

Chippenham Site Allocations Plan Sustainability Appraisal Report

Wiltshire Council

ATKINS

Part One B: A Review of the Sustainability Appraisal of Strategic Areas

May 2016

Plan Design Enable

Notice

This document and its contents have been prepared and are intended solely for Wiltshire Council's information and use in relation to the Chippenham Site Allocations Plan.

Atkins assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

Document history

Job number: 5139589						
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft for comment	BN/CW	MW	CW	CW	16/03/16
2.0	Draft Final	BN/CW	MW	CW	CW	28/04/16
3.0	Final	BN/CW	MW	CW	CW	13/05/16

Client signoff

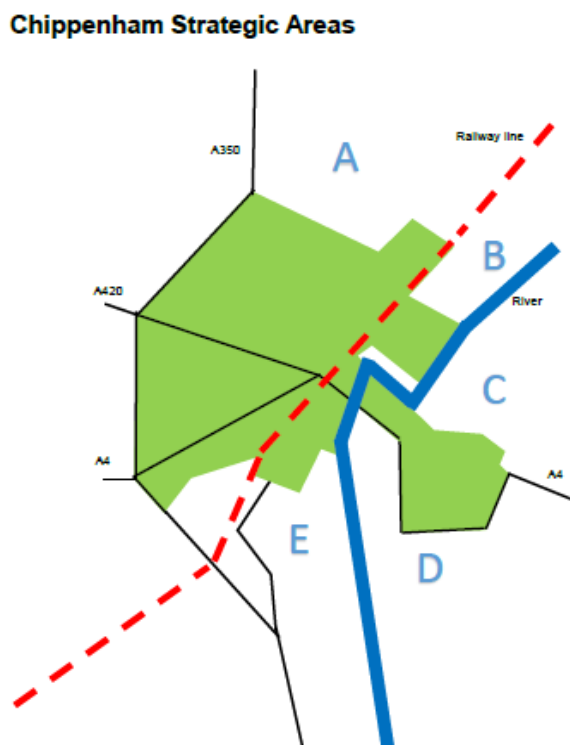
Client	Wiltshire Council
Project	Chippenham Site Allocations Plan
Document title	SA Report
Job no.	5139589

1. Strategic areas assessment

1.1 Introduction

- 1.1.1 This section provides a high level assessment of the five indicative strategic areas (A to E) identified in the Chippenham diagram contained in the Wiltshire Core Strategy. The SA of the Core Strategy does not provide an assessment of Areas A to E and instead they are assessed in this SA Report for the Chippenham Site Allocations Plan.
- 1.1.2 These strategic areas may, in principle, be suitable to accommodate large mixed use sites on the edge of the town. These areas lie adjacent to the north-eastern, eastern, south-eastern and southern boundaries of Chippenham and are defined by barriers such as main roads, rivers and the main railway line. The five strategic areas in Chippenham are provided in the Figure 1.1 below.

Figure 1.1: Chippenham Strategic Areas Diagram



- 1.1.3 No areas were identified by the Council for assessment west of Chippenham as this direction of growth is not considered suited to the development of large mixed use sites and, therefore, not considered a reasonable alternative for the purpose of SA.
- 1.1.4 In addition to this, no strategic areas were considered within existing urban areas of Chippenham given the limited opportunities for redevelopment, as stated in the Para 5.47 of the Wiltshire Core Strategy (2015) *“Currently, the limited opportunities for the redevelopment of brownfield sites in Chippenham means that it is necessary to identify greenfield sites on the edge of town”*
- 1.1.5 The high level assessment of strategic areas A to E provides initial information as to which strategic area (or parts of strategic areas) or combination of areas are best suited to accommodate strategic development on the periphery of Chippenham town.
- 1.1.6 It is important to note that given the high level nature of the strategic of areas A to E, there is some uncertainty in effects against SA objectives. It should also be noted that the level of assessment of these areas that has been undertaken allows for a proportionate use of evidence appropriate for a comparison of broad strategic areas and provides a relatively comprehensive identification and assessment of key receptors, resources and effects.

