cycling links. Infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Mix of greenfield and brownfield land. Site is majority greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate	xx	Retain or replace existing playing field offer and existing green buffer and tree cover	x
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland. Drainage is impeded with moderate fertility. A mix of agricultural land classifications including Grade 3b and 4.	0	Top soil could be conserved and put to alternative use on/off site.	0

4. Water	a) Flood risk	A considerable 37% of the site is within flood zone 3 which includes 9% with intermediate / high vulnerability to surface water flooding.	×	Development should not occur within flood zone 3 areas and the parts of the site which are at intermediate to high risk of flooding. These areas should be designated as open space / water compatible uses only. Surface water can be attenuated to at least existing runoff rates	0
	b) Water supply	There is a watercourse running along the northern boundary of the site and a primary river running through the site.	×	Development should ensure it is as water efficient as possible. Buffer zones required for watercourse. Culverting should be avoided.	×
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Degraded and partially restored landscape which has been altered from its former state by mining, extraction and industrial uses. On much of the site there are areas of maturing woodland.	×	Consider strengthening existing planting and new native woodland planting.	×
6. Built environment	Historic designations	There are no known historic designations	0	Scheme proposals should employ sustainable design principles as a matter of good practice.	0

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not close to town centres but close to Higher Folds. Cross Border Offending – Not very close to border Major Traffic Routes – Reasonably accessible to A580. Close to Manchester Rd Vulnerable Localities Index – Close to high scoring areas on index.	0/×	Development would clearly have to consider access issues and security. Development may help contribute towards addressing deprivation issues in local area.	0
8. Neighbourhood quality	a) Amenity considerations	There may be some impact on local residents as a result of vehicular access. There may be localised adverse impact in terms of the perception of the effect on amenity for those residents who appreciate the openness of the area at present. As there is presently no built development on the site, new development would result in a loss of visual amenity to the surrounding area.	×	Mitigation could be achieved through the promotion of sustainable transport alternatives. The approach could help to manage impacts arising from new development of the site.	0/×
	b) Environmental gain	Natural environment could be less attractive as a result of development. Development likely to have a perceived negative impact on environmental quality.	×	Mitigation through incorporating natural and new environmental features in layout design should help to manage impacts.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact	×

10. Health	Comments	Approximately 1,300 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to an NHS dentist currently accepting new patients is poor. Access to fresh food within walking distance is very poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be moderate to low as access to the locality is through a dense urban area to the west but through a less built up area to east the. Fewer incidences of poor health occur in these areas. Access would not be through Higher Folds where health problems are worst.	0	Potential target area for allotment provision. Potential for investment in doctor and dental services. Potential to provide new local shopping centre. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	There are two outdoor sports facilities, two areas of woodland, an area of amenity greenspace and an area of semi natural greenspace. There are 11 Public Rights of Way within or immediately adjacent to site and one rough surface traffic free cycle route. Also adjacent to Leigh cemetery which has extended into the site. Within 3.2km catchment of principal park (Pennington Flash Country Park), 1.2km catchment of township park (Lilford Park) and within 600m catchment of an 'other' park (Bedford)	✗✗	Potential for outdoor sports facilities and areas of woodland, amenity greenspace and semi natural greenspace to be retained and improved or relocated as a condition of development. Pennington Flash Country Park, Lilford Par and Bedford Park could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	0/✓
12. Housing	Contribution to housing delivery targets	Assuming a density of 30 dwellings per hectare on a developable area of 20.03 hectares, the broad site option could potentially contribute approximately 600 dwellings towards meeting the borough's housing requirement.	✓✓✓	Potential for mix of housing types and tenures, including smaller and family homes. May have lower development costs due to nature of the land.	✓✓✓

	Provision of affordable / sustainable homes	<p>Subject to economic viability considerations the broad site option has the potential to deliver around 150 affordable units as part of the overall housing development.</p> <p>Greenfield broad site option may make provision of affordable housing more viable.</p> <p>The broad site option is sustainably located and would represent an urban extension of existing development to the east of Leigh. Access to the A572 and the A580 East Lancashire Road, and is close to existing services in the Leigh centre.</p> <p>Primary Employment Area at Leigh Commerce Park is 1km away.</p>	✓✓✓	<p>While there is a general affordability problem across the borough, housing affordability problems are lower in this location when compared to the borough as a whole.</p> <p>Nonetheless, affordable housing delivery remains an important objective</p>	✓✓✓
13. Education	Education facilities / capacity	The development is likely to yield around 115 primary and 80 secondary school pupils. There is little capacity in local primary schools and development will require the provision of around 120 additional places. There is sufficient capacity in local secondary schools.	✗	The modification and/or extension of existing primary schools could address capacity issues	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	High levels of deprivation in the adjoining Higher Folds estate and moderate to low levels in the surrounding areas.	✓	Potential for contribution to measures to improve the outcomes of the residents on the Higher Folds estate.	✓✓
15. Energy	a) Capacity	Gas supply in local area – no capacity issues Electricity: Spare Capacity as at 2011/12	0	Development needs to ensure it is as energy efficient as possible in order to retain future capacity.	0
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (6.1m/s at 45m)			

