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# Stratford-on-Avon District Council Assessment of Potential New Settlements and Sustainable Urban Extensions

Final Report

On behalf of **Stratford-on-Avon District Council**



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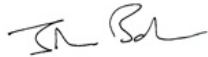
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# 1 Introduction and Approach

- 1.1.1 Peter Brett Associates (PBA) has been appointed to support Stratford-on-Avon District Council (SDC) by undertaking an Assessment of Potential New Settlements or Sustainable Urban Extensions.
- 1.1.2 SDC are currently reviewing their housing requirements and technical work suggests that SDC will need to provide a total of 9,500 dwellings for the period 2008 to 2028. SDC consider that making provision for housing in the Local Plan may require provision of a sustainable urban extension (SUE) or a new settlement to provide about 2,000 dwellings.
- 1.1.3 Initial housing trajectory work suggests that SDC will need any potential strategic development to deliver at the following minimum rate:
- 200 dwellings between 2013/14 and 2017/18;
  - 850 dwellings between 2017/18 and 2022/23;
  - 850 dwellings between 2022/23 and 2027/28.
- 1.1.4 SDC undertook an initial strategic assessment of potential locations across the district entitled “Large Scale New Settlement Assessment – Stratford-on-Avon District Council Technical Paper June 2013”. This subsequent study by PBA undertakes a further assessment of locations identified through this technical paper to help inform the Council’s plan making.

## 1.2 Objectives and Method

- 1.2.1 The brief for this study sets out a requirement to assess six sites in terms of their feasibility and suitability and also the ability to deliver infrastructure required to support the development. This work will help inform the decision making and provide evidence to assist in the consideration of a possible new settlement or strategic urban extension in Stratford District.
- 1.2.2 The work combines elements of, Strategic Housing Land Availability Assessment (SHLAA) and Infrastructure Delivery Plan (IDP) work. PBA is very familiar with the principles of SHLAA assessments having undertaken in excess of 50 separate SHLAA commissions. Similarly, PBA has worked on several IDP, including IDP advice for Local Authorities on behalf of the Planning Advisory Service.
- 1.2.3 The brief states that the assessment of New Settlements (NS) or Sustainable Urban Extensions (SUE) should include:
- The strategic “deliverability” of a NS or SUE (i.e. suitability, availability and achievability), and high level identification of barriers to development and potential means to resolve them;
  - The identification and indicative costing of the major infrastructure items needed to support development in that location.
- 1.2.4 The finding and recommendations of the study are based on the matters that have been presented and considered in the Study. It is important to note that the Council will need to consider wider planning issues to help inform their decision making such as the demand for housing and its spatial distribution. These matters are outside the remit of this project.

## Site Selection

1.2.5 Stratford-on-Avon District Council (SDC) has undertaken work on settlement function and the spatial distribution of development to identify a selection of potential locations across the District. Promoted development sites within these areas that have the ability to provide a development of strategic scale (2000+ dwellings) have been identified by the Council for assessment by PBA. The six sites identified for the study by the Council are:

- Option 1: Southam Cement Works (New Settlement);
- Option 2: Long Marston (New Settlement);
- Option 3: Lighthorne Heath (New Settlement).
- Option 4: West of Alcester (Sustainable Urban Extension);
- Option 5: Harbury Estate (Sustainable Urban Extension);
- Option 6: South East Stratford (Sustainable Urban Extension);

1.2.6 PBA proposed a two part approach to meet the Council's Objectives. The Consultants have been instructed to assess all sites in part 1 and only Options 2, 3 and 6 in Part 2.

### Part 1 – Site Assessment (Suitability, Availability and Achievability)

1.2.7 A desk based exercise has been undertaken utilising constraint data, information provided by the Council and site promoter's submissions. The work:

- Provides a Site Assessment of deliverability (i.e. availability, suitability and achievability), specifically:
  - Confirming site availability with owner/promoters
  - Reviewing policy and development constraints to confirm suitability in principle
  - Undertaken mini market review to illustrate market appetite for delivery
- Produces a broad land use budget including an estimate of the capacity of each location. This includes a review of council policies in respect of infrastructure provision, such as open space and education, and the consideration of development mix and density in light of the market for delivery.

1.2.8 Part 1 establishes baseline information, to inform the Council's choice of a strategic option.

### Part 2 – Infrastructure Requirements and Service Providers Consultation

1.2.9 Part 2 builds on the baseline assessment by considering the infrastructure requirements and the viability of sites. Part 2 specifically undertakes the following:

- Consultation with infrastructure stakeholders such as transport, education, health, open space and emergency services to establish the infrastructure requirements for each location including costs;

- Recommendations on which infrastructure items might be best delivered through planning obligations either on site or S106 and could potentially be funded through Community Infrastructure Levy (CIL).
- Verification that the affordable housing and policy targets are compatible with any identified S106 obligations at the strategic location or locations, or suggestion of an alternative target to ensure viability is not put at risk;
- Identification of indicative CIL charge rates for residential development.

1.2.10 Part 2 focussed on the infrastructure requirements of sites to identify likely infrastructure impacts, subsequent costs and potential funding sources. The work built on the Infrastructure Delivery Plan (IDP) work already undertaken by the Council and consultation with Infrastructure Service Providers (IPS). Consultation primarily involved direct contact via telephone and email. This three step approach included:

- Distribution of consultation letter and initial questionnaire to contacts provided by SDC;
- Attend CIL Steering Group to meet IPS and discuss infrastructure requirements for short listed sites;
- Follow up telephone and email discussions to enable infrastructure requirements to be clarified and confirmed.

1.2.11 It should be noted that IDP is an on-going process and new information becomes available on a regular basis. The study has used the information provided by ISP's and the Council. We would recommend that the Council keeps the IDP, including the specific consideration of infrastructure requirements from new settlements and sustainable urban extensions under review.

### **Viability Method**

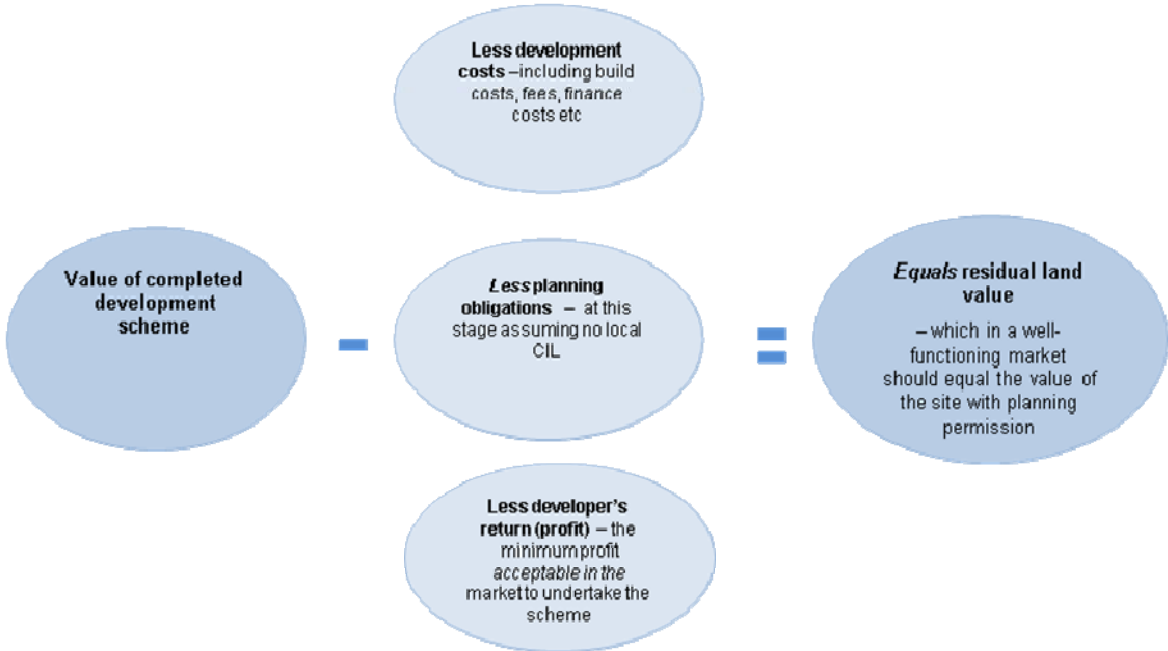
1.2.12 The deliverability of the sites has been tested by assessing them within the PBA CIL viability toolkit. It is important that the same baseline assumptions and approach are used for this, as to use a separate method may cause compatibility and therefore robustness issues at the CIL Charging Schedule Examination.

1.2.13 The viability assessments are based on development appraisals of each scheme, using the residual valuation method. This approach is in line with accepted practice and as recommended by RICS guidance<sup>1</sup> and the Harman report.<sup>2</sup> Residual valuation is applied to the three sites, aiming to show typical values for each. It is based on the formula presented in **Figure 1.1**.

<sup>1</sup> RICS (2012), *Financial Viability in Planning, RICS First Edition Guidance Note*

<sup>2</sup> Local Housing Delivery Group Chaired by Sir John Harman (2012) *Viability Testing Local Plans*

Figure 1.1 Method diagram: value of completed development scheme



1.2.14 For each of the schemes tested, we use this formula to estimate typical residual land values, which is what the site should be worth once it has full planning permission. The residual value calculation requires a wide range of inputs, or assumptions, including the costs of development and the required developer's return.

1.2.15 The arithmetic of residual appraisal is straightforward (we use a bespoke spreadsheet models for the appraisals). However, the inputs to the calculation are hard to determine for a specific site (as demonstrated by the complexity of many S106 negotiations). The difficulties grow when making calculations that represent a typical or average site – which is what we need to do for a high level appraisal for demonstrating that a site is broadly deliverable and also the potential to charge a CIL. Therefore our viability assessments are necessarily broad approximations, subject to a margin of uncertainty



## 2 Part 1 - Site Assessment

### 2.1 Site Assessment Proforma

2.1.1 Part 1 has been completed for all six sites identified by the Council. Site Assessment findings are set out in **Tables 2.1** to **2.6** below:

Table 2.1: Southam Cement Works (NS)

Site ref	Settlement	Size (ha)
Option 1: Southam Cement Works (NS)	Southam	110.6 (including 14 ha of former Cement Works)
Site Address	Type of site	
Land at Stockton Reservoir, North of Southam	Mixed	
Current/previous land use	Planning status	
Disused Cement Work and Agriculture	Partially covered by application	
Description of site		
<p>The site comprises a series of sites surrounding the disused Southam cement works. The main site is removed from Southam to the South and Long Itchington to the North. The promoted opportunity would represent a new settlement, but parts of the site are adjacent to Long Itchington. There are several distinct sites within the landholdings promoted. Including:</p> <ol style="list-style-type: none"> <li>1. The main site (48.2 ha) comprises of the disused Southam cement works. This is located North of the town, to the East of the A423 and South of a disused railway that abuts the site. There is access via Southam Road south of the Railway Cottages. Dense vegetation lines the land along the A423, and large sections of the site are densely vegetated. Aside from the land used for the cement works, and the land that is covered in vegetation, there are three green fields to the west, directly parallel to Southam Road.</li> <li>2. There are several fields to the west of the cement works and the A423 that can be accessed from The Model Village. These appear to be green arable fields lined with hedgerows.</li> <li>3. Directly to the north of the cement works are three further arable fields bordered to the north by the Grand Union Canal, the west by the Stockton Reservoir, and to the west Southam Road. Access could be gained via Nightingale Lane. This site is approx. 15 hectares, but much of it is covered with dense vegetation.</li> <li>4. To the north of the canal and south of Stockton Road are two further agricultural fields that slope down gently to the south, with the canal and poplars at the bottom of the site. Adjacent is a school and existing residential properties to the north and west. The remaining boundaries are flanked with other agricultural fields.</li> </ol>		
Planning history		
<p>Site 4 to the north of the canal has a planning application (11/01564/FUL) for the erection of 10 affordable dwellings including adopted roadways, services and external plant (to include solar panels for each individual property) the scheme comprises 7 two-beds and 1 three-bed for rent and 2 two-beds for shared ownership and has been granted with conditions as at 11/10/2012.</p>		
Policy context/ Restrictions		
<p>Policy CS 5 'Minerals' of the Draft Core Strategy 2012 outlines Safeguarding and extending the Southam Quarry. The District Local Plan Review designated a number of Areas of Restraint in and around Stratford-upon-Avon and certain Main Rural Centres, one of which is Southam. The Southam Area Policy Profile Environmental Principle currently supports the restoration of the disused quarry alongside A426 to provide a high quality area for leisure and recreation, whilst supporting biodiversity and nature conservation interests. Development would currently contravene policy as it is outside the development boundary and not inline with proposed uses of leisure and recreation.</p>		
Physical constraints		
<p>The western section of Site 4 is within a landfill buffer. It is considered that there are no access constraints subject to the views of the Highway Authority. Development of this scale is likely to have an impact on the surrounding road network and this would require further investigation. The edge of Site 2 is located in the flood plain which would reduce the scope of development on this part of the site. There may be physical limitations when developing the disused Quarry, and as such the ground conditions would need further consideration. If abnormal development costs. Severn Trent Water confirm that there is minimal spare capacity at Itchen Bank sewage treatment works. Extensive capacity upgrading is envisaged to accommodate development but they do not envisage any issues as there are no land or other physical constraints preventing expansion. In terms of</p>		