1.2 Methodology

- 1.2.1 A Sustainability Threshold Assessment (STA) methodology has been used which allows for the evaluation and comparison of effects for the five strategic areas. The generic assessment scale that has been utilised is shown in Table 1.1. Further details on the methodology that has been utilised are set in Methodology Chapter 2 in Part One A: Chapters 1-6 (separate document).
- 1.2.2 Information contained in various thematic evidence papers prepared in support of the Chippenham Site Allocations Plan has been utilised in the assessments:
- Biodiversity Evidence Paper 2015
 - Flood Risk and Surface Water Management Evidence Paper 2015
 - Historic Assets Evidence Base 2015
 - Landscape Setting Assessment Evidence Paper 2014
 - Transport Evidence Paper (Part 1) 2014
 - Transport Evidence Paper (Part 2) 2015
- 1.2.3 Constraints maps for the Chippenham area (presented in Appendix A) have been prepared covering the following topics:
- Biodiversity (linked to SA Objective 1)
 - RIGS (linked to SA Objective 1)
 - BAP Priority Habitats (linked to SA Objective 1)
 - Agricultural Land (linked to SA Objective 2)
 - Contaminated Land (linked to SA Objective 2)
 - Mineral Safeguarding Areas (linked to SA Objective 2)
 - Water Resources and Flooding (linked to SA Objective 3)
 - Air Quality (linked to SA Objective 4)
 - Heritage (linked to SA Objective 6)
 - Landscape and Townscape (linked to SA Objective 7)
 - Community Facilities (linked to SA Objective 8)
 - Open Space (linked to SA Objective 8)
 - Public Rights of Way (linked to SA Objective 8)
 - Multiple Deprivation (linked to SA Objective 8)
- 1.2.4 The description of the Strategic Areas provided in Appendix B has been extracted from Evidence Paper 4: Chippenham Landscape Setting Assessment.
- 1.2.5 It should be noted that the STA methodology has a particular focus on likely adverse effects that may arise from development as it acts as a first sieve in the identification of areas or sub-areas inside each strategic area with the most ability to accommodate development.
- 1.2.6 The assessment methodology takes into consideration constraints to development in each of the five strategic areas and is based on the following generic approach:

- 1- The existence of absolute sustainability constraints covering the whole of a strategic area will lead to the exclusion of an area.
- 2- Sustainability constraints which result in significant adverse effects for which mitigation is problematic will require the search for development to be located in better performing areas; if no better performing strategic areas exist then an approach is set as to how the area could still accommodate development.
- 3- Sustainability constraints which result in adverse effects capable of being mitigated mean that development can be located inside the strategic area. In this case, mitigation measures are identified to prevent and/or minimise identified likely adverse effects.
- 4- No sustainability constraints result in no adverse effects and development can be located inside the strategic area.

Table 1.1: Thresholds for Assessment

Not suitable for development		Absolute sustainability constraints; exclude this option.
Significant adverse effect on...		Sustainability issues; mitigation considered problematic.
Limited adverse effect on...		Sustainability issues; mitigation considered achievable.
No adverse effect		No sustainability constraints.
Opportunities to...		Development will support sustainability objective.