16. Accessibility	a) Sustainable transport accessibility	<p>Leigh-Salford-Manchester Busway 1.1km</p> <p>Queensway has 3 bus services (high frequency route). A572 has 9 bus services (possible combined high frequency)</p> <p>Nearest rail station is Atherton at 3.2km away with 2 direct bus services.</p> <p>3 footpaths cross the site and a traffic free cycle route crosses the site linking to Tyldesley (Guided Busway).</p>	✓	<p>New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations.</p> <p>Promotion of existing bus / rail services likely to encourage increase in patronage.</p>	✓
	b) Existing peak time congestion	<p>Junctions approaching or over capacity at AM Peak times: A572/Green Lane</p> <p>Average speeds < 10mph: None</p>	✗	Despite sustainable transport improvements / promotion, an increase in the number of peak time car borne trips will be generated by the site.	✗
	Improvements / mitigation suggestions	Promotion of existing bus services (and including the guided busway in the future). Existing walking and cycling routes to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	<p>Whilst the site is not proposed for employment development it is located within a community in the top 10% most deprived in England (Higher Folds South).</p> <p>The site is in close proximity to key employment locations in Leigh, notably Leigh Commerce Park, and within 2km of the A580 East Lancashire Road which is a major transport link into Liverpool and Manchester. Quality housing development may help the long term sustainability of these employment areas.</p>			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – East of Hooten Gardens, Leigh

Key negatives are centred on soil and minerals due to the loss of greenfield land as well as the loss of agricultural land. Loss of landscape character is another key negative. Other negatives are water issues due to the presence of water courses; poor sustainable travel options (despite mitigation); congestion and waste. Key positives arise in housing due to the attractiveness of the site, and recreation due to supporting and improving current access. Other positives are the ability of development to help improve the biodiversity of the location as well as supporting health outcomes.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are no designated sites within or close to the site. There is a Tree Preservation Order outside of the site boundary near Bedford Brook.	0	Offsite enhancement could benefit biodiversity as a result of any development.	✓
	b) Species	No existing records for the site. There are a number of waterbodies/ watercourses which will require a survey. Development may result in the loss of breeding bird habitat and foraging habitat for bats. Surveys will be required.	×	Mitigation/compensation or enhancement proposals will need to be development specific depending upon survey results and detailed design.	0
2. Air quality	a) Air quality assessment	No particular air quality issues in immediate locality. Some issues as a result of traffic on the A572, A574 and A580 which a development in this location may detrimentally affect. Currently open agricultural land this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures put into place.	0	Incorporating tree cover along major routes and within the development will help offset increase in air quality as a result of increasing use by private vehicle.	0
	b) Potential for proposed infrastructure to mitigate or enhance	Infrastructure investment at the site would have limited impact on air quality issues – would need to be linked into a network-wide approach. Improved access to public transport infrastructure as well as improved walking and cycling routes would likely assist.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	×××	Retain and/or improve level of tree cover and hedge row buffer on canal side.	×××
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with	××	Top soil could be conserved and put to alternative use on/off site.	××

		some arable woodland in agricultural use. Drainage is impeded with moderate fertility. Classified as grade 3b agricultural land.			
4. Water	a) Flood risk	The western edge of the site borders Bedford Brook. 15% of the site at its south west corner falls within flood zone 3. Site is adjacent to the Bridgewater canal and lies lower than the canal	xx	Development would be avoided on the area of the site which lies within flood zone 3. Surface water can be attenuated to reflect at least existing runoff rates Mitigation measures to protect development from the risk of overtopping of the canal	0
	b) Water supply	Primary river running along eastern boundary of the site. Primary river running through site.	xx	Environment Agency would require buffer zones and would object to watercourses being culverted. Development should ensure it is as water efficient as possible.	x
	c) Waste water	No waste water issues	0	Use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources is likely to remain negative in the context of rising demand and climate change.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Part of the wider mossland landscape defined to the north by the Bridgewater Canal. A low-lying landscape with few remaining hedgerows. No longer of original mossland character.	xx	Mitigate views from the canal, eastern and southern boundaries. Existing buffer on western side should be retained and strengthened.	xx
6. Built environment	Historic designations	The Bridgewater Conservation area is located off-site to the immediate north, and extends to the north-west. Bedford Hall – Grade II listed building is located to the south, approximately 0.4km from the site centre.	x	Development here has the potential to make a positive impact providing sustainable design principles are used. The approach will take account of the impact of development on identified heritage assets.	0/x