<p>water supply, it is likely that significant off sites works will be required to supply the proposed development. At this stage a cautious view would suggest that extensive infrastructure will be needed and take some time, 18 months (estimate), to put in place.</p>
<p><b>Potential impacts</b></p> <p>The Landscape Sensitivity Study states that these sites are within zones LI01, LI04, LI05 and LI07. These have various degrees of sensitivity towards development. Site 4 (the land south of Stockton Road) has a medium tolerance to housing development. This land may be possibly developed, but only if advanced planting is put in place in line with the eastern boundary of the school to form a softer established edge to the settlement. Elsewhere, housing is considered to be inappropriate due to openness and potential prominence, including the western part of site 2. Site 3 (south of the canal) has a medium tolerance to commercial development. This land may be possibly developed. The Ecological Study (2012) identifies the site as low distinctiveness across the majority of the site, and moderate distinctiveness some of the boundaries which are identified as intact hedges. The Historic Environment Assessment identifies the site within a low sensitivity historic landscape. Sites 3 and 4 are located on the built edge of Long Itchington. If these sites were to come forward alongside the main Cement works site the whole development would represent an extension of Long Itchington. It is considered that development of this scale is disproportionate to the size of the existing settlement. Development at this site would result in the loss of agricultural land which might be a consideration for the Council</p>
<p><b>Suitability summary</b></p> <p>Currently development on this site would contravene policy and therefore the site would not be considered to be suitable. However, from the information available, the main site is considered suitable subject to further consideration of remediation and abnormal development issues. The main issue with the development of Southam Cement works and surrounding land are the potential landscape and ecology impacts of associated sites. The Council may wish to consider the disproportionate scale of development compared with Long Itchington and coalescence issues, but these non-site specific considerations are beyond the remit of this study.</p>
<p><b>Availability summary</b></p> <p>The landowner, Cemex Properties UK Ltd, has promoted the site for a potential strategic development, in a letter dated 4<sup>th</sup> March 2013.</p>
<p><b>Market appraisal / Achievability</b></p> <p>Site 1, the Southam Quarry, may be less economically viable for development subject to the extent of abnormal development costs and this could be considered an achievability constraint. Sites 2, 3 and 4 are greenfield sites adjacent to the urban area, and therefore are in a location that developers find attractive to bring forward for residential development. The market for housing in this area is relatively buoyant, underpinned by high sales values of between £2700/sq.m - £3800/sq.m. Land values range from about £2.5m/ha (before deductions for planning obligations and abnormal costs), which is high enough to ensure that planning obligations packages, including affordable housing, as well as abnormal development costs, can be delivered without either threatening the viability of the scheme, or falling below any existing use value. Land values have fallen from the 2007-peak, as a result of the current economic downturn, with many schemes being delayed, but market conditions have improved, and most sites in Stratford-on-Avon District are viable.</p>
<p><b>Yield summary</b></p> <p>The site extends to approximately 110 hectares and, assuming a typical net to gross ratio of 60% and an indicative density of 30 dwellings per hectare would indicate a potential number of dwellings in the order of 1,980 dwellings. The overall land budget includes 40% for landscaping, transport infrastructure, open space and associated community, education facilities. Given landscape issues of sites unlikely that the site could be completely developed.</p>
<p><b>Conclusion</b></p> <p>Whilst considered available and potentially suitable subject to landscape issues, the main Southam cement works site is not considered of sufficient scale to represent a development of strategic scale in isolation. The site is reliant on adjacent sites which would lead to the development on the edge of Long Itchington. Identified landscape and viability issues for the main site, with its potential abnormal development costs, raise significant doubts over the ability of the site to deliver the required strategic development.</p>

Site Plan

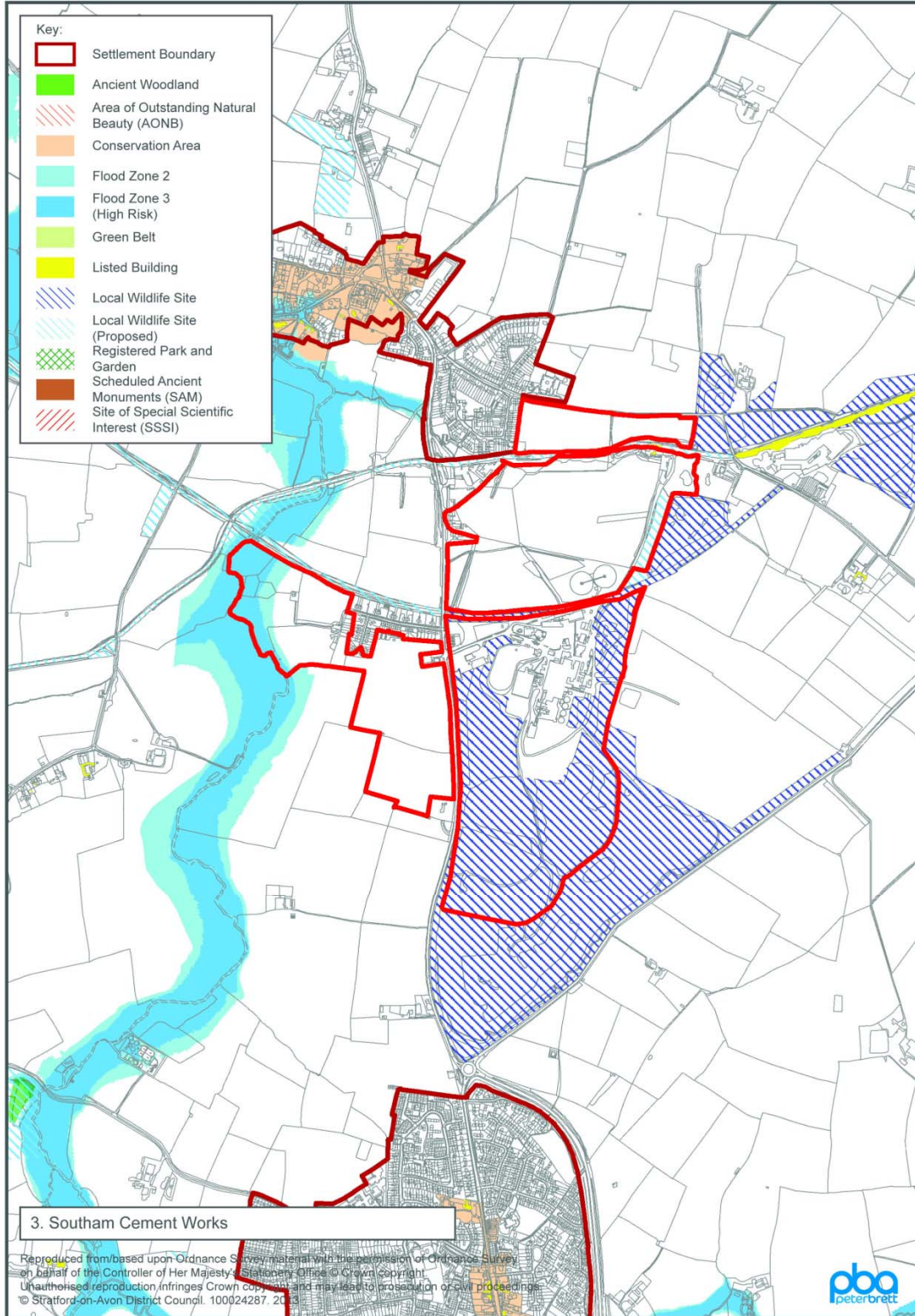


Table 2.2: Long Marston (NS)

<b>Site ref</b>	<b>Settlement</b>	<b>Size (ha)</b>
Option 2: Long Marston	New Settlement	411.8 ha
<b>Site Address</b>		<b>Type of site</b>
a) Long Marston Estate, b) Long Marston Airfield		Mixed
<b>Current/previous land use</b>		<b>Planning status</b>
a) Industrial and b) Airfield Partially		Permitted
<b>Description of site</b>		
<p>Two separate sites have been promoted in the Long Marston area both of which could effectively provide for a new settlement of strategic scale. The two sites include:</p> <ul style="list-style-type: none"> <li>a) The Long Marston Estate, comprises approximately 190 ha with warehouse/industrial units, office space, and hardstanding/open storage, as well as large area of greenfield land.</li> <li>b) The Long Marston Airfield. In addition to the Airfield itself, there are large areas of green open space. The whole site extends approximately 220 ha.</li> </ul> <p>Surrounding uses includes open countryside and village of Long Marston.</p>		
<b>Planning history</b>		
<p>Part of the Long Marston Estate has outline planning permission for a mix of uses comprising up to 150 self-catering lodges, up to 150 holiday homes, a touring caravan park, a community hall and retail convenience store, sports pitches, and up to 500 homes, including affordable housing to meet local needs. There is also detailed planning permission for the retention of 80,000 sq m of employment space, the retention of the rail storage and restoration uses, as well as a rail based leisure attraction, a new roundabout at the Campden Road/Shipston Road junction, as well as at the Clifford Lane / Shipston Road entrance.</p>		
<b>Policy context/ Restrictions</b>		
<p>Most of the Long Marston airfield is designated as a Local wildlife site. Both sites would currently contravene policy as they are outside defined development boundaries. The sites are located in close proximity of Long Marston a defined Village in the settlement hierarchy.</p>		
<b>Physical constraints</b>		
<p>PBA consider that there are no immediate access problems into the either site, subject to the views of the highway authority. Development of this scale is likely to have an impact on the surrounding road network and would require further investigation. The Long Marston Airfield is constrained by a flood zone running through the western part of the site. Severn Trent Water confirm that there is minimal spare capacity at Long Marston sewage treatment works. Extensive additional capacity will be required in order to accommodate future development, but they do not envisage any issues as there are no land or other physical constraints preventing expansion. In terms of water supply the existing network can support minimal new development before extensive off site works are needed. The nearest large capacity mains are approx 4.3 km from the site however strategic modelling would be needed to determine whether further off site works are required.</p>		
<b>Potential impacts</b>		
<p>Both Long Marston sites were not considered as part of the Landscape Sensitivity Study, therefore no available information is available on the sensitivity of the landscape of the sites to accommodate development. This is less of an issue for Long Marston Estate which is partially developed. Further landscape investigation will be required if the sites are considered further. The ecological impact of development on the Local wildlife site will need further consideration by the Council. Land contamination at the Long Marston Estate is considered a potential issue that also requires further investigation.</p>		
<b>Suitability summary</b>		
<p>Both sites are contrary to existing policy, but considered potentially developable subject to further consideration of landscape, contamination and ecology issues. The sites are located in a remote part of the district and do not represent a single development opportunity. Both sites are sufficient in scale, potentially suitable and available for development if a new settlement option is considered most suitable.</p>		
<b>Availability summary</b>		
<p>The owners/ agents confirm that the sites are available for development, and that there are no legal or ownership problems that could limit development. Two landowners have expressed their interest in developing their landholdings in the Long Marston Area, these include:</p> <ul style="list-style-type: none"> <li>a) The freehold of Long Marston Estate are St Modwen;</li> <li>b) Long Marston Airfield is promoted by owners H G Hodges &amp; Son Limited and their developers Barratt David Wilson.</li> </ul>		

<b>Market appraisal / Achievability</b>
<p>The airfield site consists of greenfield land and the Long Marston Estate already has partial planning permission. They are therefore both in a locations that developers find attractive to bring forward for residential development. They are also of a sufficient scale that a house builder would find viable to deliver. The market for housing in this area is relatively buoyant, underpinned by high sales values of between £2700/sq.m - £3800/sq.m. Land values range from about £2.5m/ha (before deductions for planning obligations and abnormal costs), which is high enough to ensure that planning obligations packages, including affordable housing, as well as abnormal development costs, can be delivered without either threatening the viability of the scheme, or falling below any existing use value. Land values have fallen from the 2007-peak, as a result of the current economic downturn, with many schemes being delayed, but market conditions have improved, and most sites in Stratford-on-Avon District are viable.</p>
<b>Yield summary</b>
<p>The site extends to approximately 410 hectares and, assuming a typical net to gross ratio of 55% and an indicative density of 30 dwellings per hectare would indicate a potential number of dwellings in the order of 6,765 dwellings. The indicative land budget includes 45% for landscaping, transport infrastructure, open space and associated community, education facilities. Separately the potential unconstrained yield for the Long Marston Estate would be 3135 dwellings, given the previously developed nature of the site and current mix of uses it unclear what the yield might reduce too. Long Marston Airfield yield could be 3,630 dwellings, given the flood constraint this is likely to be reduced to the region of 3,000 dwellings. It is considered that either site could yield sufficient development to deliver a new settlement in this location.</p>
<b>Conclusion</b>
<p>Current policy would prevent development in this location, but both sites are considered potentially suitable and available for development as new settlements. Combined the sites do not represent a single cohesive new settlement and therefore the Council would have to choose which site it prefers. PBA consider that the reuse of brownfield land and existing planning permission would make the Long Marston Estate site the preferable option. It is relatively unconstrained with the exception of potential contamination issues which would need further consideration. The sites at Long Marston are considered to be a potentially developable options for a strategic development and should therefore be considered further</p>

