

Appendix C/1

**Cambridge East Area
Action Plan
Sustainability Appraisal
Report**

Special Council Meeting 9th May

Cambridge East Final Sustainability Appraisal Report

Chapters 1-5, and 7 are not included here, but will be similar to the content detailed in the Core Strategy Final Sustainability Report, and are not included in this agenda.

The following Cambridge East Sustainability Appraisal chapters are included:

Chapter 6 – Plan Policies

Appendix 3 - Cumulative, Synergistic & Secondary Effects

Appendix 4 - Significant Impacts Matrix

Appendix 6 - Mitigation Proposals

Appendix 1-2 of the Final Sustainability Report - the Baseline Assessment Dataset and Assessment of Policy Alternatives are included as Appendix A2 and A3 of the Council Agenda.

6 PLAN POLICIES

The predicted effects of each policy on the SA objectives are contained in detailed appraisal tables which are provided in a separate document due to their size. This section draws together information from the Scoping Report – particularly the baseline – with the results of the assessments of overall and cumulative, and other impacts to summarise the overall social, environmental and economic effects of the plan, discussing them in the context of each SA objective in turn.

Each section of the AAP begins with a set of objectives that for the plan which are not strictly part of the policy itself. These objectives have not been assessed separately, however we have satisfied ourselves that they are adequately covered by the corresponding policies and supporting text which have been assessed.

6.1 Summary of cumulative, synergistic and secondary impacts

Current guidance requires the explicit review of these three types of effect in order that each policy is not assessed in isolation. Guidance proposes a range of assessment techniques, each of which has merits and drawbacks. We have used the matrix-based assessment in this instance as it provides a clearer correlation between policies and objectives than some of the other techniques, although clearly it is a further, subjective element of the assessment.

Appendix 3 contains a table cross-referencing the SA objectives against the policies and the conclusions are summarised in a table outlining the principal impacts. In summary, the principal effects identified are:

- The absolute increase in energy and water use, and waste arisings; although as noted previously these are inevitable if government / county house building targets are to be met, and the plan makes provision for deploying appropriate technology to improve efficient use of resources;
- The beneficial effect of integrating the urban quarter into wider transport infrastructure improvements across the city that support sustainable transport policy and encourage modal shift.
- An overall positive (synergistic) effect from policies addressing a wide range of aspects of the design, ranging from housing density to the layout of town and local centres, and features such as the country park. These should will contribute to objectives relating to settlement character, residents' satisfaction, encouraging early occupancy of Cambridge East and integrating it into the surrounding urban fabric;
- A significant temporary problem which may not be cumulative but which may be repetitive. Development will occur over more than 10 years, and residents in the adjoining suburbs will be subject to some impacts for sustained periods, possibly at different times over this period. The situation will also affect those who occupy the first housing units on the main site (although it may be less likely to affect the area north of Newmarket Road). This issue will need careful coordination of the construction programme to minimise disturbance and good site

practices to minimise risks of other impacts such as noise and dust contamination;

- Drainage is a potential issue due to the proximity of SSSIs to the north and east of the site, both of which currently require specific management controls. Contamination and fluctuation in water levels must be avoided by drainage design during construction and once the SUDS is installed;
- Benefits for human health through the provision of open space, encouraging sustainable transport, and provision of other facilities. This is not strictly a cumulative effect, but one where various policies interlock to address an objective comprehensively;

As noted above, in several cases it has proved difficult to distinguish between cumulative impacts and collective impacts – ie. where several policies contribute to an objective. Many of the policies and their supporting text provide mitigation measures for the recognised impacts of the development limiting, in particular, the number of instances where additional cumulative adverse impacts might occur.

6.2 Significant social, environmental and economic effects of the preferred policies

Appendix 4 contains a matrix indicating where there are potentially significant positive and negative impacts from policies on the SA objectives. In reviewing this table and the summaries below reference should be made to the discussion about important and significant impacts in section 3.1 of this report to understand the terminology we have used. Specifically, in many cases significance cannot be established quantitatively, as it can in EIA for example, due to the limited information about the design and layout of the settlement at this stage.

Each section follows a common structure, presenting the issue that the objective seeks to address, supported by baseline data where appropriate. The impact of the plan is then discussed and the key policies which are predicted to have positive or negative impacts are identified. The section concludes with a discussion of synergistic, cumulative or secondary effects which are also referred to in the sections below. All data defining conditions in the District are taken from the baseline dataset unless otherwise stated.

Figure 2 overlays the current proposals map with various parameters that summarise design issues and constraints for the development.

Figure 2: Cambridge East constraints map (Source: South Cambridgeshire District Council, DEFRA; base map © Crown copyright).

1.1 Minimise the irreversible loss of undeveloped land and productive agricultural holdings

The shortage of previously developed land in the District is reflected in the target that 37% of new dwellings should be built on brownfield sites, compared to the national target of 60% stipulated by ODPM, but which is established in the adopted Structure Plan. In 2003 the rate was 27%, consistent with that over the preceding five years, and suggesting the need for improvement. Over the same period average housing density was 19.7 dwellings/ha., which is typical of the sub-region as a whole, but some way below the minimum threshold of 30/ha. specified in PPG3.

Development at Cambridge East is clearly consistent with this objective, balancing the need to meet the housing targets in the Regional Spatial Strategy and Cambridgeshire Structure Plan policy P9/2c with the need to limit the loss of greenfield land. Redevelopment is almost entirely based on re-use of land currently under industrial / commercial use of various forms. Permanent loss of agricultural land is restricted to a small area to the east of the existing park & ride site and a near-rectangular area between the current North Works site and High Ditch Road. An additional small wedge of land next to the Newmarket Road roundabout is also taken, which is believed to be currently unused. There will also be the loss of some agricultural land to the north of Cherry Hinton. A larger area of agricultural land will also be taken north of Teversham to provide the country park, however this does not result in an irreversible land use change.

A further small amount of land will be taken to accommodate the relocated park & ride site south of the roundabout at the eastern end of the site.

Policies with a potentially significant or important beneficial impact: CE/3, CE/18. Both policies provide for a spatial pattern which minimises greenfield land take although this cannot be calibrated as an impact. The requirement to take forward development of this site to support house building targets and meet Structure Plan policies means that these losses are intrinsically more sustainable than loss of agricultural land elsewhere.

Policies with a potentially significant or important harmful impact: none identified.

The principal cumulative impact is the longer-term effect of creating Cambridge East on development pressure on land around Cambridge. Land lying between High Ditch Road and the A14 will lie within the Green Belt limiting further expansion in this direction. Expansion in other directions is only possible in a small area between the relatively new housing development on the north-east of Cherry Hinton and the green separation serving Teversham. Green Belt designation has been continued which will help prevent 'creep' to the east side of Airport Way.

1.2 Reduce the use of non-renewable resources, including energy sources

Prudent use of natural resources in general is one of the basic themes of the UK sustainable development agenda. Baseline data suggests local consumption of gas is lower than the UK average, at 15,395KwH per home, compared to 17000KwH for the UK as a whole. Nevertheless, climate change concerns mean a need to control consumption or exploit more sustainable power sources. Current targets require a 10% increase in production of renewable energy, although the District's capacity has remained static at just under 9GwH for the last five years. There is a regional target to generate 14% of electricity needs from renewable sources over the same period.

Introduction of energy efficient technology and renewable energy generation are addressed by policies CE/28 and CE/32. These establish quotas or thresholds which developers must achieve for the installing photovoltaic cells, solar panels and heat-retention measures. The targets are not particularly stringent, however the Council considers this the most effective way of providing flexibility in that this is expected to encourage developers to meet these thresholds.