7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not close to town centres but close to Higher Fold. Cross Border Offending – Not very close to border Major Traffic Routes – Good access to A580. Close to Manchester Rd Vulnerable Localities Index – Some relatively average scoring areas on index.	0/×	Development would clearly have to consider access issues and security	0
8. Neighbourhood quality	a) Amenity considerations	Impacts on residents in adjoining estates would be likely to arise as a result of vehicular access. There could be localised impact in terms of the perception of the effect of development on amenity for those residents who appreciate the openness of the area at present. With no significant levels of built development currently on the site, new development could result in a perception of reduced visual amenity in the surrounding area.	×	Mitigation could be achieved through the promotion of sustainable transport alternatives. The approach could help to manage impacts arising from development of the site.	0/×
	b) Environmental gain	The natural environment could be less attractive as a result of new development. Development could lead to a perception of negative impact in terms of its effect on environmental quality.	×	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach would help to manage impacts arising from development.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact	×

10. Health	Comments	Approximately 1,400 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is reasonable. Access to fresh food within walking distance is poor. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be moderate as access is through a dense urban area to the west and north with moderate incidences of poor health.	×	Potential for investment in doctor and dental services. Potential to provide new local shopping centre. Ensure residential travel plan is in place and appropriate green space and trees are provided on approaches to site.	✓
	Impact on existing recreational space and opportunity for enhancement	There are no open space designations on site. Two public rights of way are within or immediately adjacent to the site. The Bridgewater Canal adjoins the northern edge. There is woodland as well as built and outdoor sports facilities adjacent (north of canal). Within 3.2km catchment of principal park (Pennington Flash Country Park), 1.2km of township park (Pennington Hall) and 600m of an 'other' park (Dootson's)	0	Potential to maintain Public Rights of Way and provide improved access to woodland and canal network. Pennington Flash Country Park, Pennington Hall Park and Dootson's Park could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✓✓
12. Housing	Contribution to housing delivery targets	Assuming a density of 30 dwellings per hectare on a developable area of 18.12 hectares, the broad site option could potentially contribute approximately 544 dwellings towards meeting the borough's housing requirement. Greenfield broad site option. Proximity to East Lancs. Road and links to Manchester and Salford.	✓✓✓	Potential for a range of housing types and tenures. Greenfield broad site option is likely to have lower development costs.	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations the broad site option has the potential to deliver around 136 affordable units as part of the overall housing development.	✓✓✓	Set against the background of general affordability problems borough-wide, the housing affordability problem is moderate to	✓✓✓

		<p>Development would form an urban extension of existing development in the south-east of Leigh.</p> <p>Lower development costs and greenfield factor likely to make provision of affordable units more viable in this location.</p> <p>Primary Employment Area (Hope Carr Commerce Park) is within 1km of the broad site option.</p>		<p>high in this particular location compared to the borough as a whole.</p> <p>Therefore, affordable housing delivery is a very important objective here.</p> <p>May present opportunities for low carbon technologies.</p>	
13. Education	Education facilities / capacity	<p>The development is likely to yield around 125 primary and 90 secondary school pupils. Local primary schools are at capacity therefore development will require the provision of around 125 additional primary places. There is sufficient capacity at local secondary schools.</p>	×	<p>The modification and/or extension of existing primary schools could address capacity issues</p>	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	<p>Moderate levels of deprivation in the adjoining areas and high to moderate levels in the surrounding areas.</p>	0	<p>Some potential for supporting wider community infrastructure which supports residents in Higher Folds/Marshland Green area.</p>	0/✓
15. Energy	a) Capacity	<p>Gas supply in local area – no capacity issues</p> <p>Electricity: Spare Capacity as at 2011/12</p>	0	<p>Development needs to ensure it is as energy efficient as possible in order to retain future capacity.</p>	0
	Renewables: Qualitative assessment	<p>Solar potential is reliant on construction of dwellings.</p> <p>Wind power probably unfeasible in area of dwellings (6.1m/s at 45m)</p>			
16. Accessibility	a) Sustainable transport accessibility	<p>Leigh Salford Manchester Busway 1km</p> <p>The majority of the site is > 400m from existing bus services.</p> <p>A574 Warrington Rd has 4 bus services (at least 1 / hr).</p> <p>Nearest rail station is Atherton at 4.4km away, there is no direct bus service.</p> <p>A footpath crosses the site.</p>	×	<p>New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations.</p> <p>New bus service and promotion of existing bus / rail services likely to encourage increase in patronage.</p>	×?