1.3 Assessment Summary

- 1.3.1 The summary of the strategic areas assessments scores is presented in Table 1.2. Detailed assessment results for each strategic area are presented in Appendix B.
- 1.3.2 Overall, the assessments show that no absolute constraints to development exist in the five strategic areas (denoted by the absence of red shaded cells in Table 1.2); although some constraints resulting in significant adverse effects arising from development for which mitigation would be problematic (denoted by orange shaded cells in Table 1.2) are present in all areas to a greater or lesser extent. All areas also exhibit a number of constraints of achievable mitigation (denoted by the yellow shaded cells in Table 1.2)
- 1.3.3 A number of generic mitigation measures have been identified which could be applied in most if not all of the strategic areas. These are set out below, with related SA objectives listed in parenthesis:
- Ecological surveys will be required to accurately assess likely effects once development details become available (SA Objective 1).
 - Integrated surface water management and pollution prevention measures such as SUDS should be introduced as part of new development (SA Objective 3).
 - Air quality monitoring and noise surveys will be required to determine baseline conditions and understand the extent of potential constraints in specific identified areas (SA Objective 4).
 - Noise-reducing measures such as low noise tarmac and noise bunds / barriers in relation to sensitive receptors may be required in specific identified areas (SA Objective 4).
 - Buildings should be designed so as to minimise construction and operational carbon emissions (SA Objective 5).
 - Trees or new woodland should be planted as part of development to sequesterate carbon, as well as to screen development which would alter the character of the rural landscape, where relevant (SA Objectives 5 and 7).

- Mitigation of effects on heritage assets should be prioritised as: avoidance; preservation in situ of discrete areas of archaeological remains; or archaeological recording for more widespread remains. Archaeological investigations should be considered to assess the significance of any unknown heritage assets (SA Objective 6).
- Any landscape planting should be drought resistant and have a low water demand (SA Objective 7).
- Buffer zones should be used to avoid or reduce impacts on biodiversity, heritage and landscape assets (SA Objectives 1, 6 and 7).
- Public transport improvements would have to bring about a substantial modal shift in all areas in order to alleviate congestion (SA Objective 10).

1.3.4 The subsections below summarise key assessment results for each strategic area, as well as identifying, where applicable, sub-areas within each strategic area with least constraints to development and therefore more suitable for development. Reference should be made to Table 1.2 where environmental objectives and socio-economic objectives are categorised.

Table 1.2: Strategic Areas Assessment Summary Table

SA Objective	Area A revised	Area B revised	Area C revised	Area D revised	Area E revised
Environmental					
1. Protect and enhance all biodiversity and geological features and avoid irreversible losses	Orange	Yellow	Yellow	Yellow	Yellow
2. Ensure efficient and effective use of land and the use of suitably located previously developed land and buildings	Orange	Orange	Orange	Orange	Orange
3. Use and manage water resources in a sustainable manner.	Yellow	Yellow	Yellow	Yellow	Yellow
4. Improve air quality throughout Wiltshire and minimise all sources of environmental pollution	Yellow	Yellow	Orange	Orange	Yellow
5. Minimise our impacts on climate change and reduce our vulnerability to future climate change effects	Yellow	Yellow	Yellow	Yellow	Yellow
6. Protect, maintain and enhance the historic environment	Yellow	Yellow	Yellow	Yellow	Yellow
7. Conserve and enhance the character and quality of Wiltshire’s rural and urban landscapes, maintaining and strengthening local distinctiveness and sense of place	Yellow	Orange	Yellow	Yellow	Yellow
Socio-economic					
8. Provide everyone with the opportunity to live in good quality, affordable housing, and ensure an appropriate mix of dwelling sizes, types and tenures	Green	Green	Green	Green	Green
9. Reduce poverty and deprivation and promote more inclusive and self- contained communities	Yellow	Yellow	Yellow	Yellow	Yellow
10. Reduce the need to travel and promote more sustainable transport choices	Yellow	Yellow	Yellow	Yellow	Blue
11. Encourage a vibrant and diversified economy and provide for long-term sustainable economic growth	Green	Green	Green	Green	Green
12. Ensure adequate provision of high quality employment land and diverse employment opportunities to meet the needs of local businesses and a changing workforce	Blue	Yellow	Yellow	Yellow	Blue