Policies with a potentially significant beneficial impact: CE/2, CE/28, CE/29, CE/32. The absolute impact of these policies will depend on two factors: whether (or how many) developers embrace the proposals in policy CE/28; and whether developers implement the minimum requirement or are encouraged to equip more properties with the relevant technology.

The objective also refers to broad issues of energy consumption, and it is strongly supported by specific policies on sustainable transport (CE/14 and CE/15), as well as broader policies such as CE/2 which support modal shift and reduced reliance on the private car.

Policies with a potentially significant adverse impact: CE/1, CE/3, CE/10, CE/11. These policies have a negative impact in absolute terms in that development will contribute to increased energy demands in the sub-region. However the primacy of government policy and the targets in policy 5/3 of the Cambridgeshire Structure Plan require expansion of the district's housing stock and therefore the key relative impact is whether the new technology can reduce the average energy consumption per capita or per household.

The main issue for this objective is the limited cumulative benefit. The Council needs to balance the desire to promote this technology against the financial impositions on developers which are also being asked to contribute to other infrastructure improvements through Section 46 agreements. The benefit of this policy would be maximised if a reasonably ambitious rate of deployment can be encouraged. Some energy efficiency measures can be delivered by design strategies (eg. on massing and orientation of housing) which do not necessarily carry cost burdens. However by mandating a minimum level of provision developers would be encouraged to buy technology in reasonably large volumes that would ideally reduce the price of each unit, lessening the cost burden of complying with this policy. However, it is understood that the Government is unlikely to agree to local planning policies over-riding national legislation set out in Building regulations.

1.3 Limit water consumption to levels supportable by natural processes and storage systems

The District lies in one of the driest areas of the UK (Scoping Report, para. 8.3), although it benefits from the chalk geology in its southern half, as a result of which measures to maintain the openness of land (for percolation) and maintain the nature structure of drainage systems are essential. Unfortunately evaluation of current conditions is limited by the lack of sustainable indicator information at present, although the Scoping Report notes this is a priority for which a source of data is being investigated. (Note that water quality issues are addressed by objective 4.1).

As with the development at Northstowe, water consumption is addressed more aggressively than energy conservation, with policy CE/26 clause 5, which requires technology or facilities that reduce household use by at least 25% compared to current rates. This clearly requires a substantial reduction in usage as a result of greywater recycling and other techniques and is a stringent approach.

Impact on groundwater recharge is addressed primarily by policies CE26(1), (3ii) and 3(iii), all of which provide for sustainable drainage of the site to maintain its current runoff rates and pattern.

Policies with a potentially significant beneficial impact: CE/26, CE/32. All policies clearly support maintenance of water quality, resources and run-off rates.

Policies with a potentially significant adverse impact: CE/1, CE/3, CE/10, CE/11 and CE/38. The assessment for this objective largely mirrors that of 1.2 above. In absolute terms the development will increase water consumption and part of it will cover what is currently open land into which groundwater percolates. This is offset by the measures in CE/26 to reduce water consumption relative to existing development, and to maintain the overall pattern of local run-off.

The primary secondary and cumulative effects are likely to be the impact on run-off and groundwater absorption. It is not possible to assess the practicality of this requirement without further detail of the site layout.

2.1 Avoid damage to designated sites and protected species

The biodiversity value of the Cambridgeshire countryside is a key component of the District Vision (see Section 2.2). However the Scoping Report states that there is a relatively low level of formally protected wildlife area given the District's agricultural character and taking into account the current management of the land as operational airport. There are two key designations in the immediate vicinity of the site.

Stow cum Quy Fen lies approximately 2kms to the north, comprising neutral grassland of 'unfavourable but recovering' status, and areas of standing water important for dragonfly breeding. The site is currently subject to an English Nature enforcement notice requiring management procedures and improvements to prevent fluctuation in water levels (note that water quality is not mentioned specifically). Supporting detail for policy CE/26 indicates that water draining of the eastern side of the site passes through Quy Water which crosses the northwestern side of the SSSI.

Wilbraham Fen lies a little more than 1km from the eastern edge of the site, beyond Teversham. Like Quy Fen it comprises grassland and fenland habitats, with some of the latter also subject to an enforcement notice to improve management practices.

Barnwell Road Local Nature Reserve is closer at hand, straddling the outer ring road at the southwest edge of the site in an area that will adjoin the green corridor in Cambridge East. The site supports various bird species of interest (kingfishers, nightingales, redwings and fieldfares), butterflies, dragonflies, grass snakes and water voles.

Policy CE/20 requires the developer(s) to commission a full ecological survey of the site to establish its key biodiversity features, which should be retained and incorporated into the master plan for the settlement, and to identify the presence of any protected species or habitats on the site. The current policy wording requires biodiversity to be surveyed "before, during and after construction". However the need to conserve and protect features such as individual trees and other features means this survey needs to be undertaken as early as possible, and within the timetable for the initial master planning work, so that its conclusions and mitigation proposals can be incorporated into the site plan from the outset. It is not possible to assess the impact of policies without clear indication of the presence of protected species and habitats, and the comments for objective 2.2 are also generally relevant.

Policies with a potentially significant beneficial impact: CE/19, CE/20, CE/25, CE/26. The impact of this policy cannot be estimated without the details of an ecological survey of the site. However a key issue is the need to prevent water contamination and fluctuation of water levels that would adversely affect the nearby SSSIs, and this will require mitigation measures during construction until the SUDS is operational and performing these functions. The Barnwell Road nature reserve includes a water environment which will also require protection from changes in water volume and quality.

Policies with a potentially significant adverse impact: none identified.

Potential secondary, cumulative or synergistic effects: none identified. Issues relating to the impact on locally characteristic species are reviewed in the section below.

2.2 Maintain and enhance the range and viability of characteristic habitats and species

The Scoping Report refers to software under development that can estimate the extent to which Biodiversity Action Plan targets and objectives are being achieved. This facility is not available at present, a common problem for councils in our experience. Other indicators such as the trends in farmland and woodland bird populations are not available at local level, but might show significant trends that need to be addressed, given the intensity of the agriculture in the District, especially the north-east.

The Cambridgeshire Biodiversity Action Plan identifies five broad habitats (including acid grasslands and rivers & streams) and a further ten priority habitats (including *ancient and/or species-rich hedgerows*, *cereal field margins*, coastal and floodplain grazing marsh, fens, lowland calcareous grassland, *lowland meadows* and reedbeds). Some of these will be present in each of the areas covered by DPDs in the initial South Cambridgeshire LDF, and action plans have been prepared for each habitat. A further twelve local habitats (including churchyards and cemeteries, *roadside verges*, *drainage ditches* and arable land) have been identified. Those habitats that are likely to be present in the AAP area are indicated in italics above although the latter group are likely to be very localised.

Policies CE/19 to CE/21 make broad provision for a range of actions covering conservation, maintaining important features, and introducing new facilities ranging from the country park to a programme of placing nesting boxes and other items within the urban areas. CE/20 is particularly important as it requires the developer to undertake an initial ecological survey, and issues relating to timing and coordination of this work with initial detailed planning of the site are discussed in the review of objective 2.1. Equally important is CE/7(15) which outlines the network linking open spaces within the settlement with the adjacent green spaces at Coldhams Common and around Teversham.

The scale of development at the site means that disturbance to local wildlife is inevitable and it is important that the construction, landscaping and biodiversity strategies (see policies CE/33, CE/17 and CE/20 respectively) are coordinated to limit disturbance to local species, in particular allowing them to occupy the green corridor.