		Bridgewater canal towpath forms northern boundary of the site.			
	b) Existing peak time congestion	Junctions approaching or over capacity at both AM and PM Peak times is the A574/A580. Average speeds < 10mph: None	×	Despite sustainable transport improvements / promotion, an increase in the number of peak time car borne trips will be generated by the site.	×
	Improvements / mitigation suggestions	Would require new bus services to serve the site as well as promotion of existing bus services (including the guided busway). Existing walking and cycling routes would need to be upgraded (inc canal towpath) / promoted and new walking and cycling links provided / promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	<p>Whilst the site is not proposed for employment development it is located in close proximity to deprived communities.</p> <p>The site is also in close proximity to key employment locations in Leigh, notably Leigh Commerce Park and within 1km of the A580 East Lancashire Road which is a major transport link into Liverpool and Manchester. Quality housing development may help the long term sustainability of these employment areas.</p>			
18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – Land at Coldalhurst Lane, Astley

Key negative issues are identified for soil and minerals due to the loss of greenfield land which is not easy to mitigate; and also the loss of landscape character which, due to the size of the site, is also difficult to mitigate. Other negative impacts are seen in biodiversity due to the presence of bats and bird species although surveys would need to be undertaken; loss of agricultural land, congestion issues, energy and waste. Key positives are identified for housing provision and the ability of the site to support local recreation provision. Other positives are notable in improving health outcomes, helping tackle deprivation issues (as development here may assist Blackmoor local centre) and sustainable travel provision.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	There are no Sites of Biological Importance in or close to the site. There are a small number of Tree Preservation Orders on the periphery of the site.	×	Tree Preservation Order trees should be retained. A buffer zone along the brook should be considered.	0
	b) Species	Bats have been recorded in this area and there are records suggesting a good range of bird species. Surveys are needed. Hedgerows need additional survey to confirm whether important.	×	Linkages should be retained along the brook. Mitigation/compensation or enhancement proposals will need to be development specific depending upon survey results and detailed design.	×
2. Air quality	a) Air quality assessment	Air Quality Management Area on A580 (East Lancashire Road) Access to the location will be predominantly via the East Lancashire Road rather than through the borough. Air quality should not be affected greatly in residential areas or along major routes into the borough. However, travel is likely to be private vehicle.	×	Incorporating tree cover along the major routes into the Borough and within the development will help offset decrease in air quality as a result of increasing use by private vehicle.	×
	b) Potential for proposed infrastructure to mitigate or enhance	Limited potential for large scale infrastructure at location. Any infrastructure investment at the location would have limited impact on air quality issues – would need to be linked into a network-wide approach.			0
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is greenfield. Impact would be permanent loss of greenfield. Not easy to mitigate.	×	Retain tree cover and improve buffer between existing development and the East Lancashire Road. Retain green corridor for brook running through the site	×

	b) Impact on 'agricultural' land	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable woodland. Drainage is impeded with moderate fertility. Grassland classified as grade 3b agricultural land.	×	Top soil could be conserved and put to alternative use on/off site.	×?
4. Water	a) Flood risk	There are flood concerns at Lark Hill, 20% of the site area is in flood zone 2 and 12% is in flood zone 3 following the line of Astley Brook and including within it, 38% at intermediate and high risk of surface water flooding.	××?	There will be no development within flood zone 3 and / or areas identified at intermediate or high risk of surface water flooding. These areas can be designated as public open space/water compatible uses only. Surface water can be attenuated to reflect at least existing run-off.	0?
	b) Water supply	United Utilities report no or minor capacity / servicing / cost issues.	0	Development should ensure it is as water efficient as possible.	0
	c) Waste water	Site with major capacity constraints/ servicing/ cost issues.	××	Use of sustainable drainage systems should be encouraged. Investment in the waste water network is programmed (application received).	0
	Other comments	Astley Brook (designated Main River) flows to the southern end of this broad location. The prior written consent of the Environment Agency will be needed for any proposed works in, over, under or within 8m of either bank top of the channel. A non-main watercourse flows through this broad location and this will need to be protected also as part of any strategic development proposals. For ecological reasons, a minimum undeveloped buffer zone of 5 meters from top of bank should be maintained. Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			
5. Landscapes	Qualitative assessment against SA objective and sub-criteria	The site is totally enclosed by housing and the A580 East Lancashire Road. Significant parts are still in agricultural use and defined by hedgerows and hedgerow trees.	××	Conserve and manage remaining hedgerows. Consider native planting to screen new development. Impact will remain due to comparatively small size of the site.	××?