Site Plan

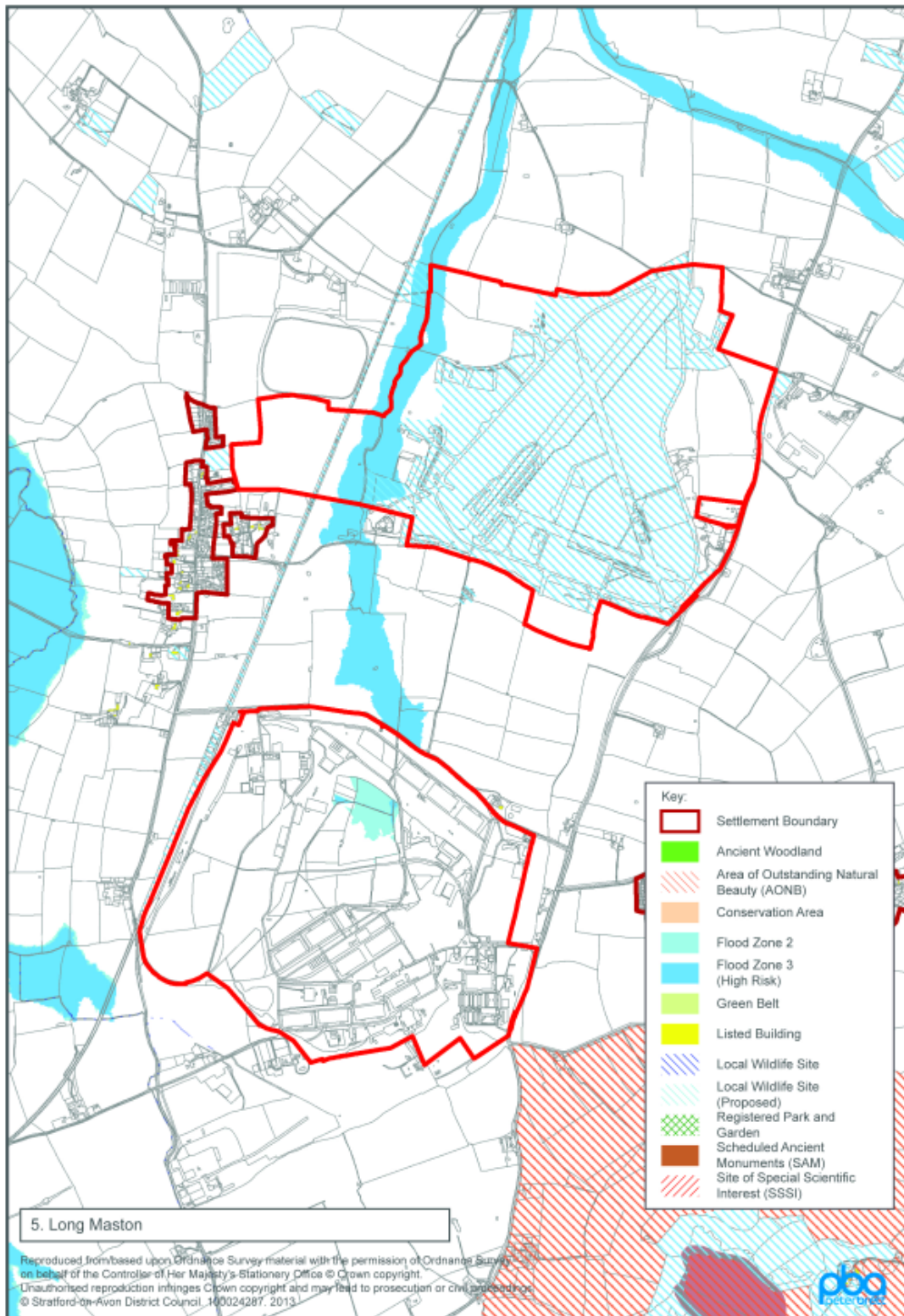


Table 2.3: Lighthorne Heath (NS)

Site ref	Settlement	Size (ha)
Option 3: Lighthorne Heath (NS)	Lighthorne Heath	265.5 ha
Site Address	Type of site	
B4451/B4100/Banbury Road, Lighthorne and The Old Styche Field, The Old Gated Road/Banbury Road, Lighthorne	Greenfield	
Current/previous land use	Planning status	
Agricultural	No planning status	
Description of site		
<p>The site is the largest single development option under consideration and comprises two main sites that together represent a strategic development opportunity for a new settlement adjacent to the M40. The two sites include:</p> <p>a) The site lies to the east of Lighthorne Heath and Jaguar Land Rover (JLR) plant, bordered to the south-west by the B1400 and the M40 to the northeast. Junction 12 of the M40 is in the eastern corner of the site. The site comprises multiple fields totalling 249 hectares approximately, but excludes Castle Farmhouse. The agricultural land comprises farmland and Gaydon Coppice. The site is relatively flat with only a small percentage covered by trees or buildings.</p> <p>b) The site lies to the north of Lighthorne Heath and JLR plant, to the north of the B1400 and to the south of the M40. The site comprises two fields totalling 45 hectares approximately. Chesterton Wood lies to the west with further agricultural land to the east and south. This part of the site is also relatively flat with no trees or buildings in the site.</p>		
Planning history		
No known planning history		
Policy context/ Restrictions		
The site is located outside the build up area of development and is not allocated for development and therefore currently contravenes existing planning policy. The site is removed from the main settlements in the district and is partially covered by a local wildlife site.		
Physical constraints		
<p>The site lies in close proximity to Junction 12 of the M40 and therefore has easy access to the strategic motorway network. Junction 12 has recently been granted funding to be improved to ease congestion and therefore the traffic from any proposed settlement could be catered for in the redesign of the junction. PBA consider that there are no constraints to site access, as there are several potential access points from the B1400. Development of this scale is likely to have additional impact on the surrounding road network and these would require further investigation. There are no known problems regarding flood risks or ground conditions, but the sites location adjacent to the M40 could result in noise and pollution issues which would need to be satisfactorily addressed within any proposed scheme. Severn Trent Water confirm, that there is minimal spare capacity at Lighthorne sewage treatment works (STW) and no spare capacity at Gaydon STW. Extensive additional capacity will be required in order to accommodate future development at Lighthorne Heath STW and/or Gaydon STW. We do not envisage any issues as there are no land or other physical constraints preventing expansion. In terms of water, supply, the development would probably require the reinforcement and upgrading of Wellesbourne BS to increase flow, upgrading and replacement of the 8" PVC from Gaydon Cross to Gaydon Service Reservoir. Works to potentially, allow flow from Campion DMA 08415 (Supply Area) into Gaydon SR and the diversion of approx. 1km of the existing 90 mm/63 mm main off Banbury Road serving Kingston Grange/Upper Kingston/Kingston Holt/sewage works.</p>		
Potential impacts		
Development at this site would result in the loss of agricultural land which might be a consideration for the Council. Part of the site comprises Ancient woodland and there are Tree Preservation Orders within Gaydon Coppice. Further investigation would be required to confirm if these potential impacts could be incorporated into the proposed development in this location.		
Suitability summary		
The site is located 7.8 miles from Warwick, 8 miles from Leamington Spa, 16 miles from Stratford upon Avon and 14 miles from Banbury. It is well located for the strategic motorway network but relatively remote from services, amenities and employment (with the exception of JLR). The site is considered potentially sustainable for a new settlement, subject to further investigation of noise, pollution, and ecological impacts.		

<p><b>Availability summary</b></p> <p>Broadway Malyan have been liaising with the various landowners of the site, and control the whole site. The Landowners have promoted the site as a new settlement.</p>
<p><b>Market appraisal / Achievability</b></p> <p>The site is a greenfield location that is attractive for private developers. The market for housing in this area is relatively buoyant, underpinned by high sales values of between £2700/sq.m - £3800/sq.m. Land values range from about £2.5m/ha (before deductions for planning obligations and abnormal costs), which is high enough to ensure that planning obligations packages, including affordable housing, as well as abnormal development costs, can be delivered without either threatening the viability of the scheme, or falling below any existing use value. Land values have fallen from the 2007-peak, as a result of the current economic downturn, with many schemes being delayed, but market conditions have improved, and most sites in Stratford-on-Avon District are viable.</p>
<p><b>Yield summary</b></p> <p>The site extends to approximately 265 hectares and, assuming a typical net to gross ratio of 55% and an indicative density of 30 dwellings per hectare would indicate a potential number of dwellings in the order of 4,372 dwellings. The indicative land budget includes 45% for landscaping, transport infrastructure, open space and associated community, education facilities. Subject to further investigation of noise, pollution and ecology issues the site yield could be adjusted.</p>
<p><b>Conclusion</b></p> <p>Development in this location would be outside defined settlement boundaries, but the site is otherwise considered potentially suitable and available for the creation of a new settlement. The site is relatively unconstrained with the exception of noise, pollution and ecology issues, which would need further consideration. The site is available and considered to be a potentially developable option for a strategic development. The site should be considered further.</p>



Site Plan

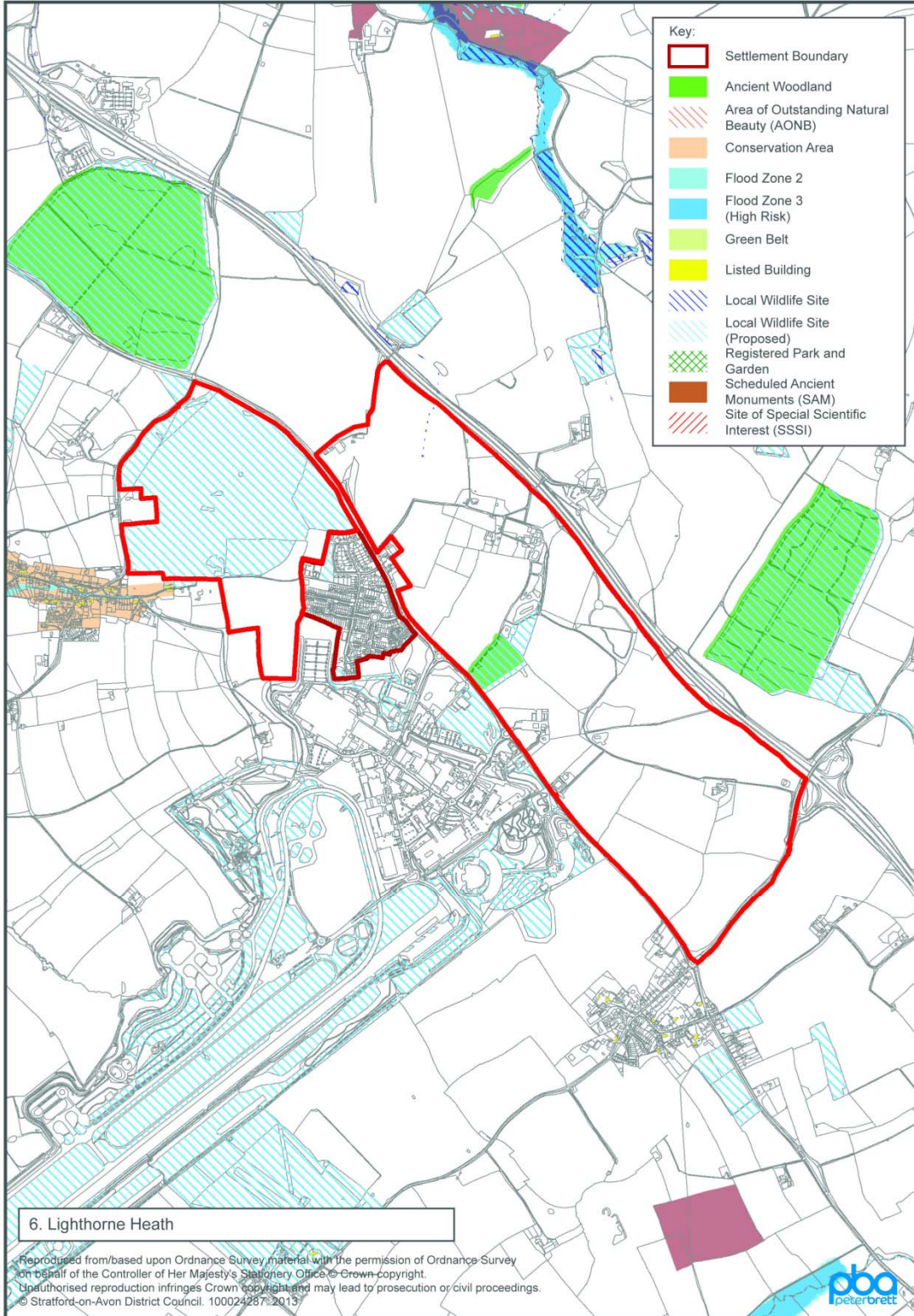


Table 2.4: West of Alcester (SUE)