The supporting policy text mentions three locally characteristic which benefit from the open aspect of the current airfield: the skylark, grey partridge and brown hare. Redevelopment will replace this large area with a network of spaces which will not offer the same vegetation or openness providing security. It will be necessary to provide habitat compensation for these species if they are identified locally during ecological survey. Ideally this should not be achieved by translocation, and the link from the Teversham green separation to the proposed country park may provide a natural migration corridor provided these features are established before

development of the core site (ie. that south of Newmarket Road) begins, and provided that they provide an appropriate habitat required for these species.

Policies with potentially significant beneficial impacts: CE/5, CE/6, CE/18, CE/19, CE/20, CE/21, CE/25. Their effect cannot be assessed without more detail of the wildlife assets on the site at present, though clearly the policies aim to minimise adverse impacts and should incorporate proactive conservation measures provided the initial survey occurs early enough.

There is a potentially significant secondary impact in terms of the effect of a sustained period of construction on the attractiveness of the site to wildlife. Even if natural features are retained local wildlife is unlikely to use it if there is continual disturbance from construction noise, vehicle movements, etc. There are also risks of contamination from dust, vehicle emissions, accidental spillages and leakages of foul water which would have locally adverse effects and which need to be prevented by thorough application of effective operational procedures under the terms of policy CE/33¹.

2.3 Improve opportunities for people to access and appreciate wildlife and wild places

This objective is not directly related to specific government policies or targets, although there is a strong fit with the objectives of the Countryside and Rights of Way Act 2000 (CRoW), and with government initiatives to promote healthier lifestyles. The baseline dataset has no information on relevant parameters (notably the % of rights of way that are open and in reasonable condition) and we expect this will be addressed by the obligation to measure their availability arising from CRoW.

The AAP makes extensive provision for this objective with the green corridor and green finger network, as well as other communal open spaces, providing biodiversity assets through the urban quarter. Policies CE/16 and CE/17 provide for access to these areas while CE/18 provides for links to the surrounding open land (for wildlife), rights of way and recreational space (for residents).

Policies that have potentially significant benefits: CE/5, CE/6, CE/7, CE/14, CE/16, CE/17, CE/18, CE/19, CE/25, CE/26. Overall significance cannot be judged at this stage but clearly these proposals provide for increased public access to land that is currently largely inaccessible and is therefore beneficial.

There are no policies that conflict with this objective, and any concerns about the broader implications of development on biodiversity in general (places and species) are covered by the comments for 2.2 above.

The only potential secondary issue is the need to balance the desirability of increasing access to the surrounding countryside (to instil satisfaction with the urban quarter as a good place to live, to encourage exercise, and to foster interest in biodiversity) with the need to maintain the rural character and tranquillity of these areas. It may be appropriate for the Council to designate some parts of the rural surroundings as Countryside Enhancement Areas.

¹ Note that contamination is a particular issue as the whole of the site and its surroundings lie within a nitrate-sensitive area.

However policies CE/19 to CE/21 recognise the importance of retaining quiet and less accessible areas within the quarter to provide a safe refuge for local wildlife.

3.1 Avoid areas and sites designated for their historic interest, and protect their settings

This objective can be difficult to measure because assets are widely fragmented, and their presence only suspected. The age of many settlements in the District means a potentially high level of listed buildings, but there is a much broader significance because of the rural settlement pattern and the shared heritage with Cambridge city. The Scoping Report notes that the principal indicator - % of listed buildings considered at risk - has remained roughly static at around 2%.

Figure 2 shows the location of a selection of listed buildings surrounding the site. These are primarily clustered in Teversham and Fen Ditton. Their setting will be protected by the green separation proposed in policy CE/6 for both villages.

The policy CE/22 text identifies a survey undertaken in 2001 which revealed a cluster of remains from various periods along Newmarket Road, with Roman remains identified north of the road on the park & ride site. Re-development of this area will provide an opportunity for further examination. There are also medieval remains approximately 300m east of the eastern boundary of the site between Cherry Hinton and Teversham.

The principal modern assets are the 1930s airport terminal building, which is listed and which may therefore require conservation of other structures with an aviation connection on the site. Policy CE/23 requires a survey of buildings on the site to determine their architectural and heritage value. The policy itself, and the listing system, provide for the buildings to be retained within the urban quarter, and to be sympathetically re-used where possible.

A specific issue concerns the three large hangars on the site. These are distinctive features which might be considered a component of the local skyline. However each occupies a substantial area in a part of the site likely to be allocated to housing. Their size will have a considerable visual impact locally and may cause shadowing on any housing built in the immediate vicinity. The structure review will therefore need to consider their heritage importance against the ability to incorporate them into the site layout.

Policies with a potentially significant beneficial impact: CE/22. CE/23. The impact of development depends on the scarcity and historical importance of the listed and scheduled features listed above.

Policies with potentially significant adverse impacts: none identified.

Potential secondary, cumulative and synergistic effects: none identified.

3.2 Maintain and enhance the diversity and distinctiveness of landscape and townscape character

The Strategic Vision (section 2.1) sets great stock in the importance of the District's character to its attractiveness as a place to live and work (notwithstanding the costs involved), and as a complement to the principal tourist attraction of Cambridge itself. It is difficult to identify meaningful indicators that can be measured readily and at an appropriate scale for the built environment. However this is largely subsumed by the designation of Landscape Character Areas which reflect the integration of settlement pattern and density, building materials, flatness of the terrain, along with more subtle nuances such as the importance of the openness of the East Anglian Chalk to recharging the District's groundwater resources, and the need for new development to reflect the layout and structure of settlements in the vicinity.

This objective is dealt with extensively by a range of policies within the plan, ranging from the broad over-arching vision of CE/1 to those dealing with features which are to be designed into the settlement and an extensive range of landscaping features which mitigate visual impacts and provide additional enhancements. These include:

- Urban layout integrating housing with amenities and communal / open / play space in close proximity to enable easy access and facilitate community activities and interaction
- High quality urban design to ensure the high density layout of housing and mixing of land uses does not compromise the standard of dwellings provided in the quarter
- Mixing housing styles to give a uniform (but not repetitive) feel to the development, and internal landscaping to prevent the higher densities giving a 'hemmed in' impression
- Creating an implicit hierarchy within the quarter by establishing local centres to serve the immediate community so that the development is not focused on a single centre surrounded by dormitory suburbs
- Integrating sustainable transport and especially foot and cycle access within the quarter, and to recreation space and other amenities within and beyond it
- Landscaping the edges of the settlement to integrate them with the adjacent areas, providing green separation both to protect older settlements from visual intrusion, and to provide continuous features linking through the settlement to those closer to the centre of Cambridge.

Policies with potentially significant beneficial impacts: CE/2, CE/4, CE/5, CE/6, CE/7, CE/8, CE/9, CE/10, CE/12, CE/14, CE/17, CE/18, CE/21, CE/36. It is not possible to assess the impacts of these policies at this stage.

Policies with potentially significant negative impacts: none identified. In practice this conclusion assumes that the screening and other impact reduction measures proposed in policies on green separation, etc. will provide effective mitigation of visual impacts of the development, and this will need to be tested in a formal assessment of the impacts during EIA.

Potential secondary, cumulative and synergistic effects: the principal long term synergistic impact is that the combination of good quality urban environment and well-provisioned amenities within and around it will create the cohesive community envisaged by policy CE/1.

3.3 Create spaces, places and buildings that work well, wear well and look good

This objective is one of the most difficult to assess since it is largely subjective. Good urban design principles address specific requirements within settlements, and this is assumed to be the focus of the objective. The need for good quality landscape is assumed to be addressed by objectives 2.2 and 3.2. A 2002/3 survey suggest South Cambridgeshire is performing well, with 90% of residents satisfied with the quality of their immediate (built) environment, which is above the national average. This outcome appears to reflect the predominantly rural aspect of the area, and the open, low density layouts of many of the District's principal settlements.