Area A

- 1.3.5 In terms of socio-economic SA objectives, Area A generally provides positive support for the housing and local economy SA objectives. There are, however, two constraints relating to inclusive and self-contained communities and promotion of sustainable travel choices. In particular, the constraints relate to non-motorised access to community facilities and the town centre but mitigation is considered achievable.
- 1.3.6 With regard to environmental SA objectives, the assessment results indicate marked constraints of problematic mitigation in relation to biodiversity and geological features and efficient use of land. Area A encompasses a number of important ecological resources, including two BAP priority habitats, the Birds Marsh Wood County Wildlife Site as well as several protected species. The majority of land in the strategic area (not covered by the approved application 12/00560/OUT) comprises BMV agricultural land, making mitigation through avoidance of BMV also problematic.
- 1.3.7 The eastern part of the strategic area is formed of land which contributes to the setting of a number of heritage assets and includes some landscapes with particular sensitivity. These constraints could be achievable mitigated through sensitive design, layout and landscaping which address the need to enhance or better reveal the settings of these assets. Other environmental constraints regarding water resources, air quality and environmental pollution and communities are also achievable mitigated. The constraints relating to mitigation of and vulnerability to climate change can be mitigated through reduced car dependency, carbon sequestration and design which minimises carbon emissions during construction and operation.
- 1.3.8 Regarding sustainable transport, the Area is well situated in relation to the PRN with the A350 adjoining the western boundary of the Area, and affords good access to the existing principal employment site to the east. The Area has moderate non-motorised access to the town centre. Relative ease of access to the M4 corridor from this Area may encourage longer distance commuting and road transport focused employment development, which may result in lack of integration with the town centre. These factors combined indicate strong potential for marked reliance on motorised transport from development in the Area, with the risk of exacerbating congestion and associated air quality and noise issues on the B4069 route to the east and the town centre. In order to alleviate congestion public transport improvements would have to bring about a substantial modal shift. This mitigation is considered achievable.
- 1.3.9 The best performing part of the Area comprises that already covered by the approved application. Improvement to the existing public transport network will be required as part of the approved application and there is potential for the approved application to extend existing bus routes to serve the area. The B4069 would serve the Area well as a future public transport corridor. Any development in the Area should also seek to appropriately integrate with the link road proposed in the approved application to support optimal access to the PRN, the town centre, existing employment sites and key facilities.

Area B

- 1.3.10 With regard to socio-economic SA objectives, Area B generally provides positive support for the housing and local economy SA objectives. There is, however, one constraint related to the promotion of sustainable travel choices to employment areas. Improvements to public transport network in Chippenham would be needed to support employment development at Area B. This mitigation is considered achievable.
- 1.3.11 The assessment results indicate that development in Area B is subject to a number of environmental constraints. The extent of BMV agricultural land, which is considered too extensive to adequately mitigate through avoidance, is deemed problematic. None of the other environmental constraints are deemed problematic to mitigate. Constraints in Area B concern biodiversity, efficient and effective use of water resources, mitigation of and vulnerability to climate change, heritage assets and the quality of urban and rural landscapes. Biodiversity constraints include the River Avon CWS which can be avoided. Mitigation of effects from development in an Outer SPZ is considered achievable, as are mitigation of impacts on and vulnerability to climate change through building design, carbon sequestration and reduced focus on the private vehicle. Constraints associated with heritage relate to land which contributes to the setting and character of Langley Burrell and Tytherton Lucas Conservation Areas and listed

buildings at Rawlings Farm and Upper Peckingell Farm. Additionally visual effects of development in Area B on the rural landscape, particularly in terms of the setting of the village of Tytherton Lucas, are of problematic mitigation.

- 1.3.12 Regarding sustainable transport, the assessment for Area B indicates the northern and eastern parts of the Area are constrained in relation to the weak ease of access to community facilities and services but that these constraints would not be problematic to mitigate. The southern and western parts of the Area enjoy good access to the town centre and existing employment areas, in terms of non-motorised movement. However, access to the PRN is generally weak and would likely entail routing through the town centre, as well as increasing pressure on the already congested B4069. The approved application in Strategic Area A comprises a strategic link road which would improve access from Area B to the PRN.
- 1.3.13 The close proximity to the town centre as well as an existing principal employment site presents a strong opportunity in the south and west of the Area to encourage more compact development focused on non-motorised movement routes, with close attention to ecological and landscape integration. However, this would need to be supported by improved public transportation services using the B4069 corridor in order to avoid increases in vehicle traffic, as well as good quality well integrated employment opportunities and increased provision of community services. Improving access from this Area to Abbeyfield secondary school would require a new river crossing.