<b>Site ref</b>	<b>Settlement</b>	<b>Size (ha)</b>
Option 4: West of Alcester (SUE)	Alcester	182.9 ha
<b>Site Address</b>	<b>Type of site</b>	
Ragley Estate, land at Cold Comfort Farm, Alcester	Greenfield	
<b>Current/previous land use</b>	<b>Planning status</b>	
Agriculture	Planning Application pending for part of the site	
<b>Description of site</b>		
<p>Option 4 consists of two sites to the west of Alcester separated by the A435. The site largely comprises agricultural land and hedgerows adjacent to the built edge of Alcester. The site is bounded by the built up area of Alcester to the East, open countryside to the West and mixed countryside and development to the North and South. The site appears to be accessible from A435, B4090 and Birmingham road/Eclipse Road within Alcester. The A435 is contained within a cutting at the Southern end of the sites and this raises issues of integration of development on the western site with the Eastern site and Alcester itself. The larger western site rises steeply from the A435.</p>		
<b>Planning history</b>		
<p>The smaller of the two sites, which is adjacent to the existing settlement and east of the A435, has already been considered within the previous planning strategies and is the subject to on-going discussions with developers and two planning proposals on the eastern part of the site totalling approximately 300 dwellings.</p>		
<b>Policy context/ Restrictions</b>		
<p>Alcester is designated as a Main Rural Centre and therefore considered a suitable location for meeting the Districts housing needs due to the range of facilities available. Saved policies from the Stratford-on-Avon Local Plan include Policy PR2: Green Belt. The settlement of Alcester itself is excluded from the Green Belt designation, but the surrounding land including the Ragley Estate is designated as Green Belt. Development of the land to the north of Arden Road is in the Green Belt and is being considered to meet the town's needs for employment land. Existing policy would preclude development in this location and therefore the Council would need to undertake a greenbelt review considering all green belt locations.</p>		
<b>Physical constraints</b>		
<p>The site is partially within Flood Zone 3, and Alcester has experienced serious flooding from surface water and its ancient watercourses, one of which runs across the site. Over the past few years, however, this problem has been remedied by the installation of two pumping sets, and as such development outside the flood plan could be acceptable subject to appropriate mitigation to address potential flood and surface water issues. Site access appears to be suitable from several points subject to Highway Authority approval. Development of this scale is likely to have an impact on the surrounding road network and would require further investigation.</p>		
<b>Potential impacts</b>		
<p>The Stratford-on-Avon Landscape Sensitivity Study 2011 considered the site within the A435 and identified that the site has medium landscape sensitivity primarily to the west and north and there is high and high/medium landscape sensitivity to the south and east. The study did not consider land west of the A435, but development in this location could adversely affect the landscape setting of Alcester and it is considered that further investigation would be required to assess landscape impacts. Cold Comfort Farm to the west of the site is a listed building and any development in this location would have to consider this further. Development at this site would result in the loss of agricultural land which might be a consideration for the Council</p>		
<b>Suitability summary</b>		
<p>Currently development on this site would contravene policy and therefore the site would not be considered to be suitable. However, from the information available, the site may be considered suitable in principle for future housing potential subject to further investigation into landscape, design issues to address integration concerns and a formal greenbelt review. The site is located adjacent to a main rural centre and therefore and relatively good accessibility to facilities, job opportunities and public transport. Site constraints have the potential to be overcome and therefore result in the creation of a sustainable, mixed community of strategic scale.</p>		
<b>Availability summary</b>		
<p>The site forms part of the Ragley Estate and is held in trust as part of the estate. In a letter dated 1<sup>st</sup> March 2013, the Chief Executive confirmed that, should the site be considered appropriate for development, the owners of the land would be interested in making the land available.</p>		



<p><b>Market appraisal / Achievability</b></p> <p>This greenfield site is adjacent to the urban area and therefore is in a location that developers find attractive to bring forward for residential development. The market for housing in this area is relatively buoyant, underpinned by high sales values of between £2700/sq.m - £3800/sq.m. Land values range from about £2.5m/ha (before deductions for planning obligations and abnormal costs), which is high enough to ensure that planning obligations packages, including affordable housing, as well as abnormal development costs, can be delivered without either threatening the viability of the scheme, or falling below any existing use value. Land values have fallen from the 2007-peak, as a result of the current economic downturn, with many schemes being delayed, but market conditions have improved, and most sites in Stratford-on-Avon District are viable.</p>
<p><b>Yield summary</b></p> <p>The site extends to approximately 180 hectares and, assuming an typical net to gross ratio of 55% and an indicative density of 30 dwellings per hectare would indicate a potential number of dwellings in the order of 2,970. The overall land budget includes 45% for landscaping, transport infrastructure, open space and associated community, education facilities. Given flood issues on site it is unlikely that the whole site could be developed and therefore it is sensible to reduce the potential yield to 2,500 to reflect the reduced land available. If the site was to come forward further work would be require to appropriately masterplan the site and identify a more precise yield. It should be noted that a development of this scale would almost double the current size of Alcester and therefore it is questioned this scale of development in this location is considered appropriate.</p>
<p><b>Conclusion</b></p> <p>The site is potentially suitable for development, but a change to the extent of the Green Belt would be required in order for it to be developed. SDC consider that an alternative location outside the Green Belt could be more suitable in the first instance. If the site is considered further, it is considered that the site constraints identified, e.g. flood, landscape and settlement integration, could potentially be addressed through appropriate site design and layout. The Council could consider the Eastern part located outside the Green Belt for a smaller scale development in the future but this site alone would not represent a development of sufficient scale to meet the requirement identified for this project.</p>

**Site Location**

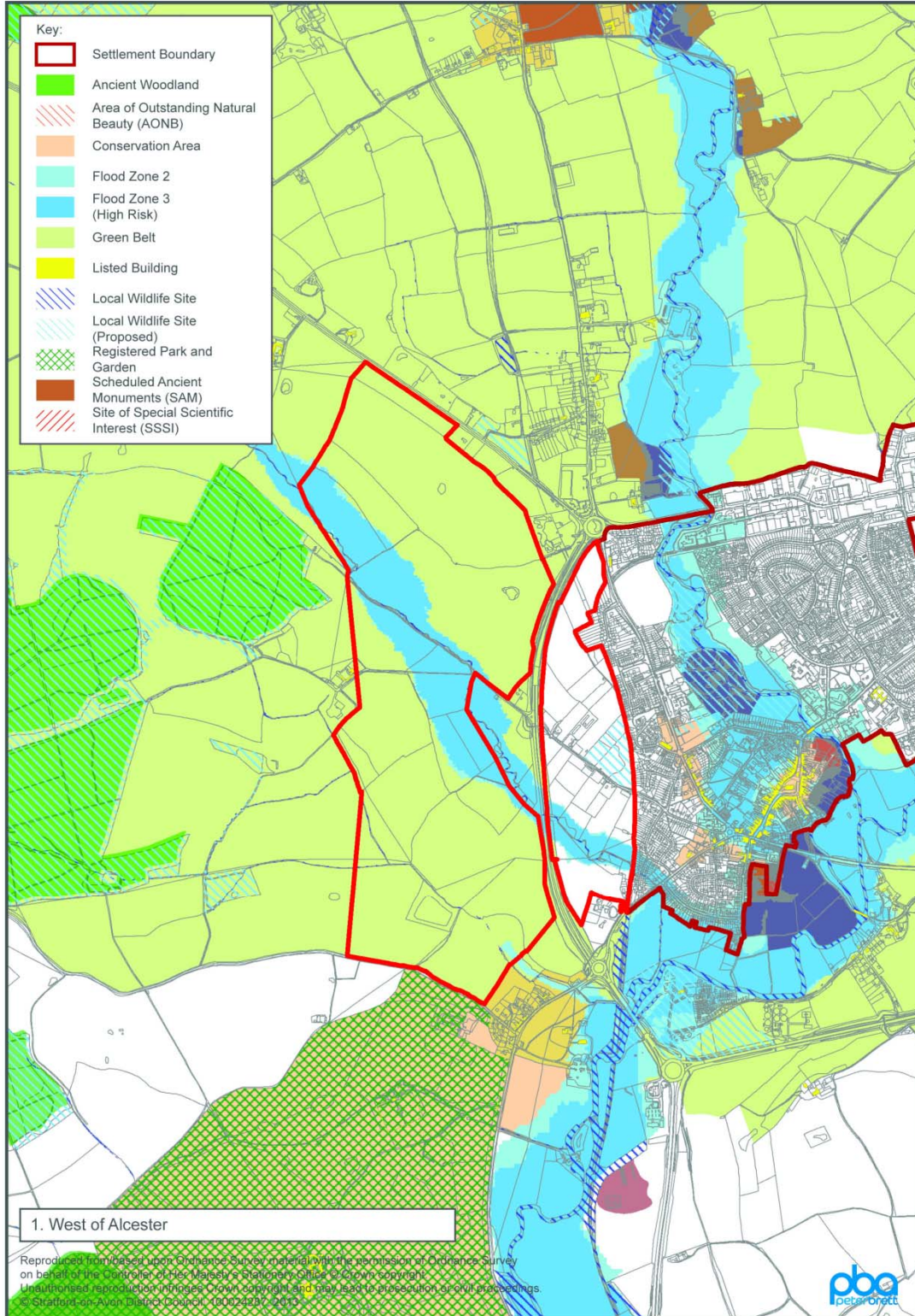


Table 2.5: Harbury Estate (SUE)

Site ref	Settlement	Size (ha)
Option 5: Harbury Estate (SUE)	Bishops Itchington 90	25 ha
<b>Site Address</b>	<b>Type of site</b>	
Harbury cement works, Bishops Itchington	Mixed	
<b>Current/previous land use</b>	<b>Planning status</b>	
Cement works	Existing Masterplan (SPD)	
<b>Description of site</b>		
<p>The site comprises a series of land parcels located to the north of Bishop's Itchington. There are several distinct sites within the landholding promoted, including:</p> <ol style="list-style-type: none"> <li>1. The first site located to the southeast comprises 'allotment gardens'. There is rough ground behind existing residential properties with two potential access points from either Hambridge Road or Ladbroke Road. Land to the east and north is agricultural land.</li> <li>2. To the north of the 'allotment gardens' site is a green arable field which slopes down to the lane, with electricity wires crossing the site. There are hedgerows around the site, although the topography means it is quite prominent.</li> <li>3. To the north of High Street and east of Station Road, there is a small site. There are a mix of uses including arable land and area of trees, and development would infill Greenfield land between areas of residential property. Access is from either Station Road or High Street, although the High Street access has an electricity pole at this location.</li> <li>4. One of the largest parts of the site is the disused Harbury cement works, which extends north from the settlement and is bordered by the railway line to the northeast. The land is accessed via a private lane off Ladbroke Road. As well as the disused works, there are large areas of dense vegetation on this site. There are some green fields to the west, which could be accessed from the B4451. These green fields are approximately 5 ha and could achieve 175 dwellings.</li> <li>5. To the north of the disused cement works and south of the railway line are two green, flat, arable fields that could be accessed from the B4451. There are hedgerows around the site. This site is approximately 8 ha.</li> <li>6. To the north of the railway line are three further green, flat, arable fields, which can be accessed from Deppers Bridge. Residential development has occurred to the north of Deppers Bridge, and three dwellings to the south, which indent into the site. This site is approximately 20 ha.</li> </ol>		
<b>Planning history</b>		
There is no known relevant planning application history. The site is covered by a Supplementary Planning Document – Harbury Cement Works Masterplan.		
<b>Policy context/ Restrictions</b>		
<p>The Draft Core Strategy 2012 for Stratford-on Avon District designates the Bishops Itchington village as a Local Service Village. It states that the following uses are appropriate for the Former Harbury Cement Works, Bishops Itchington in principle:</p> <ul style="list-style-type: none"> <li>• Storage and distribution and other forms of business operations that provide and make use of a rail connection into the site.</li> <li>• Leisure, tourism and recreation.</li> <li>• Employment and residential development of a form and scale that meets local needs or is justified in relation to other uses on the site.</li> </ul> <p>Other uses may be acceptable if they take into account a range of criteria, including the need to comply with the Masterplan for the site (adopted SPD) and critically restrict new buildings to the previously developed parts of the site.</p>		
<b>Physical constraints</b>		
<p>The principal physical constraint is a site of Special Scientific Interest (SSSI) north of the village within site 4. There is also a Local Wildlife Site to the north of the village. Both of these environmental designations will need to be considered further if an appropriate development is to come forward. The site appears to be accessible for the local highway between subject to more detailed consideration by the Highway authority. Development of this scale is likely to have an impact on the surrounding road network and would require further investigation. There may be physical limitations when developing the brownfield parts of the site, and as such the ground conditions would need further consideration to identify potential abnormal costs. Some parts of sites 1, 2 and 6 are located within flood zone 3, and would also need further assessment and potentially impact on the extent of development in this location. Severn Trent Water confirm that there is minimal spare capacity at Itchen Bank sewage treatment works. It is not envisaged that land or other physical constraints will prevent expansion. In terms of water supply, the development can be supplied from existing network but may need the installation of a</p>		