As with other documents in the LDF it is closely linked to objective 3.2 and the bullet points for the preceding objective identify the components of the design and infrastructure for the development which will help most in achieving it.

Policies with a potential beneficial significant impact: CE/8, CE/9, CE/10, CE/11, CE/12, CE/14, CE/16, CE/17, CE/18, CE/21, CE/36.

Policies with a potential significant adverse impact: none identified.

Potential synergistic and other benefits: as for objective 3.2.

4.1 Reduce emissions of greenhouse gases and other pollutants (including air, water, soil, noise, vibration and light

Section 11 of the Scoping Report highlights several issues under this objective where local conditions are below national averages, or where performance has deteriorated recently. Commuting patterns (including the school run) are a particular issue, which contribute to local congestion to add to the 28% increase in vehicle traffic over the period 1992-2002. Local monitoring has shown that traffic flows into and out of Cambridge are static but above the level stipulated in the Local Transport Plan. A further indication of the nature of the problem is that trunk traffic flows are 70% above the national average, and that on other principle roads is 35% higher. This situation has implications for air quality with recent data suggesting a significant deterioration with a 30% increase in NO₂ levels at one local monitoring station alongside the Cambridge-Huntingdon link of the A14 close to Northstowe, while at another station on the Cambridge Northern Fringe levels were static but already 30% above UK and European thresholds. Furthermore, dust concentration may be an issue. Two measurement stations providing local data show concentrations of 40 and 72µg/m³ respectively, the first equaling the air quality threshold for this parameter, and the second being almost double. However from 2005 the dust concentration threshold is cut to 20 µg/m³ (to be achieved by 2010) suggesting a potential air quality problem if these levels are typical of other parts of the District.

However improvements in engine technology and the increased proportion of vehicles fitted with catalytic convertors are forecast to improve background air quality over the next five years, although it has not been possible to establish whether the 2010 forecasts are based on growth in traffic over the period 2001-2010 that is consistent with actual recent growth.

Water quality does not appear to be a problem with all main rivers achieving 100% rating on biological and chemical quality, a significant improvement on the situation five years and well above the national target of 95% by 2005. The quality of smaller water courses is not known.

Current National Air Quality Survey forecasts suggest high levels of NO₂ along Newmarket Road consistent with patterns along other major arteries into the city and reflecting the impacts of high traffic levels and queuing during rush hour periods.

The Plan contributes to the objective directly by:

- Co-locating new housing with a very substantial provision of new jobs within the urban quarter to reduce trip length and out-commuting (CE/2, CE/7);
- Providing an integrated network of public transport services within the development, and linking it to bus, cycle and pedestrian infrastructure, particularly those providing routes into the City itself (CE/2, CE/14)
- Controlling access to the quarter from certain junctions which will limit the impact of additional traffic on the surrounding road system, beginning this process when development starts north of Newmarket Road (CE/13)
- Requiring appropriate and consistent construction management procedures to limit site traffic and its impact on the area (CE/33)
- Requiring developers to provide evidence that development of any type will not contribute to emission levels (CE/31).

Impact on PM₁₀ levels is addressed primarily through the construction strategy (CE/33) since the release of material from excavation and demolition work, storage or removal of spoil, and ground churned by site traffic are the most likely sources of additional dust, and will require specific measures in the developers' submissions.

Noise impacts will depend on the timing and location of construction activities, and depend on their duration (ie. nuisance effect over a sustained period), proximity, and whether there are cumulative effects from various plant operating simultaneously. Time of day is assumed not to be an issue provided the considerate contractor strategy required by policy CE/33 is enforced.

Site plant typically emits sound levels above 80dB (decibels) at a distance of 7m, with levels exceeding 100dB for unsilenced equipment². These levels reduce by 3dB with each doubling of distance from the source, however this

² British Standard 5228, quoted in Morris P & Therivel R (eds), 2001, Methods of Environmental Impact Assessment, 2nd ed.

means there are areas around the perimeter of the site where there is still considerable scope for intrusive noise impacts, specifically affecting:

- Housing adjoining the west side of the development overlooking the redeveloped airfield maintenance compound, and the North Works area to the north of Newmarket Road;
- Housing on the northern edge of Cherry Hinton which adjoins the southern edge of the southern part of Cambridge East;
- Housing within the urban quarter which is occupied early while development continues in adjacent sectors.

The construction strategy should require the installation of temporary noise abatement measures (possibly paneling) to limit the impact on neighbouring areas, as well as appropriate management processes and controls on working hours. Policy CE/33 clause 5 notes that construction spoil might be used to provide permanent barriers to traffic noise, and there is also scope to use it as a temporary noise barrier provided it is stored in a way that does not increase dust levels.

Visual impacts are addressed through a series of policies on landscape treatments within and at the edge of the settlement, while air quality and noise are addressed primarily in terms of construction impacts (though clearly the former is also influenced by those policies encouraging sustainable forms of transport). Policies CE/31 and CE/33 will also address noise levels from any form of development, and from construction, respectively.

The principal temporary impact will be the sustained effect on air quality of phased construction over a period of 10 years, arising from:

- Removal, storage and replacement of topsoil and construction spoil
- Excavations
- Exhaust fumes from construction traffic and other plant
- Emissions from other site equipment (eg. crushers, drilling / piling equipment, etc.)

It is not possible to calibrate the effect of these activities in terms of the likely increase in NO_x and PM₁₀ levels without more details of the location and timing of site activities, an indication of which activities will occur concurrently, or information about the routeing of construction traffic. Table 8 indicates best practice criteria for assessing how far 'nuisance dust' (equivalent to the PM₁₀ pollutant) can be expected to penetrate away from construction activities, and also how far soiling (ie. deposition of other particulate matter on surfaces) is likely to penetrate. Activities at Cambridge East clearly fall into the 'large construction site' category.

The rates shown in Table 8 suggest that any impacts of construction activities should be relatively localised within the areas under development at a particular time. Nevertheless it should be noted that soiling and nuisance dust would be more extensive if there are inadequate controls on site.

Table 8: Construction dust assessment criteria (Source: Laxen, 2000³)

Source	Potential Distance for Significant Adverse Effects (Distance from source)	
Description	Soiling	PM ₁₀ *
Large construction sites, with high use of haul routes	100 m	25-50 m
Moderate sized construction sites, with moderate use of haul routes	50 m	15-30 m
Minor construction sites, with limited use of haul routes	25 m	10-20 m

* Based on 35 permitted exceedances of 50 µg/m³ in a year

Water quality is addressed explicitly in terms of the need to prevent any water leaving the site, whether through natural processes or in sewage systems, from contaminating the surface and groundwater regime (policy CE/26). However particular attention will need to be paid to the volume and quality of water discharging eastwards off the site to ensure there are no adverse impacts on the two nearby SSSIs (see objective 2.1). These controls will be provided by the SUDS once development is in progress, but temporary measures such as sediment traps will be necessary to prevent adverse effects of runoff during construction.

We would expect matters such as requirements to limit light spill to be addressed in the detailed design guides for the development.

Policies with a potentially significant beneficial impact: CE/4, CE/11, CE/15, CE/28, CE/30, CE/31, CE/32, CE/33. At present the significance of the impact of these policies cannot be calibrated as this will depend on the design brief and timing of new development.

Policies with potentially significant adverse impacts: none identified. Policy CE/13 provides for road access to the development, and this will clearly have localised impacts on air quality. Access points are optimised to balance the need to provide residents, visitors, delivery vehicles, etc., with access to the site while limiting their impact on sections of the surrounding road network.