Area C

- 1.3.14 Area C provides support for socio-economic SA objectives relating to housing and long-term sustainable economic growth. Additionally, a number of constraints are identified with regard to accessibility, including weak access by public transport and non-motorised modes to proposed employment development as well as access to community facilities and services but these are considered of achievable mitigation.
- 1.3.15 The Area does not perform well in relation to the environmental SA objectives as it exhibits two constraints which might prove problematic to mitigate against (land efficiency and air quality and environmental pollution). The extent of BMV land in Area C makes strategic mixed-use development in this Area problematic to mitigate as BMV cannot be avoided. The main access to the PRN and the town centre is via the already congested A4. Environmental pollution is a constraint considered problematic to mitigate as development of Area C would increase air and noise pollution along the A4 into Chippenham. A large proportion of the central, northern and eastern parts of the Area is characterised by moderate to poor access to the town centre, existing employment areas and services, and public transport provision. Improved public transport provision on the A4, and fostering of close integration of non-motorised movement routes, development of the south western and southern parts of the Area offer the best mitigation for the environmental pollution issues identified but it is considered that this will not be sufficient to mitigate satisfactorily the significant adverse effects identified.
- 1.3.16 Other constraints in relation to the environmental SA objectives where mitigation is considered achievable include the River Avon CWS biodiversity feature and the outer SPZ which comprises much of the Area, the presence of Tytherton Lucas Conservation Area and impacts on and vulnerability to climate change. Development in subareas in proximity to the town centre could reduce dependency on cars and reduce emissions, and in doing so mitigating the latter constraint. However, this would encourage development in proximity to the River Avon floodplain where land is vulnerable to flooding and this would have to be taken into account in development proposals. Mitigation of effects on Tytherton Lucas Conservation Area is achievable through avoidance of certain subareas; similarly avoidance of most visually prominent land would mitigate the constraint on the visual amenity and character of the rural landscape.

Area D

- 1.3.17 With regard to socio-economic SA objectives the Area provides positive support for the housing and local economy SA objectives, namely providing good quality affordable housing and encouraging long term sustainable growth. Otherwise, there are constraints relating to the provision of high quality employment land with strong public transport and non-motorised access. Neither of these are considered problematic to mitigate.

- 1.3.18 Similarly to Area C, the assessment against environmental SA objectives indicates constraints deemed problematic to mitigate relating to efficient use of land, due to the extent of BMV land, and air quality and environmental pollution due to the northern part of the Area's proximity to the A4. Furthest overall from the town centre and existing employment sites, access to/from Area D is reliant on the already congested A4 which borders the north of the Area and this will exacerbate existing air quality and environmental pollution issues. Accessibility via public transport or non-motorised modes is considered generally weak over much of the Area, although the north east of the Area has good non-motorised access to Abbeyfield secondary school. Development of the northern part of the Area, in particular the north east, offers the best potential performance in terms of likely significant effects. However, this would require improvement to public transport services to reduce potential negative effects on the A4 corridor and town centre as well as low car ownership/car free type of development, but it is considered that this will not be sufficient to mitigate satisfactorily the significant adverse effects identified.
- 1.3.19 The assessment results indicate a number of constraints against environmental SA objectives deemed achievable to mitigate through avoidance. The Area is partially situated within a Minerals Safeguarding Area. There are a number of important biodiversity features in the Area, in particular associated with riparian and woodland habitats, the linear nature of which makes severance an issue. Bordered in the west and south by the River Avon, flood risk and drainage issues are constraints in these and adjacent parts of the Area. The more remote, rural landscape in the south of the Area, and the setting of some heritage assets in the northwest, pose constraints to development in these areas. Mitigation of adverse effects on the settings of Rowden Conservation Area is achievable through the introduction of buffer zones. The constraint relating to mitigation of and vulnerability to climate change can be mitigated through reduced car dependency, carbon sequestration and design which minimises carbon emissions during construction and operation.