6. Built environment	Historic designations	There are no known historic designations	0	Sustainable development principles and guidelines should be established, and incorporated into all development scheme proposals.	0
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – Not close to a town centre. In “commuter” area Cross Border Offending – Very close to borough boundary with Salford. Major Traffic Routes – Direct access to East Lancashire Road Vulnerable Localities Index – Some middle scoring areas causing concern,	×	Development would clearly have to consider access issues and security	0/×
8. Neighbourhood quality	a) Amenity considerations	There would be some minor negative impact on amenity experienced by residents in Astley as a result of vehicular access. Localised adverse amenity impact would be experienced by those residents who appreciate the openness of the area as it is at present.	×	Mitigation could be achieved by promoting sustainable transport alternatives. The approach could help to manage adverse impacts arising from the development.	0/×
	b) Environmental gain	The natural environment could be less attractive as a result of new development. Development could be perceived as having an adverse impact on environmental quality.	×	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach could help to manage impacts arising from development.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact	×

10. Health	Comments	Approximately 600 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to a NHS dentist currently accepting new patients is reasonable. Access to fresh food within walking distance is good. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be low as access is through areas of low density to the east and west and several points of access to the location are possible from the A572. However the impact would be severe impact on the area to the north where existing health problems are also the most severe (Prince's Avenue).	✗	Potential to support further fresh food shop at Blackmoor local centre. Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on all approaches to the sites.	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	No open space designations on the site. Six Public Rights of Way within or immediately adjacent to the site. Outdoor sports facility adjacent to the site on the other side of the A572 at St Ambrose Barlow RC Primary School. Traffic free cycleway with a good surface on the other side of East Lancashire Road adjacent to site. Outside catchment area for all categories of park.	✓	A well designed development has the potential to contribute positively to the open space provision in this area particularly in areas identified as flood zones 2 and 3 and risk of surface water flooding. Potential to address gap in park provision in Astley. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✓✓✓
12. Housing	Contribution to housing delivery targets	Assuming a density of 30 dwellings per hectare on a developable area of 7.62 hectares, the broad site option could potentially contribute approximately 229 dwellings towards meeting the borough's housing requirement.	✓✓✓	Potential for mix of general market housing types. Greenfield	✓✓✓
	Provision of affordable / sustainable homes	Subject to economic viability considerations the broad site option has the potential to deliver around 57 affordable units as part of the overall housing development.	✓✓✓	Set against the background of general affordability problems borough-wide, the housing affordability	✓✓✓

		<p>Greenfield development values should aid the prospects for the delivery of affordable units.</p> <p>Broad site option is located 0.3km from the Chaddock Lane Primary Employment Area. Broad site option is close to the Astley local centre.</p> <p>Abuts the A580 East Lancashire Road to the south, which acts as a constraint to development. Well situated for access to employment opportunities in Salford and Manchester and is also close to the line of the protected route of the proposed Leigh Guided Busway.</p> <p>Development would be an urban extension of existing residential development south of the A572 Manchester Road centred around Coldalhurst Lane.</p>		<p>problem is moderate to high in this location compared to the borough as a whole.</p> <p>Therefore, affordable housing delivery is considered a very important objective in this location.</p> <p>Opportunities for green infrastructure and amenity buffer zones to protect development closest to the line of the A580 East Lancs. Road.</p> <p>Opportunities for low carbon technologies and higher standards of sustainability in design.</p>	
13. Education	Education facilities / capacity	<p>The development is likely to yield around 50 primary and 35 secondary school pupils. This would result in the need for the provision of around 40 additional primary places. There is sufficient capacity at local secondary schools.</p>	✗	<p>The modification and/or extension of an existing primary school could address capacity issues</p>	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	<p>Low or very low levels of deprivation in the adjoining areas and low or very low levels in the surrounding areas but high levels in the Blackmoor area.</p>	0/✓	<p>Potential for contributions to improve the outcomes of the residents in areas of deprivation – notably through supporting the local centre.</p>	✓
15. Energy	a) Capacity	<p>Gas supply in local area including High Pressure distribution pipeline running parallel and close to East Lancashire Road (south west) from Astley House end of the site to midway along site length require consent and advice from the HSE and National Grid before development but no capacity issues</p> <p>Electricity: Spare Capacity as at</p>	✗	<p>Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Large Investment may be needed affecting viability.</p>	✗