As stated for previous objectives, it will be essential that there are consistent and effective site operational processes to minimise the generation of dust during the removal, storage and re-location of spoil, and its disturbance by site traffic. The green separation areas will afford protection to properties in that are close to construction activity along some edges of the development but additional measures will be necessary in other locations. Moreover this does not rule out:

- Contamination from materials being transported into / out of the site
- Contamination by ongoing construction work which affects adjacent parts of the settlement which have been completed and are occupied.

Both issues will need to be addressed in the construction strategy.

³ Laxen, D., 2000. Dibden Terminal Technical Statement, Air quality Impact assessment TS/AQ1, Associated British Ports.

Given the duration of the work there is also an inevitable risk of material being washed from the site into adjacent water courses, and it will also be necessary for the construction strategy – and ultimately the operational procedures – to ensure adequate filtration facilities are provided in working areas to limit the risk of surface water contamination. There are no sensitive sites within the immediate vicinity of the northern and eastern edge of the development, although this will need to be confirmed by the ecological survey (see policy CE/20). However any release of material will adversely affect the water environment and is therefore inconsistent with policy CE/26.

Note also that the policies dealing with construction activities do not currently refer to the possibility of contaminated land on the land either side of Newmarket Road, including the Marshalls aviation facilities, and the car showrooms, workshops and other facilities on the northern side. An initial search undertaken for the Initial Sustainability Appraisal identified a site within the North Works area which has a Pollution Prevention & Control licence, indicating that the planning conditions in policy CE/39 should require the developer(s) to undertake a contaminated land survey, the results of which would be incorporated into the construction strategy.

4.2 Minimise waste production and support the recycling of waste products

The Scoping Report suggests this is another pressing problem for the District with a 25% increase in waste generation to 352kgs/household over the period 2001-2003. In 2003 just over 20% of this material was recycled and a further 5.3% was composted. While both represent good progress, the sizeable increase in waste generation creates extra pressure to meet the target for value recovery from 40% of waste by 2005.

In absolute terms the AAP does not support this objective because it will generate around 4million kilos of household waste once the settlement is complete, added to which there will be an as yet unknown volume of municipal waste as well as that produced by business and commercial activities in the settlement. In practice the role of the AAP will be to contribute to the Cambridgeshire Waste Strategy by ensuring that facilities are provided in housing and employment areas to encourage increased recycling. This issue is not currently addressed explicitly in the AAP text.⁷ Meanwhile other policies, such as CE/26 and CE/33 also support recycling of water resources and construction materials respectively.

Policies with a potentially significant beneficial impact: none identified although CE/26 and CE/33 contribute to this objective.

Policies with a potentially significant adverse impact: CE/1, CE/10, CE/11, CE/12, CE/24, CE/38. All policies have an adverse impact as they result in new growth of developed land, and therefore contribute to the problem of increase waste arisings mentioned above. Clustering of new housing and employment on single sites will help by making it easier to organise waste collection, but both will contribute to waste growth and collection of industrial and commercial waste lies outside the Council's control.

The principal cumulative impact is the growth in waste arisings as a result of development on the scale envisaged. The principal secondary impact is the increased requirement for treatment of sewage and foul water which arises

from development of land that currently has little housing or employment on it. Text supporting policy CE/23 indicates waste water will be directed to the Cambridge Sewage Treatment Works, and that plans to relocate the facility will take account of requirements arising from Cambridge East.

4.3 Limit or reduce vulnerability to the effects of climate change (including flooding)

This objective addresses two areas: reducing the vulnerability to flooding, and improving the thermal efficiency of structures to retain heat thereby reducing energy demands. Both parameters are difficult to calibrate at present, although the Scoping Report proposes to use GIS of Environment Agency data to determine the number of properties currently lying within moderate to high (100 to 50 year incidence) areas.

Figure 4 shows the extent of flood risk areas around the settlement, based on a Strategic Flood Risk Assessment commissioned by the Council and completed in February 2005.

Water from the northern and eastern sides of the development area drains into the Cam via three separate routes, while that on the south side drains into the river via Coldham's Brook.

The AAP addresses flood risk through the combined action of policies on the design of the water park / SUDS, and the broader requirement to ensure that natural drainage patterns are maintained in terms of quantity and direction. Stormwater and runoff will be collected or intercepted by pipes and channels into the green corridors, then into the water feature / SUDS, and then into the existing drainage system.

Figure 4: Composite flood risk assessment map of Cambridge East and its surroundings
(Source: Mott McDonald for South Cambridgeshire District Council; base map © Crown copyright).

Flood risk to the settlement is negligible. However the construction strategy and site design will need to mitigate potential flood risks at sections of the drain along the eastern side of the airfield as shown on Figure 4. These are confined to the 100-year event threshold, however risk must not be increased by interruption of natural drainage patterns.

The size and design of the components will need to be checked to ensure the system has adequate capacity to deal with stormwater runoff and within the system of balancing ponds

As noted for objective 2.1, water draining off the east will be carried past the Quy Fen SSSI where remedial measures are currently in place to prevent water level fluctuations.

Reducing energy use, particularly by improved heat retention in buildings, is addressed by policy CE/28 and has already been discussed in the review of objective 1.2.

Policies with potentially significant beneficial impacts: CE/7, CE/17, CE/28, CE/30, CE/31, CE/32, CE/33. The overall impact of these policies depends on the detailed design of the drainage and flood control infrastructure across the site, and along its eastern edge in particular.

Policies with potentially significant adverse impacts: none identified.

Both sets of policies support this objective but will apply only to new development. Other initiatives will be necessary to encourage increased use of energy-efficient solutions in existing housing stock.

5.1 Maintain and enhance human health

Data presented in the Scoping Report suggests this is not a particular problem for the District, with life expectancy above the national average (79 years for men, 83 for women, compared to national averages of 76 and 81 respectively) and incidence of long-term illness below it (12.7% locally compared to 18.2% nationally). Nevertheless concerns about increased obesity levels suggest that any policy initiatives that contribute to healthier communities are desirable.

It is difficult for the components of the LDF to improve human health directly, therefore their main contribution is to provide facilities that support initiatives by other bodies such as the Department of Health and local Primary Care Trusts. In this respect the AAP is strongly supportive. It addresses this issue primarily through infrastructure and design provision that encourages people to take more exercise in several ways:

- Making public transport accessible, so people are encouraged to walk to the bus stop or guided bus interchange (rather than driving to work)
- Designing the spatial pattern of housing, services amenity and some employment to minimise distances, encouraging people to walk or cycle, or use public transport, and by providing adequate footpaths and cycleways to encourage such behaviour
- Improving the provision of open space within and close to the town for informal and formal recreation, and policy for dual-use of school sports and other facilities wherever this is feasible.

The latter approach includes the deliberate use of green corridors and links to surrounding open space to provide recreational facilities for residents from the outset.

Policies with potentially significant beneficial impact: CE/12, CE/14, CE/15, CE/16, CE/17, CE/24. The impact of these policies cannot be calibrated because this will depend on how many people make use of the opportunity to get more exercise, commute by other modes of transport, etc. Nevertheless the corresponding assessment of the South Cambridgeshire Core Strategy notes that many smaller settlements in the District are poorly served by recreational facilities and therefore the facilities in Cambridge East should provide opportunity to adopt a healthier lifestyle.

Policies with potentially significant adverse impact: none identified.

There are potential secondary impacts from poor air quality which has been identified under objective 4.1, and which might contribute to localised incidence of respiratory problems.