booster pump at Ladbroke Road.
<b>Potential impacts</b>
The Stratford-on-Avon Landscape Sensitivity Study 2011 identified high landscape sensitivity to the North of Bishops Itchington which indicates that it is unable to accommodate development without landscape impact. This affects the largest part of the site the main site (site 4) has Tree Preservation Orders that would need consideration. Parts of the site most closely related to the settlement boundary could also have a potential impact on the Conservation Area. Development at this site would result in the loss of agricultural land which might be a consideration for the Council
<b>Suitability summary</b>
The site is not currently suitable under existing policy, e.g. adopted SPD. If policy was reviewed it is considered that the site is still constrained by flood, environmental and landscape issues. Parts of the site are potentially suitable, but it is unclear if a comprehensive urban extension could be accommodated adjacent to the build up area of Bishop's Itchington. Northern parts of the promoted site in isolation are unlikely to be considered of sufficient scale for a new settlement.
<b>Availability summary</b>
Follett Property Holdings Limited and St Francis Group have indicated that the site is available for development.
<b>Market appraisal / Achievability</b>
The site is in a location that developers find attractive to bring forward housing sites for development. The market for housing in this area is relatively buoyant, underpinned by high sales values of between £2700/sq.m - £3800/sq.m. Land values range from about £2.5m/ha (before deductions for planning obligations and abnormal costs), which is high enough to ensure that planning obligations packages, including affordable housing, as well as abnormal development costs, can be delivered without either threatening the viability of the scheme, or falling below any existing use value. Land values have fallen from the 2007-peak, as a result of the current economic downturn, with many schemes being delayed, but market conditions have improved, and most sites in Stratford-on-Avon District are viable.
<b>Yield summary</b>
The site extends to approximately 90 hectares and, assuming a typical net to gross ratio of 60% and an indicative density of 30 dwellings per hectare would indicate a potential number of dwellings in the order of 1,620. The overall land budget includes 40% for landscaping, transport infrastructure, open space and associated community, education facilities. Given flood, environmental and landscape issues on site it is unlikely that the site could be developed as a new settlement or urban extension at this scale. It should be noted that development of this scale is considered disproportionate to the size of the existing settlement.
<b>Conclusion</b>
Development would currently contravene the existing Harbury Cement Works Masterplan (SPD) in terms of the scale of residential development being greater than local needs or justified in relation to other uses on the site. However the site is available and suitable in part, if flood, environmental and landscape issues can be addressed. It is considered that these constraints are likely to hamper the design of a comprehensive urban extension to Bishop's Itchington. With these constraints and insufficient yield to meet the Council's requirement, the site is not a priority for further consideration.

**Site Plan**

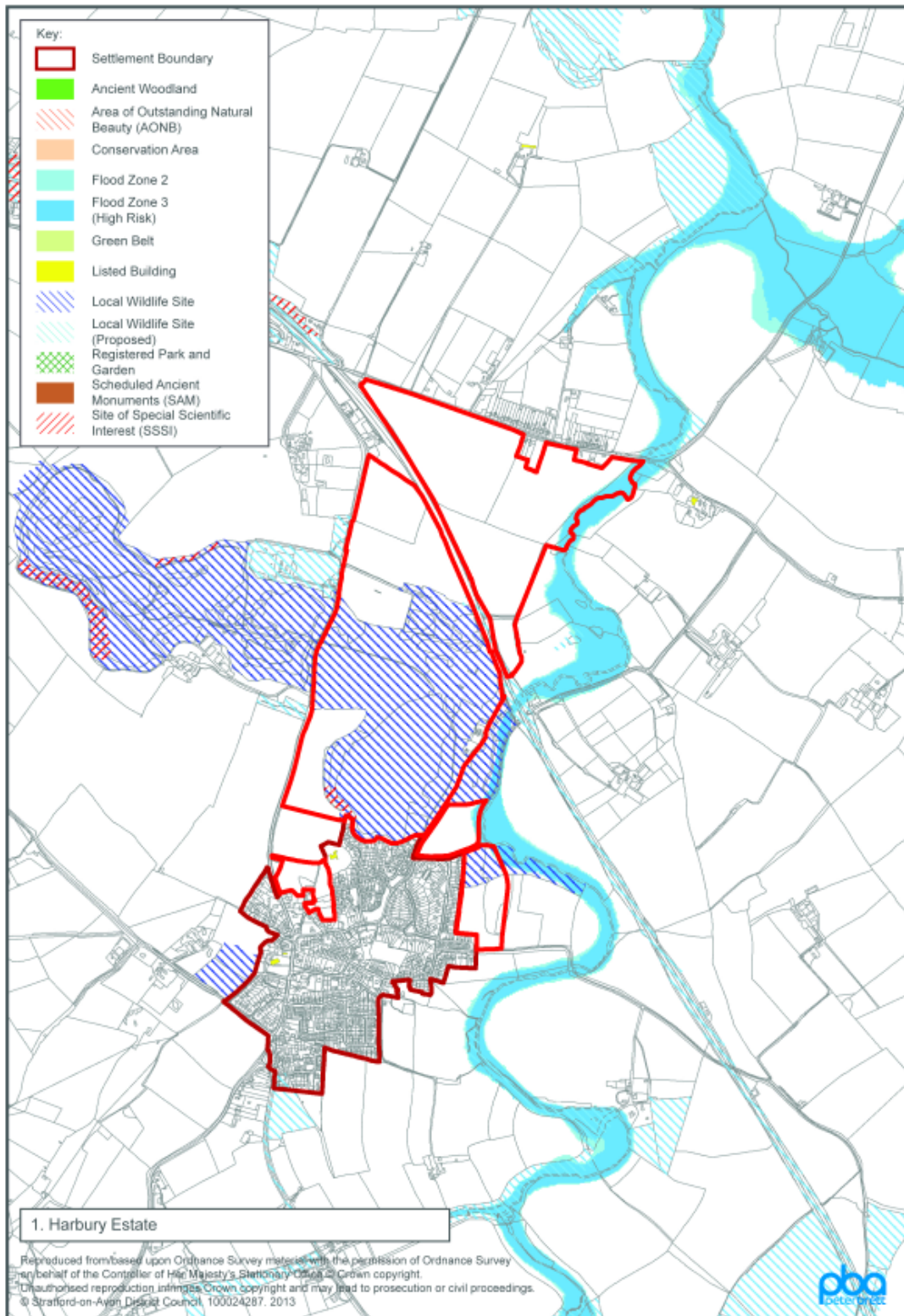


Table 2.6: South East Stratford (SUE)

Site ref	Settlement	Size (ha)
Option 6: South East Stratford (SUE)	Stratford-upon-Avon 190.8	ha
<b>Site Address</b>	<b>Type of site</b>	
Land South of Wellsbourne Road and North of Banbury Road	Greenfield	
<b>Current/previous land use</b>	<b>Planning status</b>	
Agriculture	No Planning Status	
<b>Description of site</b>		
The site comprises a series of agricultural fields located to the South East of Stratford. The site undulates gently and contains several established hedgerows and tree lined site boundaries. Surrounding uses include residential development and a golf course to the east and North and open countryside to the south and west.		
<b>Planning history</b>		
No known relevant planning history.		
<b>Policy context/ Restrictions</b>		
Most of the land is designated Agriculture Land. Development would currently contravene policy as it is outside the development boundary.		
<b>Physical constraints</b>		
PBA consider that there are no access problems into the site, subject to the views of the Highway authority. Development of this scale is likely to have an impact on the surrounding road network and would require further investigation. The site is not located within any flood zones and there appears to be no known physical constraints that would prevent development in this location. There are parts of the treatment process known to be close to capacity at this Stratford Milcote STW. However there are also mothballed assets which can be brought back on-line to provide additional capacity which would not prevent development. In terms of water supply, it is likely that significant off sites works will be required to supply the proposed development. At this early stage Severn Trent Water have taken a cautious view that infrastructure needed is likely to be extensive and take some time, 18 months (estimate), to put in place.		
<b>Potential impacts</b>		
The Landscape Sensitivity Study concludes that the site has a high/medium landscape sensitivity to housing development. The eastern half of the site adjacent to the settlement boundary is located within an area of medium landscape sensitivity, whilst the western edge and south end of the potential site is located in an area of high/medium. This issue needs further investigation to establish how this constraint could be overcome and how it impacts on site yield. Development at this site would result in the loss of agricultural land which might be a consideration for the Council		
<b>Suitability summary</b>		
Stratford is identified as the main town in the Draft Core Strategy. The town provides the main shopping and employment opportunities for the District. Retailing is not only provided in the town centre, but also on an out of centre retail park and in small district centres. Currently development on this site would contravene policy and therefore the site would not be considered to be suitable. However, from the information available, the site is considered suitable in principle for future housing potential, because of its accessibility to facilities, job opportunities and public transport, and because there are no insurmountable constraints. The site could contribute to the creation of a sustainable, mixed community.		
<b>Availability summary</b>		
The owners / agents confirm that approximately 100 ha of the site is available for development, and that there are no legal or ownership problems that could limit development. Land at Arden Heath Farm, Loxley Road and Land between Banbury Road and Loxley Road are both available but other sites have yet to be confirmed at available and this will need further consideration by the Council. In addition a further 30 ha are also available adjacent to the defined site boundary		
<b>Market appraisal / Achievability</b>		
The site consists of greenfield land adjacent to the urban area, and therefore they are in a location that developers find attractive to bring forward for residential development. They are also of a sufficient scale that a house builder would find viable to deliver. The market for housing in this area is relatively buoyant, underpinned by high sales values of between £2700/sq.m - £3800/sq.m. Land values range from about £2.5m - £4m/ha (before deductions for planning obligations and abnormal costs), which is high enough to ensure that planning obligations packages, including affordable housing, as well as abnormal development costs, can be delivered		

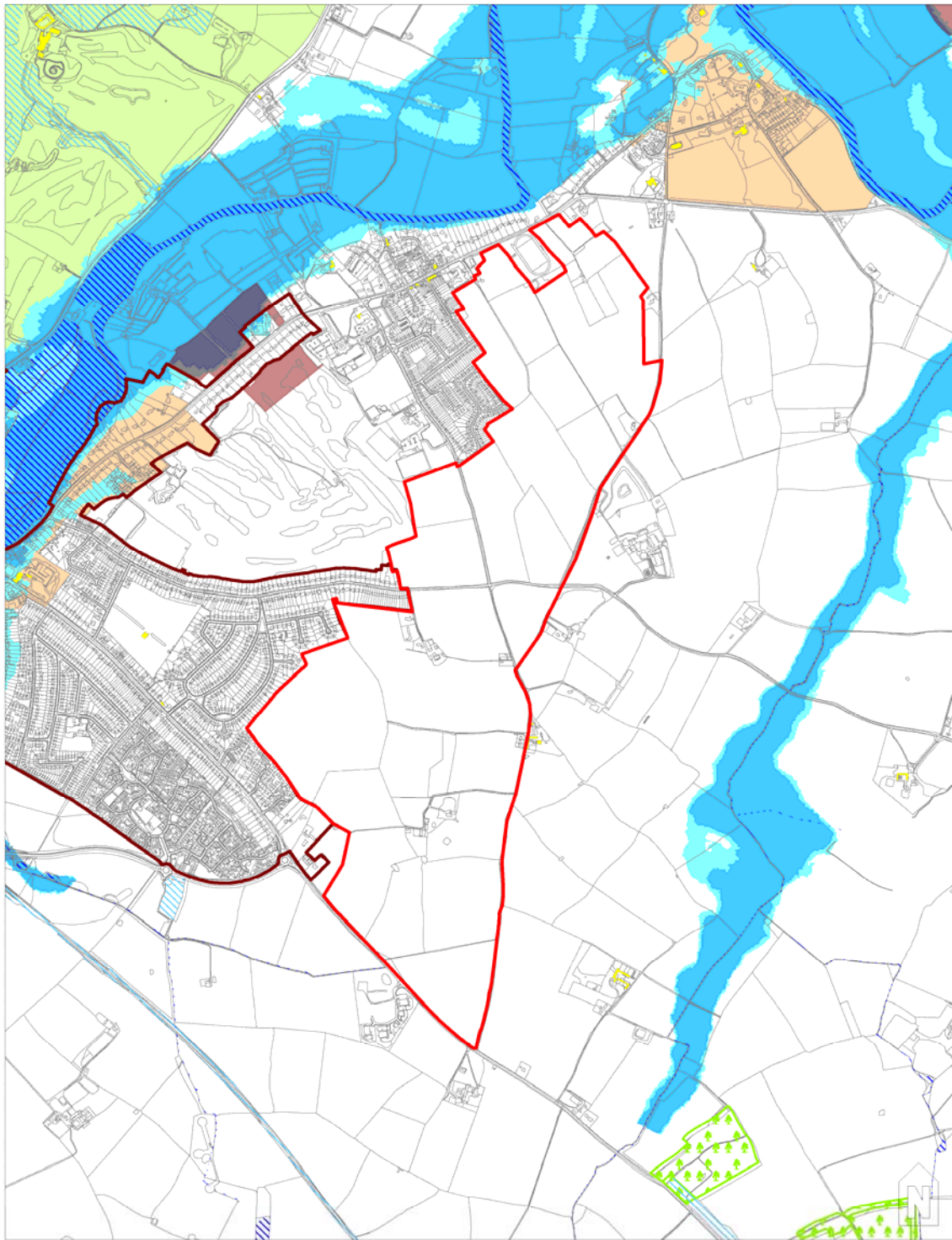


without either threatening the viability of the scheme, or falling below any existing use value. Land values have fallen from the 2007-peak, as a result of the current economic downturn, with many schemes being delayed, but market conditions have improved, and most sites in Stratford-on-Avon District are viable.