		2011/12			
	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (5.6m/s at 45m)			
16. Accessibility	a) Sustainable transport accessibility	There are 10 bus services on the A572 (combined to give possible high frequency route) and the Leigh Salford Manchester Busway is 2km away. The nearest rail station is Atherton at 3.3km from the site and there is 1 direct bus service. 4 footpaths cross the site and the A580 traffic free cycle route runs to the south of the site.	✓	New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations. Promotion of existing bus / rail services likely to encourage increase in patronage.	✓
	b) Existing peak time congestion	Junctions approaching or over capacity at both AM and PM Peak times are the A572/Princess Ave; Higher Green Lane/A580 and the A572/A580. Average speeds < 10mph: None	✗	Despite sustainable transport improvements / promotion, an increase in the number of peak time car borne trips will occur.	✗
	Improvements / mitigation suggestions	Promotion of existing bus, but limited rail promotion and limited connection to Leigh Salford Manchester busway. Existing walking routes would need to be upgraded / promoted and new walking and cycling links provided / promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Located on the A580 East Lancashire Road Corridor which is a key transport link to the Manchester and Liverpool City Regions. The key employment location at Chaddock Lane is in close proximity and within easy walking and cycling distance and quality housing development may help the long term sustainability of this area.			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment	n/a	Not applicable	n/a
	Owner constraints	Not applicable			

Sustainability Appraisal – South of Atherton

After mitigation there are no key negatives. However, some negative issues do remain concerning species (due to a record of bats in the area) and the probability of other species on site; congestion issues and the possible impact of energy issues. Key positives arise from it being a brownfield location, the ability to support recreation activity, housing provision and the impact on deprivation – notably the Hag Fold estate. Specific infrastructure investment here would have a wider positive effect on the air quality of the network. Other positives are likely in sustainable travel and health outcomes.

SA objective and sub criteria		Comments	Basic score	Mitigation / Enhancement Comments	Residual impact
1. Biodiversity	a) Designated sites	Atherton Wood and Lilford Wood Site of Biological Importance are close to the south of the site. There are Tree Preservation Orders within the site (19 individual trees). Woodland and scrub to south east forms important corridor.	0	Ensure a buffer is retained and strong linkages allow for habitat connectivity	0
	b) Species	There are records for bats in the general area and it is probable the site supports water vole and great crested newt. Some acid grassland identified along the brook is a potential priority habitat site. Detailed survey needed.	×	Linkages should be retained along the brook and acid grassland retained. Species mitigation is likely to be needed following survey work, and will need to inform the specific development proposals/design.	×
2. Air quality	a) Air quality assessment	No particular air quality issues in immediate locality. Some issues as a result of traffic on the A577 and B5215 which a development in this location may detrimentally affect. Currently open agricultural land this can help alleviate some air quality issues, which would be lost if developed unless mitigation measures put into place.	×	Incorporating tree cover along major routes and within the development will help offset increase in air quality as a result of increasing use by private vehicle.	0/×
	b) Potential for proposed infrastructure to mitigate or enhance	New link road proposed through site connecting A577- B5215 (opportunity to 'capture' Atherton area for sustainable transport / community), new bus service through site to link Leigh Salford Manchester busway with Atherton station. Promotion of existing bus (inc. Leigh Salford Manchester busway) and Atherton station services. Existing walking and cycling (NCN 55) routes to be upgraded / promoted and new walking and cycling links to be			✓✓?

		provided / promoted to serve key local destinations. If delivered appropriately would assist with wider air quality issues.			
3. Soil and minerals	a) Brownfield / greenfield proportion	Site is majority brownfield. Evidence of spoil/shale on parts of the site.	✓	Retain small pockets of tree cover	✓✓
	b) Impact on 'agricultural' land	Slowly permeable seasonally wet acid loamy and clayey soils, with seasonally wet pastures and woodlands. Grassland with some arable forestry. Drainage is impeded with low fertility. Majority classified as grade 3b agricultural land mainly used for grazing with small pockets of farmed grassland.	0/✗	Top soil could be conserved and put to alternative use on/off site.	0/✗
4. Water	a) Flood risk	Part of site near Lodge Farm is covered by flood zone 2 (less than 1%) and 3 (7%). 4% of the site has an intermediate/ high vulnerability to surface water flooding.	✗	There will be no development within flood zone 3 and / or areas identified at intermediate or high risk of surface water flooding. These areas can be designated as public open space/water compatible uses only. Surface water can be attenuated to reflect at least existing run-off.	0
	b) Water supply	No water supply issues	0	Development should be designed to ensure it is as water efficient as possible.	0
	c) Waste water	No waste water issues	0	The use of sustainable drainage systems should be encouraged.	0
	Other comments	Although water supply can be provided (at a cost), the overall impact on water resources in the context of rising demand and climate change needs to be considered.			