Area E

- 1.3.20 The assessment results indicate that development in Area E would support the socio-economic SA objectives relating to housing and providing for long-term sustainable growth. The results also indicate no constraints on the socio-economic objectives relating to sustainable transport choices for new employment land and providing high quality employment land.
- 1.3.21 Only one constraint deemed problematic to mitigate is identified through the assessment, this relates to the environmental SA objective: efficiency of land use. The extent of BMV land in the Area would prove problematic to mitigate through avoidance.
- 1.3.22 The assessment results indicate that remaining environmental SA objectives pose constraints deemed achievable to mitigate. Biodiversity features, including the River Avon CWS can be avoided by development in Area E; similarly there is sufficient Flood Zone 1 land in the Area for development to avoid Flood Zones 2 and 3; the Mineral Safeguarding Area can be avoided and mitigation of adverse effects on the settings of Rowden Conservation Area is achievable through the introduction of buffer zones. The constraint relating to mitigation of and vulnerability to climate change can be mitigated through reduced car dependency, carbon sequestration and design which minimises carbon emissions during construction and operation.
- 1.3.23 The Area combines good access to the A350 in the southern part, and strong access to existing public transport corridors (B4643), the town centre and existing employment areas in the northern part. The majority of the Area has moderate to weak access by non-motorised modes of transport to secondary schools with the north of the area performing best. Identified air quality and environmental pollution issues are deemed achievable to mitigate.
- 1.3.24 There is a strong opportunity in the north of the Area to encourage more compact development focused on non-motorised movement routes which directly link into the nearby town centre, capitalising on the good network of existing PRowS. Encouraging development of high quality employment opportunities, particularly less motorised transport focused businesses, with close integration with the public network, would help establish such an area as more self-contained and less reliant on highway linkages, helping to reduce traffic pressure on the A4, where bus services could be increased, and ameliorate associated congestion, air quality and noise issues. Compact, human-scale development, with a strong emphasis on low car or car free movement, in

the northern part of Area E should also help facilitate sensitive approaches to the Rowden Conservation Area setting and context.

1.4 Conclusions

1.4.1

Based on the assessment results and taking into account both socio-economic and environmental constraints to development, it is concluded that:

- No absolute constraints to development are identified in any of the five strategic areas.
- All five strategic areas perform similarly with regard to socio-economic SA objectives; although Areas A and E are identified as performing slightly better, having no adverse effects on SA objective 12 (high quality employment land and diverse employment opportunities) whereas Areas B, C and D show some constraints leading to adverse effects for which mitigation is considered achievable.
- All five strategic areas will require improved public transportation in order to be able accommodate new development.
- All areas are assessed to have significant adverse effects on BMV agricultural land. The extent of BMV land across all five Areas makes the constraint problematic to mitigate. It should be noted that the assessments make no distinction between Grades 3a and 3b as no such information is available across all areas. The assessments results are therefore precautionary and will require further testing at the strategic site options assessment stage.
- Area A is assessed to have biodiversity constraints considered problematic to mitigate, whereas with the other strategic areas mitigation is considered achievable.
- Area B is assessed to have landscape constraints considered problematic to mitigate, whereas with the other strategic areas mitigation is considered achievable.
- Areas C and D have constraints considered problematic to mitigate relating to air quality, whereas the constraints for Areas A, B and E are considered achievable to mitigate.
- All areas are equally affected by a number of constraints (relating to use of water resources, climate change, the historic environment and landscape and townscape). Mitigation is considered achievable for all of these constraints.
- Overall, Area E performs marginally better than Areas A, B, C and D; having the least number of constraints considered problematic to mitigate.

Atkins
Euston Tower
30th Floor
286 Euston Road
London
NW1 3AT