**Yield summary**  
The site extends to approximately 190 hectares and, assuming a typical net to gross ratio of 55% and an indicative density of 30 dwellings per hectare would indicate a potential number of dwellings in the order of 3,185 dwellings. The overall land budget includes 45% for landscaping, transport infrastructure, open space and associated community, education facilities. Landscape issues are the only known constraint that could reduce the yield therefore an indicative yield of 2,500-3,000 dwellings appears to be a reasonable starting point for more detailed master planning work and landscape investigation, if the site is considered further by the Council.

**Conclusion**  
Current policy would prevent development in this location, but the site is considered potentially suitable and partially available. The site is relatively unconstrained, with the exception of landscape issues which would need further consideration. If the availability of the outstanding land parcel can be confirmed then the site is considered to be a potentially developable option for a strategic development, and should be considered further.

Site Plan



4. South East Stratford

1:12,500

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## 2.2 Indicative Land Use Budget

2.2.1 **Table 2.7** below sets out the total site areas, indicative yields and seeks to identify the facilities and uses that might form part of the land budget for each site. The table identifies that on site infrastructure requirements will need to be determined by IPS's including SDC. **Table 2.7** below sets out land budget information for the six sites assessed:

Table 2.7: Indicative Land Use Budget

	<b>Option 1: Southam Cement Works (NS)</b>	<b>Option 2: Long Marston (NS)</b>	<b>Option 3: Lighthorne Heath (NS)</b>	<b>Option 4: West of Alcester (SUE)</b>	<b>Option 5: Harbury Estate (SUE)</b>	<b>Option 6: South East Stratford (SUE)</b>
<b>Total Site Area</b>	110 ha	190 and 220 ha	265 ha	180 ha	90 ha	190 ha
<b>Indicative Residential Yield</b>	1,980	6,135	4,372	2,970	1,685	3,185
<b>Facilities/uses required on site:</b>						
<b>Local Centre</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Health Centre</b>	To be determined by ISP's	Yes	Yes	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's
<b>Primary School</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Secondary School</b>	To be determined by ISP's	To be determined by ISP's	Yes	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's
<b>Open space, children's playspace and leisure</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Social and Community</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Built Leisure</b>	To be determined by ISP's	To be determined by ISP's	Yes	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's

<b>Employment</b>	To be determined by SDC	To be determined by SDC	To be determined by SDC	To be determined by SDC	To be determined by SDC	To be determined by SDC
<b>Retail</b>	To be determined by SDC	To be determined by SDC	To be determined by SDC	To be determined by SDC	To be determined by SDC	To be determined by SDC
<b>Other uses</b>	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's	To be determined by ISP's

## 2.3 Part 1 Site Assessment Summary

2.3.1 The Part 1 Site Assessment has focussed on the suitability availability and achievability of the six specific sites to help provide evidence to inform the Council's strategic decision making.

2.3.2 The objective of the Part 1 was to :

- Provides a Site Assessment of deliverability (i.e. availability, suitability and achievability), specifically:
  - Confirming site availability with owner/promoters
  - Reviewing policy and development constraints to confirm suitability in principle
  - Undertaken mini market review to illustrate market appetite for delivery
- Produces a broad land use budget including an estimate of the capacity of each location. This includes a review of council policies in respect of infrastructure provision, such as open space and education, and the consideration of development mix and density in light of the market for delivery.

2.3.3 The Site Assessments and Indicative Land budgets are set out above and illustrated that all six sites are potentially available for development. The Council have to make a decision on which site represents the best strategic development option to deliver 2,000 or more dwellings within the plan period. To assist in this process PBA have set out views on the options. It should be noted that this is based on available information at the time and does not constitute a recommendation for one option over any other.

2.3.4 **Option 1 at Southam** is potentially constrained by landscape and viability issues. The site is available and potentially suitable subject to identified constraints being identified. PBA consider that the site does not represent a suitable option for a new settlement due to its disproportionate scale and coalescence with Long Itchington. These strategic planning issues are beyond the remit of this study, but at face value, it is not suggested that the site is considered further at this stage.

2.3.5 **Option 2 at Long Marston**, comprises two potentially suitable sites subject to landscape, flood ecology and contamination issues. Both sites are available sites and should be considered further.

2.3.6 **Option 3 at Lightorne Heath** is considered potentially suitable subject to further investigation of noise, pollution, and ecological impacts. The site is available and should be considered further.

- 2.3.7 **Option 4, West of Alcester** is located within the Green Belt and is considered available and suitable subject to further investigation of landscape issues and a change to the Green belt. SDC have informed the Consultants that non-greenbelt options are considered preferable in the first instance and therefore this option will not be considered further at this stage.
- 2.3.8 **Option 5 at Harbury** is potentially constrained by flood, environmental and landscape issues. The site is available and potentially suitable subject to identified constraints being identified. PBA consider that the site does not represent a suitable option for an urban extension due the likelihood that identified constraints will prevent development integrating with the existing settlement and the insufficient yield to meet the Council's identified requirements. It is not suggested that the site is considered further.
- 2.3.9 **Option 6 at South East Stratford** is considered suitable and relatively unconstrained. Availability for the whole site has not been confirmed but this is not sufficient reason to prevent its further consideration at this stage.

## 3 Part 2 – Infrastructure and Deliverability

### 3.1 Infrastructure Requirements

3.1.1 Part 2 has undertaken consultation with ISP's to identify indicative physical, social and green infrastructure requirements for the sites identified by the Council to be taken forward from Part 1:

- Long Marston (NS);
- Lighthorne Heath (NS);
- South East Stratford (SUE);

3.1.2 The work has focused on the identification on site infrastructure requirements to inform the consideration of development viability. The study has sought to identify what infrastructure is required, its cost, who is responsible for its delivery, when it is likely to be required and potential funding sources. The following infrastructure categories and contacts have been consulted:

Table 3.1: Infrastructure Service Providers Consulted

Infrastructure Area	Contact
Transport	Nick Dauncy – Warwickshire County Council
Education	Janet Neal – Warwickshire County Council
Health	David Goodwin – Coventry Primary Care Trust Mel Duffy – South Warwickshire Foundation Trust Emily Fernandez – Warwickshire County Council
Green Space	Tony Perks – Stratford-on-Avon District Council David Lowe – Stratford-on-Avon District Council
Leisure	Tony Perks – Stratford-on-Avon District Council
Community and Social	Jasbir Kaur – Warwickshire County Council
Emergency	Tim Sanders – Warwickshire Police Andrew Kelly – Warwickshire Fire and Rescue Service

3.1.3 It should be noted that SDC have consulted separately with the Environment Agency, Severn Trent Water and energy providers and confirmed that there are no specific infrastructure requirements beyond those that can be addressed through the development construction process.

### 3.2 Infrastructure Schedules

3.2.1 Infrastructure requirements for each site are set out in **Tables 3.2, 3.3** and **3.4** overleaf. It should be noted that cost information presented are indicative and subject to change.

3.2.2 Potential funding sources and delivery timing have been considered for identified Infrastructure projects to identify which infrastructure requirements might be directly funded by the developer and when they may be required. Potential timings have been defined as early mid and late and relate to the time periods set out in paragraph 1.1.3.

Table 3.2: Long Marston (NS) – Infrastructure Requirements

Category	Scheme	Cost	Potential Funding	Responsible for Delivery	Potential Timing
Transport	Eastern Relief Road (Southern Section)	£30 m	On site provision by developer S38/S278 agreements	Developers/Warwickshire County Council	Early-Mid
Transport	Eastern Relief Road (Northern Section including bridge)	£15 m	Major Scheme Bid Post 2019	Warwickshire County Council	Mid-Late
Education	Expansion of Quinton Primary School to 2 FE (1 FE increase)	£2.8 m	S106 developer contributions	Warwickshire County Council	Early
Education	New 1 FE Primary School with co-located Nursery	£3 m plus site	On site provision by developer	Warwickshire County Council	Mid-Late
Education	Expansion of Shipston Secondary School to 6 FE (2 FE increase)	£3 m	S106 developer contributions. Possible support from Education Funding Agency. The current planned basic need expansion is supported by WCC through basic need funding.	Warwickshire County Council	Mid
Education	Provision of Sixth Form at Shipston Secondary School	£3 m	S106 developer contributions and possible support for new facility from the Education Funding Agency.	Warwickshire County Council	Mid
Health	New 3 GP Facility (480 sqm)	£1.8 m	Provided on site on a commercial basis	Primary Care Trust and Clinical Commissioning Group	Early-Mid
Police	Safer Neighbour Team Premise (potentially co-located)	£100k plus site	On site provision by developer	Warwickshire Police	Mid
Green Space	Provision of public open space, children's play space and leisure.	Unknown	On site provision by developer	Stratford-on-Avon District Council	Throughout

Community	Provision or improvement of libraries and community meeting space	£1.9 m	S106 developer contributions	Warwickshire County Council and Stratford-on-Avon District Council	Mid
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Table 3.3: Lighthorne Heath (NS) – Infrastructure Requirements

Category	Scheme	Cost	Funding	Responsible for Delivery	Potential Timing
Transport	Introduction of a new north bound slip onto the M40 from the B4451	£2 m	Part of development package (S278 agreement)	Warwickshire County Council/Developer	Mid
Transport	Introduction of signals and queue detectors at the northbound off-slip of M40 Junction 13.	£1 m	Part of development package (S278 agreement)	Highways Agency/Developer	Mid
Transport	Introduction of Managed Motorways (MM) All Lanes Running (ALR) between M40 Junctions 13 and 14 - (contribution towards a full scheme between Junctions 12 and 15the total costs of which would be far greater than £10m)	£10 m	Funding contribution(S278 agreement)	Highways Agency/Developer	Mid-Late
Transport	Introduction of ramp metering on the M40 southbound on-slip at Junction	£0.5 m	Part of development package (S278 agreement)	Highways Agency/Developer	Mid-Late
Transport	Widening of the circulating carriageway and all approaches to the Fosse Way/A452 roundabout, provision of two lane exit flares on the Fosse Way in both directions.	£1 m	Part of development package (S278 agreement)	Warwickshire County Council/Developer	Mid
Transport	Further enhancements to Grey's Mallory, including revision of the lane markings between the B4100 west bound and Europa Way north bound, and addition of a third lane to accommodate more traffic movements from Europa Way south	£1 m	S106 developer contributions Part of development package (S278 agreement)	Warwickshire County Council/Developer	Mid

	bound to the B4100 east bound.				
Transport	Addition of a left turn slip from Oakley Wood Rd northbound to Harbury Lane westbound	£0.5 m	Part of development package (S278 agreement)	Warwickshire County Council//Developer	Mid
Transport	Signalisation of the B4100/Fosse Way roundabout.	£0.5 m	Part of development package (S278 agreement)	Warwickshire County Council//Developer	Mid
Transport	M40 Longbridge Island improvements	£0.5 m	Part of development package (S278 agreement)	Highways Agency/Developer	Mid-Late
Transport	Europa Way corridor improvements	£0.5 m	Part of development package (S278 agreement)	Warwickshire County Council//Developer	Mid-Late
Transport	Oakley Wood Road/Tachbrook Road corridor improvements	£0.5 m	Part of development package (S278 agreement)	Warwickshire County Council//Developer	Mid-Late
Transport	Pedestrian/cycle link to Leamington via B4100 / Chesterton / Whitnash	£1 m	Part of development package (S106 agreement)	Warwickshire County Council//Developer	Mid
Transport	Pedestrian/cycle link north from site over M40 via existing bridleways	£0.5 m	Part of development package (S106 agreement)	Warwickshire County Council//Developer	Mid
Transport	Other minor improvements to road network to provide pedestrian and cycle connections to existing leisure routes / local destinations	£1 m	Part of development package (S106 agreements)	Warwickshire County Council//Developer	Mid
Transport	Schemes to be identified - indicative cost based on £1M per 1,000 dwellings	£5 m	Part of development package (S106 agreements)	Warwickshire County Council//Developer/Bus Operators	Early-Mid
Education	Relocation and expansion of existing	£4 m plus site	S106 developer contributions and	Warwickshire County	Early