5. Landscapes	Qualitative assessment against SA objective and sub-criteria	Fragmented, undulating enclosed farmland. Retains a form of agricultural character, although adversely affected by urban/suburban pressure and disturbance, resulting in generally low-grade farmland. Has also been affected directly by previous mining activities, followed by reinstatement. This has returned the land to agricultural use but often in a degraded form. Many of the pre-industrial field boundaries however still remain and are represented by small to medium fields.	0?	There is limited potential to mitigate. Public open space and woodland may be incorporated into development.	0?
6. Built environment	Historic designations	There are no known historic designations. However, Lodge Farm has the potential to be of architectural/historic significance (subject to further research).	0	Sustainable development principles should be established and these should be incorporated into future development scheme proposals.	0/✓
7. Community safety	Qualitative assessment completed to identify area characteristics and potential issues	Proximity to Town Centre – The area is a short distance from the nearest town centre (Atherton) but a fair distance from the comparatively larger Leigh town centre. Cross Border Offending – The area, although towards the edge of the borough is still unlikely to suffer from any cross-border offending. Major Traffic Routes – The site is poorly served by road infrastructure being some distance from the major A580 and A578. It is a little closer to the A571 but travelling offenders are unlikely to be accessing here. Vulnerable Localities Index – Atherton has relatively high crime rates (in a borough-wide context). Neighbouring areas fall within the top 21-30% crime locations in the UK.	0	Development would have to consider access issues and security	0/✓

8. Neighbourhood quality	a) Amenity considerations	<p>As there is presently no significant built development currently on the site, there would be a perception of loss of visual amenity among those living in the surrounding area.</p> <p>There would be light to moderate adverse amenity impact arising from increased vehicular access.</p> <p>Surveillance opportunities may be improved as a result of development although this is considered a marginal benefit.</p>	×	Mitigation could be achieved by promoting sustainable transport alternatives. These could help to manage impacts arising from development	0/×
	b) Environmental gain	<p>Some adverse environmental impact is likely as the land is currently enclosed farmland. The land is presently in a degraded form and, while development would perhaps bring some improvement in parts, it is likely to be detrimental overall.</p>	×	Mitigation could be achieved by incorporating existing natural and new environmental features in the layout and design of scheme proposals. The approach should help to manage impacts arising from development.	0/×
9. Waste	Comments	Housing development will inevitably lead to increased waste production	×	Requiring site waste management plans on new development sites will have marginal positive impact	×

10. Health	Comments	Approximately 3,300 additional residents would require access to GP and dental services. The nearest GP is currently accepting new patients. Access to an NHS dentist currently accepting new patients is good. Access to fresh food within walking distance is good. The health impact of additional traffic generated by new residents on existing residents in the immediate surrounding areas would be moderate as access is through a dense urban area to the north which has existing moderate health problems. Access to this site is not likely to be through Hag Fold where health problems are the most severe.	0	Potential for investment in doctor and dental services. Ensure residential travel plan is in place and appropriate green space and trees are provided on all approaches to the sites.	✓
11. Recreation	Impact on existing recreational space and opportunity for enhancement	One area of amenity greenspace on site with another adjacent. One outdoor sports facility on site with three others adjacent, two with built facilities within them (Howe Bridge & Fred Longworth High School). One semi-natural greenspace on site with allotment (non-statutory) adjacent to that. One semi-natural greenspace adjacent to site. One existing area of woodland on site with two adjacent to site. Six Public Rights of Way within or immediately adjacent to site of which is a traffic free cycleway with part good quality and part rough surface, also part of greenway network. Within 1.2km catchment of township park (Central Park, Atherton).	✗	Potential for further amenity greenspace, woodland and some semi-natural greenspace to be retained; and Rights of Way and outdoor sports facility to be retained and improved or relocated as a condition of development. Central Park, Atherton could benefit from investment. An increase in population would create demand making other sports and cultural facilities in the area more sustainable.	✓✓
12. Housing	Contribution to housing delivery targets	Assuming a density of 33 dwellings per hectare on a developable area of 46.5 hectares, the broad site option could potentially contribute approximately 1,550 dwellings towards meeting the borough's housing requirement.	✓✓✓	Envisage potential for mix of housing types, including smaller and family homes.	✓✓✓
	Provision of affordable / sustainable	Subject to economic viability considerations the broad site option has the potential to	✓✓✓	The broad site option straddles two Wards with housing	✓✓✓