5.2 Reduce crime and the fear of crime

Crime does not appear to be a problem with local rates a little above half those across the county (57 per 1000 people, compared to 94), and with a small drop in rates over the last two years. It is not clear how crime rates compare to those in Cambridge, and whether the higher county-wide rate reflects higher incidence in larger urban areas. The most recent Quality of Life survey reveals 70% of residents feel safe or fairly safe after dark, which is better than the level across the county as a whole but still capable of improvement. Moreover provision of good recreation and leisure facilities for teenagers was seen as an important contributory task.

Primary responsibility for reducing crime lies with other authorities, and the AAP only deals with the objective through a general statement

A number of policies may not have a significant impact but implicitly support this objective. These include:

- Those to encourage a mix of housing sizes so that there is a consistent form and feel to neighbourhoods rather than segregation on housing type (and implicitly on income);
- Those to provide a good range of services and vital town centre to encourage civic pride; and provision of adequate recreational facilities.

The need to provide a safe 'feel' to the settlement is also acknowledged in the transport objectives that precede policy CE/13; in the need for secure parking for all forms of transport (policy CE/14); and in the overarching need for a secure environment (policy CE/21).

Policies with a potentially significant positive impact: none identified.

Policies with potentially significant adverse impact: none identified.

There are no secondary or other impacts evident.

5.3 Improve the quantity and quality of publicly accessible open space

Local performance on this objective is below standard with local provision 25% below the equivalent level across the county, and the most recent District audit shows that some smaller villages have no informal recreation space.

The AAP addresses this issue directly by a range of policies providing for open space for informal and formal recreation within the settlement and in the adjoining countryside. In addition to policy CE/24 which ensures provision within the settlement meets national standards. Provision of formal sports facilities will be determined by a formal strategy, and inclusion of a secondary school within one of the local centres may provide scope for shared-use facilities that would benefit the broader community.

Whereas CE/24 addresses formal recreational facilities, the objective is implicitly supported by many of the landscaping policies which provide for additional, accessible, linked green space within and surrounding the site.

Policies with a potentially significant beneficial impact: CE/6, CE/7, CE/8, CE/9, CE/10, CE/14, CE/16, CE/17, CE/19, CE/21, CE/24, CE/25, CE/36. As noted above, the Plan makes provision for more open space in line with national standards and supplements this with other areas.

Policies with potentially significant adverse impact: none identified.

Potential synergistic, cumulative and secondary impacts: none identified.

6.1 Improve the quality, range and accessibility of services (eg. health, transport, education, training, leisure opportunities)

County monitoring shows that 83% of the District's population lives in communities with low levels of provision or ready access to basic services, such as a primary school, doctors' practice, shop, and regular and convenient public transport.

This problem will not apply to Cambridge East where the AAP addresses all three requirements of the objective fully.

- Policy CE/8 for the district centre aims to encourage a range of comparison and convenience shopping which serves Cambridge East and the surrounding suburbs, and which complements the facilities in the city centre. Other community and leisure facilities will occupy the area

which will be served by the High Quality Public Transport infrastructure required by policy CE/14.

- Policy CE/9 also provides for a second tier of local centres serving neighbourhoods within the quarter to ensure that a basic range of services (retail, health, etc.) are close at hand.
- Policy CE/12 demands a range of community facilities which will benefit local residents and possibly those of the surrounding suburbs and nearby villages, while policy CE/24 provides for a range of high quality recreation facilities.
- Policy CE/9 makes provision for both primary and secondary education facilities requiring primary schools to be sited centrally within the five neighbourhoods / local centres to ensure accessibility and provision to meet local needs.
- Collectively many of the policies address the need to provide high quality, readily accessible sustainable transport infrastructure (footpaths, cycle ways and bus stops), while the overall vision (policy CE/1) site (CE/3) approach to district and local centres (CE/8 and CE/9 respectively) and housing (CE/10) are consistent with government policy encouraging mixed land-uses, reducing distances between home, shops and work, and increased housing densities close to urban and service centres.
- Finally, the design of the district centre (CE/8) is intended to provide a multi-functional core to the settlement, encouraging multi-function trips.

Policies with potentially significant beneficial impacts: CE/2, CE/7, CE/8, CE/9, CE/10, CE/11, CE/12, CE/14, CE/21, CE/24, CE/27, CE/36. Beneficial impacts should be achieved by linking policies on settlement hierarchy, housing, retail and employment allocation and transport so that they are consistent and mutually-reinforcing. The exact impact of these policies depends on the number and range of facilities that will be attracted to Cambridge East.

Policies with potentially significant adverse impacts: none identified.

The principal synergistic impact is the provision of a broad range of services and amenities in a single location. As noted above this should encourage multi-purpose trips, reducing vehicle movements, and ideally such trips would not be made by car, contributing to other SA objectives. Moreover policy CE/12 implies that facilities in Cambridge East should be sufficiently diverse to attract people from the whole of the city to some extent, and adjacent villages, again providing an opportunity for multi-purpose trips.

6.2 Redress inequalities related to age, gender, disability, race, faith, location and income

The Scoping Report provides two statistics that illustrate the difficulty of measuring this objective. The most recent Quality of Life survey shows 70% of residents regard their local environment as 'harmonious' (compared to a county-wide figure of 64%) and an Index of Multiple Deprivation score of 6.9, a little over half the county average. The latter figure is not particularly surprising given the largely rural nature of the county and the nature of local employment growth, which has largely been in sectors offering attractive

salaries. However this situation should not overlook the need to provide balance work opportunities for a wide range of skills and skill levels.

The AAP does not deal with all the listed equalities explicitly, indeed those relating to gender and race, for example, would be addressed through other legislation. However it addresses others in various ways:

- Age: the plan adopts spatial design of the settlement to make it implicitly easier for the elderly to access services and facilities either in their immediate vicinity (in local centres) or by public transport links to the district centre. The supporting text of housing policy (CE/10) explicitly mentions providing some special needs housing, possibly with convenient access to care workers, while provision of care facilities for this group is addressed by policy CE/12 (para. D6.6).
- Disability: the needs of this group are mentioned at several locations in the supporting text. However the need to provide for disabled access within the urban area, and along green corridors and other recreational routes could be made more explicit.
- Faith: policy CE/12 (para. D6.24) acknowledges that the requirements for places of worship are still being investigated and, indeed, it is difficult for the Council to be prescriptive without knowing the mix of denominations/faiths among the likely residents.
- Location: the plan as a whole (but particularly policies such as CE/8 and CE/12) provide for equality of access to services and facilities throughout the urban quarter.
- Income: the AAP cannot directly address disparities in earnings, but its affordable housing policies address one of the most important aspects of income disparity which will benefit those in the key worker sector and those on lower incomes who may live in sub-standard accommodation. Intrinsically policies on employment provision (CE/11), while seeking to foster growth in IT and R&D sectors, will also provide jobs across a broader range of business and commercial sectors in skilled and semi-skilled jobs, as well as positions in the public sector (teachers, health care workers, etc.).

Policies with potentially significant beneficial impacts: CE/10, CE/12, CE/24, CE/27. These policies fall into two groups. One set will address the mismatch in supply, demand, and cost in the local housing market. Others address another aspect of disadvantage that is not evident in the objective itself. They facilitate improvement in public transport services or alternative travel modes which will benefit those without a car or who are unable to drive. Indeed, other policies on affordable housing provision can ensure it is provided in central locations so that those with mobility problems have easier access to services.

Policies with potentially significant adverse impacts: none identified.

Potential synergistic, cumulative and secondary impacts: none identified.