	Lighthorne Heath Primary School		capital receipts from sale of existing school site	Council	
Education	New 2 to3 FE primary school with co-located nursery	£6 m plus site	S106 developer contributions	Warwickshire County Council	Mid-Late
Education	New Secondary School (5 to 6 FE)	£20 m plus site	£14.5 m S106 developer contributions and Academy sponsor funding.	Warwickshire County Council	Mid
Health	New 5 GP Facility (720 sqm)	£2.5 m	Provided on site on a commercial basis	Primary Care Trust and Clinical Commissioning Group	Early-Mid
Police	Safer Neighbour Team Premise (potentially co-located)	£100k plus land	S106 developer contributions	Warwickshire Police	Mid
Green Space	Provision of public open space, children's play space and leisure.	Unknown	On site provision by developer	Stratford-on-Avon District Council	Throughout
Leisure	A new Sports Hall (potentially co-located and shared with secondary school)	£3 m	S106 developer contributions	Warwickshire County Council	Mid-Late
Community	Provision or improvement of libraries and community meeting space	£3.8 m	S106 developer contributions	Warwickshire County Council and Stratford-on-Avon District Council	Mid

Table 3.4: South-East Stratford (SUE) – Infrastructure Requirements

Category	Scheme	Cost	Potential Funding	Responsible for Delivery	Potential Timing
Transport	Eastern Relief Road (Southern Section)	£30 m	On site provision by developer S38/S278 agreements	Developers/Warwickshire County Council	Mid
Transport	Eastern Relief Road (Northern Section including bridge)	£15 m	Major Scheme Bid Post 2019	Warwickshire County Council	Late
Education	New Primary School (2 FE)	£6 m plus site	£5 m S106 developer contributions	Warwickshire County Council	Mid
Education	New Primary School (2 to 3 FE)	£6-8 m plus site	£5.5 m S106 developer contributions	Warwickshire County Council	Late
Education	New Secondary School (4 to 5 FE) Several delivery options could be considered.	£25 m plus possible site.	£15.5 m S106 Developer contributions and Academy sponsor funding.	Warwickshire County Council	Mid
Health	New 6 GP Facility (840 sqm)	£2.9 m	Provided on site on a commercial basis	Primary Care Trust and Clinical Commissioning Group	Mid
Green Space	Provision of public open space, children's play space and leisure.	Unknown	On site provision by developer	Stratford-on-Avon District Council	Throughout
Community	Provision or improvement of libraries and community meeting space	£1.9	S106 developer contributions	Warwickshire County Council and Stratford-on-Avon District Council	Mid



3.2.3 In addition to the on site and S106 infrastructure requirements, the following strategic infrastructure requirements have been identified by ISP's. It should be noted that these requirements are related to overall levels of development at Stratford-on-Avon and across the whole District and are not solely related to any of the potential NS or SUE options.

- Provision for special needs places for education
- Provision for post 16 further education
- A new hospital on the existing Stratford site, including outpatient, diagnostic and treatment facilities
- A new ward block on the Warwick hospital site to meet the acute healthcare demands of the population of the 9500 dwellings
- Improved/extended Police custody facilities
- Improved/extended Police response hubs

### **3.3 Viability Assessment**

3.3.1 To provide evidence on the delivery of strategic sites in Stratford-on-Avon a high level viability test has been undertaken. This considers the three sites identified by the Council for more detailed consideration. This will provide evidence as to whether each of these potential strategic sites can deliver the Plan's policy objectives and those necessary to bring forward a sustainable settlement. It will also set out whether the potential strategic sites can also contribute a Community Infrastructure Levy (CIL) toward general infrastructure requirements across the area.

3.3.2 The method and approach to this testing is set out in Section 1 of this report. The approach is the same as Community Infrastructure Levy Economic Viability Study June 2013. A more detailed methodology is set out in that report.

#### **Assumptions**

3.3.3 In terms of the site selection and dwelling numbers, the council asked for the following potential dwelling numbers to be tested for each site:

- Long Marston (NS) – 2,000 dwellings
- Lighthorne Heath (NS) – 5,000 dwellings
- South East Stratford (SUE) – 3,000 dwellings

3.3.4 In order to be consistent, the viability testing uses the same baseline assumptions on density, housing mix, affordable housing, general costs and values as set out in Community Infrastructure Levy Economic Viability Study June 2013. For ease, these assumptions are outlined in Appendix A.

3.3.5 To reflect the more detailed work undertaken on infrastructure requirements, each appraisal will include the specific strategic infrastructure costs identified in this report as set out below:

- Long Marston (NS) - £43,800,000

- Lighthorne Heath (NS) – £58,400,000
- South East Stratford (SUE) – £57,900,000

3.3.6 However these costs do not include the general costs associated with ‘opening’ up a large site, such as utilities and open space. Therefore an allowance for these costs based on past experience of schemes elsewhere for large strategic sites has been included within the appraisals.

3.3.7 Having estimated the residual value, we compare this residual value with the ‘benchmark land value’ or ‘land cost’, which is the minimum land value the landowner will accept to release their land for the development specified.

3.3.8 Benchmark values will vary to reflect the landowner’s judgements, which might include the contextual nature of development, the site density achievable, the approach to the delivery of affordable housing (in the context of residential development) and so on. There are a wide range of permutations here. In order to make progress, we have to assume a central value, even though there could be a margin of error in practice. It is considered that:

- If the residual land value shown by the appraisal is below the benchmark value, the development is not financially viable, even without CIL. That means it will not happen unless the circumstances change.
- If the residual value and the benchmark values are equal, the development is just viable but there is no surplus value available for CIL.
- If the residual land value shown by the appraisal is above the benchmark value, the development is viable. The excess of residual over benchmark value measures the maximum amount that may be potentially captured by CIL. The summary table then converts this amount available for CIL into a per square metre charge in the column at the far right.

3.3.9 Our objective in these summary tables is to show, for each notional development scenario, how much money might be theoretically available for a CIL charge. Reading the summary table from left to right, successive columns are as follows:

- a. Site name
- b. Number of units
- c. Net site area
- d. Density - the number of residential units per hectare (for residential uses only).
- e. Residual value - £ per hectare and £ per sqm. The method and assumptions used in this appraisal to arrive at this number are described in the report.
- f. Benchmark land value per ha and per sqm: the estimated minimum a developer would typically need to pay to secure a site of this kind, expressed in £ per ha or divided by its chargeable floorspace.
- g. Policy costs
- h. CIL surplus per sqm: this column identifies the amount of money which is, in theory, available for CIL, after policy costs (if applicable) have been paid. It is expressed per sqm of chargeable development. Note that this sum is derived from the difference between the benchmark land value and the residual land value on site S106 (and

affordable housing costs) have been taken into account. As noted earlier, this overage is an estimate of the CIL ‘ceiling’ – the maximum CIL that could be charged consistent with the development being financially viable, expressed per ha. Given the uncertainties surrounding viability appraisal, it is of course an approximate indicator, which should be used cautiously.

- 3.3.10 It is important to bear in mind that these calculations are no more than approximations, surrounded by margins of uncertainty but are based on best available evidence and judgement at the time of writing.

### Findings

- 3.3.11 **Table 3.5** summarises the residential development appraisals. The theoretical maximum CIL charge per square metre for each development is therefore shown in the far right column of the summary table below. As we explain below, though, we do not recommend that this theoretical maximum be directly translated into a CIL Charge.

Table 3.5: Viability Appraisal Findings

	Dwellings	Net site area	Density of dwellings	Residual land value		Benchmark		Policy costs	Financial headroom	
	No.	Ha	Per Ha	Per Ha	Per £psm	Per Ha	Per £psm	Per £psm	Per Ha	Per £psm
Long Marston	2,000	57.14	35	£862,711	£299	£840,000	£291	£416	£22,711	£8
South East Stratford	3,000	85.71	35	£848,150	£328	£840,000	£325	£431	£8,150	£3
Lighthorne Heath	5,000	142.86	35	£962,088	£410	£840,000	£358	£335	£122,088	£52

- 3.3.12 The results in **Table 3.5** show that all the sites are viable and can deliver a development with the necessary strategic infrastructure and affordable housing. However, both Long Marston and South East Strategy, whilst viable are marginal – and thus the Council, on the basis of these figures would not impose a levy if either of these sites were to go forward through the Plan process. In terms of Lighthorne Heath there may be potential to collect a limited level of Levy and not put development at risk.

- 3.3.13 These figures need to be considered within the context of the broad assumptions. In particular a standard benchmark land value has been applied to all the sites. This benchmark could be considered as more appropriate to sites on the edge of settlements where there has been hope value and long term potential in bringing them forward for development. A lower benchmark would allow for improved viability and the potential to realise a higher levy.

- 3.3.14 In summary, the high level testing, based on the standard assumptions and an allowance for identified specific strategic infrastructure items shows that all the sites are viable with Lighthorne Heath marginally the most viable site and the only one that offers potential for the Levy.



### **3.4 Overall Conclusions**

- 3.4.1 The objective of the study has been to identify potential development options of a strategic scale.
- 3.4.2 An important consideration going forward will be the relative merits of each location in spatial strategy terms. The consideration of each location as part of the overall planning strategy for the District is beyond the scope of the study and will therefore require further consideration by Stratford-on-Avon District Council.

#### **New Settlements**

- 3.4.3 The following New Settlement options should be considered further by the Council:
- Option 2: Long Marston (NS);
  - Option 3: Lighthorne Heath (NS).

#### **Sustainable Urban Extensions**

- 3.4.4 The following Sustainable Urban Extension options should be considered further by the Council:
- Option 6: South East Stratford (SUE).
- 3.4.5 The findings of the study are that three locations perform well in terms of their availability, their apparent ability to accommodate development of the scale envisaged by the Council, their relatively unconstrained nature and their potential viability, having regard to their identified infrastructure requirements.