	homes	<p>deliver around 388 affordable units as part of the overall housing development.</p> <p>Proximity to Primary Employment Areas at Gibfield (0.6km) and Chanters Industrial Estate (0.2km), as well as general proximity to the A580 East Lancashire Road with access to employment opportunities in Salford and Manchester. Broad site option is also close to the line of the protected route of the proposed Leigh Guided Busway.</p> <p>Development would be an urban extension of existing development in Howe Bridge, south of Atherton centre and Hindsford, with line of former mineral railway and Green Belt to the south representing the limit of development.</p>		<p>affordability varying between the Wards. The majority of the broad site option is in the Atherleigh Ward where affordability problems are moderate to high when compared to the borough as a whole. The north-eastern part is in the Atherton Ward where the affordability problem is more severe compared to the borough as a whole.</p> <p>Therefore, affordable housing delivery is considered a very important objective here.</p>	
13. Education	Education facilities / capacity	The development is likely to yield around 325 primary and 230 secondary school pupils. With little capacity at local schools, the development would result in the need for the provision of a new 1.5-form entry primary school or equivalent and an additional 250 secondary places.	xx	The provision of a new 1.5-form entry primary school and the modification and/or extension of existing secondary schools could address capacity issues.	0
14. Community	Index of Multiple Deprivation - <i>potential to address the inequality gap</i>	Accessible from Hag Fold and Atherton area which are areas of multiple deprivation. Moderate levels of deprivation in the adjoining areas and moderate levels in the surrounding areas but high level in the Hag Fold estate.	0/✓	Some potential to improve the outcomes of the residents in nearby/adjacent areas of deprivation through support for wider community infrastructure.	✓
15. Energy	a) Capacity	Gas supply in local area. High pressure transmission pipeline: FM21 Mawdesley to Warrington require consent and advice from the Health and Safety Executive and National Grid before development but no capacity issues Electricity: Spare Capacity as at 2011/12	x	Development needs to ensure it is as energy efficient as possible in order to retain future capacity. Large Investment may be needed affecting viability	x

	Renewables: Qualitative assessment	Solar potential is reliant on construction of dwellings. Wind power probably unfeasible in area of dwellings (6.2m/s at 45m)			
16. Accessibility	a) Sustainable transport accessibility	<p>The majority of the site is > 400m from bus services.</p> <p>There are 10 bus services on the A577 (possible combined high frequency route) and 9 bus services on B5215 (high frequency route)</p> <p>Leigh Salford Manchester Busway 1km</p> <p>Nearest rail station is Atherton at 1.5km away with 4 direct bus services.</p> <p>Footpaths cross the site and traffic free cycle routes to the south of the site linking to Howe Bridge and Leigh Salford Manchester Busway (National Cycle Network 55).</p>	0	<p>New, upgraded / promoted walking and cycling links will offer more attractive sustainable access to key locations.</p> <p>New bus service and promotion of existing bus / rail services likely to encourage increase in patronage.</p>	✓
	b) Existing peak time congestion	<p>Junctions approaching or over capacity:</p> <p>AM Peak – B5215/B5235; B5235/A579; B5235/A577; A579/A577 (Gibfield); A577/Hamilton St; A577/Shakerley Rd</p> <p>PM Peak – B5215/B5235; B5235/A579; B5235/A577; A579/A577 (Church St)); A577/Hamilton St; A577/Shakerley Rd</p> <p>Average speeds < 10mph: None</p>	xx	New link road if managed well and complementary to sustainable transport / community mitigation should reduce negative traffic impact.	0/x?
	Improvements / mitigation suggestions	New link road proposed through site connecting A577- B5215 (opportunity to capture Atherton area for sustainable transport / community), new bus service through site to link Leigh Salford Manchester busway with Atherton station. Promotion of existing bus (inc. Leigh Salford Manchester busway) and Atherton station services. Existing walking and cycling (NCN 55) routes to be upgraded / promoted and new walking and cycling links to be provided / promoted to serve key local destinations.			
17. Sustainable economy	a) 'Appropriate' employment provision in deprived areas	Site not proposed for employment	n/a	Not applicable	n/a
	b) Local food production	Site development could include the provision of allotments and/or gardens			✓
	Other Comments	Although location is not proposed for employment it is in close proximity to deprived communities (including some in the top 10% most deprived in England). Site is within 1.5km of the key employment location at Gibfield and quality housing development may help long term sustainability of this area.			

18. Economy and employment	Attractiveness for employment development / raising Wigan's economic profile	Site not proposed for employment.	n/a	Not applicable	n/a
	Owner constraints	Not applicable			