[6.3 Ensure all groups have access to decent, appropriate and affordable housing](#)

A Land Registry survey shows that the house price-to-earnings ratio of 6.6 in 2003, which was in line with the East of England average, but which is rising and which will be disadvantageous to those on low or modest incomes. Moreover, in common with elsewhere in the county, too much of the recently-added stock has comprised large 4-5 bedroom houses on spacious plots. The situation is worsened by recent completions in which only 19% were classed as affordable. This is almost double the average rate over the period 1998-2003 but below the 30% target specified in ODPM guidance. The Council acknowledges that current provisioning does not meet Housing Needs Survey requirements of 800 units immediately, and a further 1047 per year thereafter, and that the requirement for this form of housing is growing.

The AAP quite clearly addresses this issue directly,. Consultation supported the Council's preferred option of setting the ceiling for provision at 50% of all new development, well above the ODPM target, and Council Members have intervened to set an equally low threshold that an affordable 'quota' applies for all developments of two or more properties.

Policy CE/10 is somewhat deficient in that it fails to make clear the level of provision required for elderly, retired residents since encouraging an appropriate age mix will be an important contributor to developing an inclusive community.

Policies with potentially significant positive impact: CE/7, CE/10, CE/38. The policy impact is assumed to be significant although there is currently no detail about the build rate and therefore the number of dwellings (affordable and open market) that would be added to the District's housing stock each year.

CE/10 provides for housing densities substantially above the level of 30 dwellings per hectare currently required by PPG3, and in ensuring there is a suitable mix of property sizes to meet requirements identified in the 2002 Housing Needs Survey, which is primarily for 1 and 2 bedroom homes.

Policies with a potentially significant adverse impact: none identified.

6.4 Encourage and enable the active involvement of local people in community activities

Increased community involvement has been a hallmark of the current government, down from the establishment of National and Regional Assemblies to encouraging more consultation on decisions that affect the local community. Material in the Scoping Report focuses on the aspect of community involvement in decision-making, however this is difficult to measure accurately and objectively. Nevertheless the Scoping Report notes the most recent Quality of Life survey shows only one in five residents considers that they can influence decisions affecting the local area, and this leaves clear room for improvement.

We have adopted a broader definition of this objective which focuses less on empowerment and more on involvement of residents in their community both through social activity and semi-formal administrative forums. In this respect the AAP supports the objective in a number of ways.

Policy CE/10 requires provision of a range of community facilities ranging from adult learning facilities, community centres, etc., to a youth centre. Less directly, the design of the district centre (policy CE/8) aims to provide a meeting place for residents, while the structure of local centres also aims to provide a local social focus based on a limited set of facilities (including primary school and possibly some local employment units). These facilities are also supplemented by extensive provision for formal recreation.

Cambridge East also provides a near unique opportunity to build a new settlement around a broadband communications infrastructure supplying entertainment, telephone, information and community services. This opportunity is recognised by policy CE/27 although it does not specifically mandate the provision of broadband infrastructure. Nevertheless such technology provides an opportunity to deliver media that could help to involve residents more in community activities and decisions, and providing access to services to help the disabled and less mobile (ie. supporting objective 6.2).

Policies with a potentially significant benefit: CE/12, CE/24, CE/35, CE/36.

Policies with a potentially significant negative impact: none identified.

Cumulative and other impacts: none identified.

7.1 Help people gain access to satisfying work appropriate to their skills, potential and place of residence

Unemployment has remained consistently low around the last 5 years at around 1%. This is well below the county average and suggests this will not be a problem provided the appropriate employment can be provided for the new residents of the new communities and new arrivals in existing ones. However one adverse trend in the current employment situation is that over a third of the District's population travel more than 5kms to work, although this is lower than the regional average and to be expected given its dispersed settlement pattern.

The key word in the objective is access. The AAP provides for access to a range of employment opportunities both by type and location. Policy CE/11 states the development will make provision for between 4000 and 5000 jobs in the longer-term. Assuming an average of two occupants per dwelling, this suggests the development would provide employment for almost a quarter of its residents.

The Plan provides for a range of employment opportunities that meet the need to focus on high tech and research sectors complementing the sub-region's strengths and supporting these activities in the Cambridge area. However the broad range of employment provision envisaged ensures a range of office, retail and other opportunities requiring a comparable range of skills.

For the remaining residents who will seek jobs outside the urban quarter, the High Quality Public Transport links proposed by policy CE/14 will provide links into the city centre and to the other employment nodes centred on Addenbrookes Hospital in the south, and the cluster of science / business parks in the north.

Policies with potentially significant beneficial impacts: CE/2, CE/8, CE/11, CE/14, CE/15, CE/27, CE/36. All these policies help to facilitate expansion of a sustainable base of new employment, though their significance depends on how much employment can be attracted to the sub-region by other agencies.

Policies with potentially significant negative impacts: none identified.

The principal synergistic impact has been mentioned for other objectives, namely the planned co-location of housing and work to reduce commuting times and encourage modal shift wherever possible.

7.2 Support appropriate investment in people places, communications and other infrastructure

There is currently no data available and this objective will be difficult to measure. We assume appropriate investment will encompass private and public sector projects, with a sizeable proportion of the former being securing through Section 46 agreements.

The AAP makes extensive provision for securing funding for further infrastructure through such agreements which are detailed in policy CE/39. The main issue this raises is the financial burden imposed on the developer(s) which will be in addition to the legal requirement to fund all basic services, facilities and infrastructure.

Policies with a potentially significant positive impact: CE/7, CE/8, CE/13, CE/14, CE/15, CE/26, CE/27. The significance of these impacts cannot be assessed without more detail of the scale, scope and location of developments to which these policies would apply.

Policies with a potentially significant negative impact: none identified.

Cumulative and other impacts: none identified other than the implications for funding. This would be disadvantageous if, for example, it affected developers' ability to provide economically viable affordable housing, giving the Council recourse to use policy CE/10 clause 10 to secure a lower level of supply than the AAP envisages.

7.3 Improve the efficiency, competitiveness, vitality and adaptability of the local economy

This is another sustainability area that is surprisingly difficult to assess in a robust and effective manner, and the primary indicators are indirect. Recent trends show an increase in viable VAT-registered firms of just below 0.9% per annum, somewhat below the District figure for 2001. Nevertheless the sub-region is also regarded not just as a centre of excellence in R&D and IT but also as an entrepreneurial hotbed.

Employment policy (CE/10) clearly supports this policy by ensuring that the urban quarter is a significant employment centre (ie. not just a dormitory suburb of Cambridge), which will create a substantial increase in employment and in all forms of economic activity in the eastern part of the city. The policy

also supports the objective in prioritising IT and R&D strengths but requiring a broad base of employment to maintain the vitality of the local economy.

The district centre policy (CE/8) and the internal relationships between it and local centres support the overall retail hierarchy, seeking to provide a self-sustaining community while complementing facilities in the city centre.

Policies with potentially significant positive impact: CE/2, CE/8, CE/9, CE/11, CE/27. The scale of impact cannot be judged without further information about the volume of employment that will be created.

Policies with a potentially significant negative impact: none identified.

Potential cumulative, synergistic and secondary impacts: none identified.

6.3 How social, environmental and economic problems were considered in developing the policies

Social, environmental and economic problems were identified from the initial scoping work and are listed in section 4.4 of this report. The range of policies and options proposed in the Preferred Options Report include measures to address these issues through individual targeted policies (eg. that on landscape character protection corresponds to the need to preserve open views to Cambridge and its skyline).

As comments in the detailed assessments indicate, many aspects of policy are dictated by central and regional government planning guidance and strategy, government policy on housing, and adopted policies in both the Cambridgeshire Structure Plan and the South Cambridgeshire Local Plan. Any plans and strategies which diverge from current guidance are unlikely to be regarded as acceptable, and therefore these documents constrain the number and range of alternatives that might be proposed and which are reasonable.