## Appendix A Viability Assumptions

Assumption	Source	Notes																																																
<b>Scenarios</b>																																																		
Residential development typology	Consultation with client	This mix of schemes was selected in discussion with the client group, making use of their local knowledge, to create a representative but focused profile of residential likely to come forward in the area for the foreseeable future.																																																
		<table border="1"> <thead> <tr> <th rowspan="2">Typology</th> <th rowspan="2">No.</th> <th colspan="4">OM dwelling type (%)</th> <th colspan="3">AH dwelling type (%)</th> </tr> <tr> <th>Flats</th> <th>Terraced</th> <th>Semi-detached</th> <th>Detached</th> <th>Flats</th> <th>Terraced</th> <th>Semi-detached</th> </tr> </thead> <tbody> <tr> <td>12 Long Marston</td> <td>2,000</td> <td>5%</td> <td>20%</td> <td>50%</td> <td>25%</td> <td>10%</td> <td>50%</td> <td>40%</td> </tr> <tr> <td>13 South East Stratford</td> <td>3,000</td> <td>5%</td> <td>20%</td> <td>50%</td> <td>25%</td> <td>10%</td> <td>50%</td> <td>40%</td> </tr> <tr> <td>14 Lighthome Heath</td> <td>5,000</td> <td>5%</td> <td>20%</td> <td>50%</td> <td>25%</td> <td>10%</td> <td>50%</td> <td>40%</td> </tr> </tbody> </table>	Typology	No.	OM dwelling type (%)				AH dwelling type (%)			Flats	Terraced	Semi-detached	Detached	Flats	Terraced	Semi-detached	12 Long Marston	2,000	5%	20%	50%	25%	10%	50%	40%	13 South East Stratford	3,000	5%	20%	50%	25%	10%	50%	40%	14 Lighthome Heath	5,000	5%	20%	50%	25%	10%	50%	40%					
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Densities	Assumed	SUE 35 dwph																																																
Unit sizes	Industry standard	<p>Residential floorspace is based upon industry standards of new build schemes. Two floor areas are displayed for flatted schemes: The Gross Internal Area (GIA) is used to calculate build costs and Net Internal Area (NIA) is applied to calculate the sales revenue. For the small housing sites (up to 5 units) larger dwellings are delivered in the borough, with medium and larger sites delivering more 'standard' unit sizes, we have therefore applied two unit sizes within our viability analysis.</p> <p>Affordable unit sizes for houses, are based upon HCA space standards (English Partnerships' Quality Standards Delivering Quality Places Revised: from November 2007) for a 3 bed 5 person home as a result these are smaller than the private units which are being delivered on site up to 5 units. Unit sizes are set out as follows:</p> <table border="1"> <thead> <tr> <th colspan="3">Private</th> </tr> </thead> <tbody> <tr> <td>Private sale values</td> <td>Flats (NIA)</td> <td>55 sq m</td> </tr> <tr> <td>Private sale values</td> <td>Flats (GIA)</td> <td>65 sq m</td> </tr> <tr> <td>Private sale values</td> <td>Terraced</td> <td>70 sq.m</td> </tr> <tr> <td>Private sale values</td> <td>Semi-</td> <td>80 sq.m</td> </tr> <tr> <td>Private sale values</td> <td>Detached</td> <td>120 sq m</td> </tr> <tr> <th colspan="3">Affordable units</th> </tr> <tr> <td>Affordable rent</td> <td>Flats (NIA)</td> <td>55 sq m</td> </tr> <tr> <td>Affordable rent</td> <td>Flats (GIA)</td> <td>65 sq m</td> </tr> <tr> <td>Affordable rent</td> <td>Terraced</td> <td>70 sq.m</td> </tr> <tr> <td>Affordable rent</td> <td>Semi-</td> <td>80 sq m</td> </tr> <tr> <td>Shared ownership</td> <td>Flats (NIA)</td> <td>55 sq m</td> </tr> <tr> <td>Shared ownership</td> <td>Flats (GIA)</td> <td>65 sq m</td> </tr> <tr> <td>Shared ownership</td> <td>Terraced</td> <td>70 sq m</td> </tr> <tr> <td>Shared ownership</td> <td>Semi-</td> <td></td> </tr> <tr> <td>Shared ownership</td> <td>detached</td> <td>80 sq m</td> </tr> </tbody> </table>	Private			Private sale values	Flats (NIA)	55 sq m	Private sale values	Flats (GIA)	65 sq m	Private sale values	Terraced	70 sq.m	Private sale values	Semi-	80 sq.m	Private sale values	Detached	120 sq m	Affordable units			Affordable rent	Flats (NIA)	55 sq m	Affordable rent	Flats (GIA)	65 sq m	Affordable rent	Terraced	70 sq.m	Affordable rent	Semi-	80 sq m	Shared ownership	Flats (NIA)	55 sq m	Shared ownership	Flats (GIA)	65 sq m	Shared ownership	Terraced	70 sq m	Shared ownership	Semi-		Shared ownership	detached	80 sq m
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<b>Construction Costs</b>																																		
Build costs	BCIS Quarterly Review of Building Prices online version accessed March 2013. Prices adjusted for the IoW.	<p>Residential build costs are based upon industry data from the Build Cost Information Service (BCIS) which is published by the Royal Institution of Chartered Surveyors (RICS). The data is published by RICS on a quarterly basis. BCIS offers a range of prices dependent on the final specification.</p> <p>The following build costs used are derived from recent data of actual prices in the marketplace. As early as 2009, the market across the UK was building at round Code for Sustainable Homes Level 3 to 4 for private and Level 4 for affordable housing.</p> <table border="1"> <thead> <tr> <th colspan="4">Private</th> </tr> </thead> <tbody> <tr> <td>Flats –</td> <td></td> <td>£990 sqm</td> <td>Mean cost</td> </tr> <tr> <td>Flats 6 story plus -</td> <td></td> <td>£1,295 sqm</td> <td>Mean cost</td> </tr> <tr> <td>Houses (general estate) –</td> <td></td> <td>£884 sqm</td> <td>Mean cost</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">Affordable</th> </tr> </thead> <tbody> <tr> <td>Flats –</td> <td>■</td> <td>£990 sqm</td> <td>Mean cost</td> </tr> <tr> <td>Flats 6 story plus -</td> <td>■</td> <td>£1,295 sqm</td> <td>Mean cost</td> </tr> <tr> <td>Houses (general estate) –</td> <td></td> <td>£884 sqm</td> <td>Mean cost</td> </tr> </tbody> </table> <p>Costs may alter in future. In particular, there may be national policy change regarding Code for Sustainable Homes building standards. The final effect of these changes on viability is difficult to foresee. While we have reviewed current Government research on cost impacts of CSH we note that past forecasts of price changes (such as that predicted in the original Cyril Sweet work) have never affected costs to the extent forecast. When these future requirements come into force, they will impact on both development costs and land values. We have not incorporated these possible impacts into our calculations, because this appraisal is based on current market conditions, not forecasts of potential future change. Our approach to incorporating these (and other) potential but unknown costs is to set a wide margin for error that will cover variations in factors such as build costs, site conditions, and timing.</p>	Private				Flats –		£990 sqm	Mean cost	Flats 6 story plus -		£1,295 sqm	Mean cost	Houses (general estate) –		£884 sqm	Mean cost	Affordable				Flats –	■	£990 sqm	Mean cost	Flats 6 story plus -	■	£1,295 sqm	Mean cost	Houses (general estate) –		£884 sqm	Mean cost
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Plot external	Industry standards	<p>Plot externals relate to costs for internal access roads, hard and soft landscaping. This will vary from site to site, but we have allowed for this at the following rate:</p> <p style="text-align: center;"><b>10% Build cost</b></p>																																
Site abnormals	Industry standards	<p>The general cost of opening up sites has been taken into account - these costs will vary according to the size and type of development - these costs could include highway access, drainage requirements, landscaping, tree retention, ground works, and demolition, remediation. Whilst a generic figure, based on past appraisals, has been applied it is considered that any extra site specific costs not within this figure would come out of the cost of the</p>																																
Professional Fees	Industry standards	<p>Professional fees relate to the costs incurred to bring the development forward and cover items such as; surveys, architects, quantity surveyors, etc. Professional fees are based on accepted industry standards and are calculated as a percentage of build costs at</p> <p style="text-align: center;"><b>12% Build cost</b></p>																																
Contingency	Industry standards	<p>Contingency is based upon the risk associated with each site and has been calculated as a percentage of build cost</p> <p style="text-align: center;"><b>5% Build cost</b></p>																																
Sale costs	Industry standards	<p>Sale costs relate to the costs incurred for disposing the completed residential units, including legal, agents and marketing fees. These are based on industry accepted scales at the following rates:</p> <p style="text-align: center;"><b>3% Gross Development Value</b></p>																																
Finance costs	Industry standards	<p>When testing for development viability it is common practice to assume development is 100% debt financed (Viability Testing Local Plans - Advice for planning practitioners and RICS Financial viability in planning guidance note GN94/2012. Within our cashflow we used a finance rate based upon market rates of interest as follows:</p> <p style="text-align: center;"><b>7% Development costs</b></p>																																
Stamp Duty on Land Purchase	HMRC	<p>Stamp Duty Land Tax (SDLT) is generally payable on the purchase or transfer of property or land in the UK where the amount paid is above a certain threshold. The SDLT rates are by Treasury, the following rates current rates have been applied:</p> <table border="1"> <tbody> <tr> <td>Up to £125,000</td> <td>0.00%</td> </tr> <tr> <td>Over £125,000 to £250,000</td> <td>1.00%</td> </tr> <tr> <td>Over £250,000 to £500,000</td> <td>3.00%</td> </tr> <tr> <td>Over £500,000 to £1m</td> <td>4.00%</td> </tr> <tr> <td>Over £1 million to £2m</td> <td>5.00%</td> </tr> <tr> <td>Over £2m</td> <td>7.00%</td> </tr> </tbody> </table>	Up to £125,000	0.00%	Over £125,000 to £250,000	1.00%	Over £250,000 to £500,000	3.00%	Over £500,000 to £1m	4.00%	Over £1 million to £2m	5.00%	Over £2m	7.00%																				
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Over £2m	7.00%																																	
Professional fees on Land Purchase	Industry standards	<p>In addition to SDLT the purchaser of land will incur professional fees relating to the purchase. Fees associated with the land purchase are based upon the following industry standards:</p> <table border="1"> <tbody> <tr> <td>Surveyor -</td> <td>1.00%</td> </tr> <tr> <td>Legals -</td> <td>0.75%</td> </tr> </tbody> </table>	Surveyor -	1.00%	Legals -	0.75%																												
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Profit																																																					
Developer's return	Industry standards	<p>A developer's return is based upon their attitude to risk. A developer's attitude to risk will depend on many factors that include but not exclusive to, development type (e.g. Greenfield, Brownfield, refurbishment, new build etc), development proposal (uses, mix and quantum), credit worthiness of developer, and current market conditions.</p> <p>The Harman Report states that "residential developer margin expressed as a percentage of GDV - should be the default methodology" and E.2.3.8.1 of the RICS Financial viability in planning report states "The residential sector seeks a return on the GDV".</p> <p>We have applied a rate that is acceptable to both developers and financial institutions in the current market. The developer return is a Gross Margin and therefore includes overheads. The developer return is calculated as a percentage of Gross Development Value at the following rate:</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 40px;">Developer return on market housing</td> <td style="text-align: right;">20% Gross development value</td> </tr> <tr> <td style="padding-left: 40px;">Return on affordable housing</td> <td style="text-align: right;">6% Gross development value</td> </tr> </table> <p>A lower margin has been applied to the affordable units as these represent less development risk as the end user is known at point of construction. This approach is also typical with industry standards. The HCA state 'Conventional practice is to allow for developer's margin at a lower rate for affordable housing developed as part of a Section 106 agreement, as the risks are low relative to development of open market housing. The user manual for the Economic Appraisal Tool states that a typical figure may be in the region of 6% of affordable housing value on a nil grant basis'.</p>				Developer return on market housing	20% Gross development value	Return on affordable housing	6% Gross development value																																												
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Industry standards	Build rate units/per annum	<p>House builders typical build to sale. Therefore build rates are determined by market conditions of how many units can be sold on a monthly basis as developers do not want to be holding onto stock as this impacts their cashflow.</p> <table border="0" style="width: 100%;"> <thead> <tr> <th colspan="2">Construction period</th> <th>Units</th> <th colspan="2">Length in months</th> <th></th> </tr> </thead> <tbody> <tr> <td>12</td> <td>Long Marston</td> <td>2000</td> <td>1/6/13</td> <td>1/5/21</td> <td>96</td> </tr> <tr> <td>13</td> <td>South East Stratford</td> <td>3000</td> <td>1/6/13</td> <td>1/5/24</td> <td>133</td> </tr> <tr> <td>14</td> <td>Lighthorne Heath</td> <td>5000</td> <td>1/6/13</td> <td>1/5/28</td> <td>182</td> </tr> <tr> <th colspan="2">Sales period</th> <th>Units</th> <th>Start</th> <th>Length in months</th> <th></th> </tr> <tr> <td>12</td> <td>Long Marston</td> <td>2000</td> <td>1/6/15</td> <td>1/5/23</td> <td>96</td> </tr> <tr> <td>13</td> <td>South East Stratford</td> <td>3000</td> <td>1/6/15</td> <td>1/5/26</td> <td>133</td> </tr> <tr> <td>14</td> <td>Lighthorne Heath</td> <td>5000</td> <td>1/6/15</td> <td>1/5/30</td> <td>182</td> </tr> </tbody> </table>				Construction period		Units	Length in months			12	Long Marston	2000	1/6/13	1/5/21	96	13	South East Stratford	3000	1/6/13	1/5/24	133	14	Lighthorne Heath	5000	1/6/13	1/5/28	182	Sales period		Units	Start	Length in months		12	Long Marston	2000	1/6/15	1/5/23	96	13	South East Stratford	3000	1/6/15	1/5/26	133	14	Lighthorne Heath	5000	1/6/15	1/5/30	182
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Residential land values	Land Registry & UK Land Directory website and consultation	<p>It is important to appreciate that assumptions on benchmark land values can only be broad approximations, subject to a wide margin of uncertainty. We take account of this uncertainty in drawing conclusions and recommendations from our analysis. We have examined a cross section of residential land comparables. These comparable transactions generally relate to both clean greenfield sites and urban, brownfield sites, which were fully serviced with roads and major utilities to the site boundary.</p> <p>It is important to take into account future policy considerations such as affordable housing when setting an appropriate benchmark. This approach is in line with the Harman report which advises authorities to work on the basis of future policy and its effects on land values.</p> <table border="0" style="width: 100%; margin-top: 10px;"> <tr> <td style="text-align: center;">Residential values</td> <td style="text-align: center;">Bulk sites</td> <td style="text-align: right;">£840,000 per ha</td> </tr> </table>				Residential values	Bulk sites	£840,000 per ha																																													
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