Table 9 cross-references the issues identified in the Scoping Report (see section 4.5) against the policies in the draft AAP to show the extent to which each issue is addressed by at least one policy⁴. It shows that only three objectives are not addressed to some degree:

- Sterilisation of sand and gravel: this is primarily an issue for the Minerals Development Framework, although the LDF should support it by ensuring that permanent sterilisation does not occur;
- Sites for travellers: this issue will be addressed primarily through a separate DPD;
- Unplanned growth in tourism: the AAP does not provide facilities that support the local tourist industry directly and therefore this objective would be addressed by other Plans.

Policies CE/35 (management of services and facilities) and CE/37 (Cambridge airport safety zone) are the only policies with no apparent

⁴ The original cross-check was based on the Preferred Options Report, which contained 117 policies. Table 10 is based on identifying the corresponding policy area in the draft DPD; in some cases this may be policy itself or the supporting text.

potentially significant or important impacts. The former is largely procedural; the latter places controls in a very limited area that has only marginal impact on the development.

A small number of issues are not addressed directly but would be addressed by other plans.

Table 9: Cross-check that Cambridge East policies are addressing the environmental and sustainability issues identified in the Scoping Report.

<i>Environmental, social or economic issue</i>	CE/1	CE/2	CE/3	CE/4	CE/5	CE/6	CE/7	CE/8	CE/9	CE/10	CE/11	CE/12	CE/13	CE/14	CE/15	CE/16	CE/17	CE/18	CE/19
Limited brownfield land																			
Sterilisation of sand & gravel																			
Altering natural drainage																			
Increased water consumption																			
Loss of local key habitats																			
Impact on designations																			
Impact on Cambridge's setting																			
Loss of local character / style																			
Uncontrolled development																			
Sterilisation of archaeol. sites																			
Loss of openness / tranquillity																			
Increased flood risk																			
Conserve energy + renewables																			
High level of private car use																			
Impact on strategic roads																			
High levels of commuting																			
Waste production is growing																			
Growth = light + noise impacts																			
High rate of fear of crime																			
Attitude to sustainable transp't																			
Accessibility of services for all																			
Loss of open space																			
House price / income disparity																			
Lack of youth facilities																			

<i>Environmental, social or economic issue</i>	CE/1	CE/2	CE/3	CE/4	CE/5	CE/6	CE/7	CE/8	CE/9	CE/10	CE/11	CE/12	CE/13	CE/14	CE/15	CE/16	CE/17	CE/18	CE/19
Loss of village facilities	Not addressed as this issue concerns rural communities.																		
Special access needs of aged																			
Villages becoming dormitories	Not addressed as this issue concerns rural communities.																		
Needs of travelling community																			
Limited public transport service	Not addressed as this issue concerns rural communities.																		
Balanced employment growth																			
Farm diversification & traffic	Not addressed as this issue concerns rural communities.																		
Infrastructure investm't needs																			
Unplanned growth in tourism																			
Cambridge's retail dominance																			
Economics of rural broadband																			

<i>Environmental, social or economic issue</i>	CE/20	CE/21	CE/22	CE/23	CE/24	CE/25	CE/26	CE/27	CE/28	CE/29	CE/30	CE/31	CE/32	CE/33	CE/34	CE/36	CE/37	CE/38	CE/39
Limited brownfield land																			
Sterilisation of sand & gravel																			
Altering natural drainage																			
Increased water consumption																			
Loss of local key habitats																			
Impact on designations																			
Impact on Cambridge's setting																			
Loss of local character / style																			
Uncontrolled development																			
Sterilisation of archaeol. sites																			
Loss of openness / tranquillity																			

<i>Environmental, social or economic issue</i>	CE/20	CE/21	CE/22	CE/23	CE/24	CE/25	CE/26	CE/27	CE/28	CE/29	CE/30	CE/31	CE/32	CE/33	CE/34	CE/36	CE/37	CE/38	CE/39
Increased flood risk																			
Conserve energy + renewables																			
High level of private car use																			
Impact on strategic roads																			
High levels of commuting																			
Waste production is growing																			
Growth = light + noise impacts																			
High rate of fear of crime																			
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Accessibility of services for all																			
Loss of open space																			
House price / income disparity																			
Lack of youth facilities																			
Loss of village facilities	Not addressed as this issue concerns rural communities.																		
Special access needs of aged																			
Villages becoming dormitories	Not addressed as this issue concerns rural communities.																		
Needs of travelling community																			
Limited public transport service	Not addressed as this issue concerns rural communities.																		
Balanced employment growth																			
Farm diversification & traffic	Not addressed as this issue concerns rural communities.																		
Infrastructure investm't needs																			
Unplanned growth in tourism																			
Cambridge's retail dominance																			
Economics of rural broadband																			

It should be stressed that Table 9 indicates where a policy in the AAP can contribute to dealing with a particular issue but it is not possible to determine whether it will play a leading role or contribute indirectly. The table does not suggest that the AAP is a panacea for all these issues, but demonstrates that they have been addressed to some degree by its range of plan policies.

6.4 Proposed mitigation measures

As noted previously, a large number of the policies in the AAP are mitigation measures in their own right. Across the rest of the policies, apart from a small number of cases, the mitigation proposals fall into two categories:

- Measures to be defined in the development and design briefs for the site.
- Adjustments of policy text or the supporting text.

The full set of mitigation proposals are shown in Appendix 5.

6.5 Uncertainties and risks

The principal uncertainty is the limited information about the layout of the settlement and its surroundings, and the sequence for developing the site. Figure 1 presents the concept diagram, which provides the only available information about the layout of the site and the spatial relationships between the key features. Detail of layout, for example, around local centres will not be available until master planning work is under way.

For this reason much of the assessment of impacts is qualitative, and has proved difficult to be conclusive about the magnitude of some impacts, and the significance of many of them. We have already noted this issue with comments in section 3.1 of this report, which acknowledge that many of the impacts we have identified as “significant” may only be regarded as “important” since they cannot be quantified.

Many of the policies are mitigation measures for recognised impacts and the lack of detail about layout and development process have caused us to take a pragmatic view of the effectiveness of the policies. Issues that are not clearly addressed in mitigation are identified in order that they can be incorporated into the site design brief and similar documents in due course. For example, without information about the sequence of development of different parts of the site, the layout of construction facilities and access, it is not possible to assess the duration and magnitude of noise and air quality impacts and it is only possible to refer to best practice design guidelines.

Lack of information is not a problem specific to this plan. Because SA / SEA is based on the front-loaded approach to appraisal, there is a possibility that assessment occurs early in the land development process at a time when there is limited information about the detailed spatial expression of policies or land use changes. In these circumstances it is only possible to provide a comprehensive but qualitative assessment of impacts and their significance.

This situation has been recognised in interim guidance issued by ODPM in the period when this Report was being prepared.⁵

As SA / SEA does not obviate the need for EIA, there will be a need for further detailed assessment once an appropriate level of design information is available to enable more accurate evaluation of the potential impacts. Nevertheless it appears this assessment will have to occur in a compressed timetable. The Council currently aims for adoption of the AAP in summer 2006, with work on the site likely to commence the following summer. In the interim period it will be necessary to complete master planning, to issue design briefs for the development as a whole and for specific aspects, and for developers to prepare various strategies required by the AAP. In this same period it will be necessary to undertake a full EIA of the development which can make use of the emerging design information. It will be essential to undertake some activities within the EIA as early as possible so that any previously unidentified problems – notably the presence of protected species on the site – can be dealt with appropriately and the mitigation measures incorporated into the core planning documents.

⁵ ODPM, Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks: interim advice note on frequently asked questions, April 2005, section 5.

