



# ELEAN GARDEN VILLAGE

Preliminary Design Statement

January 2009

**BNB**



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- 1) The village will comprise of 450 homes, creating a totally inclusive community.
- 2) The entire village will be heated from waste heat, currently being rejected to atmosphere, by the adjacent power station.
- 3) The village square will comprise, Pub, Local Shop, Crèche, Community Centre, Cricket Pitch, and Bowls Club.
- 4) The Community centre will be connected to all homes by Intranet. This will allow the Community Centre Manager, to communicate village activities, such as Girl Guides, Boy Scouts, Combined Cadet Force, Bridge, Bowls, Cricket Clubs, and other activities, further fostering a sense of community, and inclusion. The Manager will welcome new residents, and inform them of these facilities.
- 5) Allotments and greenhouses, will be available, for villagers to grow their own fruit and vegetables, waste heat from the power station, will heat the greenhouses, allowing the cultivation of exotic fruit and vegetables. There will be a weekly market, where this produce will be available for sale, and local farmers encouraged to bring and sell their products. This will also encourage the adjacent villages of Mepal, and Sutton, to participate, further fostering village interaction.
- 6) Open space will be available encouraging games, and exercise.

# 1.0 Executive Summary



1.1 Having regard to paragraphs 4.6 and 4.7 ('strategic sites') of Planning Policy Statement 12 it is evident that the Mepal Airfield site (hereafter referred to as 'Elean garden-village') is a strategic site, and can be seen as central to the achievement of the Core Strategy policies as outlined in these representations. Not only will the village deliver a substantial number of market and affordable houses, the site is ideally and uniquely placed to meet the current sustainability challenges. The proposals represent a significant opportunity to create a new community that can provide a model for others to follow.

1.2 As outlined below, a key concept of the scheme is the ability to use waste heat from the adjacent straw-burning power station, to provide carbon neutral heating. The integration of a tri-generation energy system to serve the housing (and the adjacent Business Park), offers a major opportunity to provide an exemplar system for both heating and electricity. The garden-village has the ability to deliver the following strategic policy objectives:

- **Brownfield Land** – The village will be built on the former Mepal World War II airbase and therefore constitutes a previously developed brownfield site, in accordance with PPS3.
- **Homes** – The scheme will create approximately 450 new homes, forming an inclusive village, to encourage economic and social vibrancy and meet affordable housing demand.
- **Mixed Use** – The recently approved data centre on the adjacent Elean Business Park (ref. 07/01429/OUM) will result in circa 1,000 new jobs creating a genuinely mixed use community.
- **Energy** – The entire village will utilise excess heat (70+ megawatts) from the adjacent straw-burning power station/ Elean Business Park Energy Centre, which will contribute to making this an energy efficient development and provide zero-carbon heating and hot water to the homes by capturing the waste heat.

- **Food Production** – The waste heat from the straw burning power station and the data centre can also be used in association with greenhouses and allotments and therefore residents will have the opportunity to grow fruit and vegetables all year round. The waste heat will help provide the opportunity for more varied crops, extend the growing seasons and improve productivity generally. The allotments will provide a number of health and social benefits. The village square will allow the grown fruit and vegetables to be sold locally. It will allow and facilitate a common point for local producers and residents to sell their goods, reducing the village's carbon footprint.

- **Sustainability** – The village offers the opportunity for a 'truly' green development which holds sustainability and environmental awareness at the heart. The main potential of the site is to utilise the straw-burning energy plant but the village also provides the opportunity for general bio-diversity enhancements, high levels of food production, sustainable transport initiatives and careful water resource management which satisfies sustainable objectives of national, strategic and local policies.

- **Transport** – The associated road improvements, roundabouts and footbridge will improve the highways situation in the area and significantly improve access onto the A142 for Mepal and Witcham.

- **Community Facilities** – The village will provide community facilities and social infrastructure facilities. The community centre will foster and encourage sustainable recreation for all residents. It will accelerate a sense of community and ownership.

- **Design** – The village will utilise exemplar levels of architecture and urban design.

- **Delivery** – The village (and the adjoining business park) is in the sole ownership of BNB Development Ltd and therefore is fully deliverable.

## 2.0 The Site



Site Ownership. In Red the Site of the Garden Village. In Blue the Site of the Data Centre

2.1 The site sits between Sutton a 'key service centre', the A142, and the villages of Witcham and Mepal, East Cambridgeshire. The site is 19 kilometres to the north of Cambridge, approximately 16 kilometres to the north of the A14 east-west link and 24 kilometres to the east of the A1 (M) north-south link. The site is approximately 22.7 hectares.

2.2 The site is located adjacent to the Elean Business Park and the Sutton renewable straw burning power station. To the east are a collection of warehouses and Cheffins Machinery Sale Ground. Development of the site would therefore not have a significant impact on the setting of Sutton or Mepal.



Site Location Plan

## 2.0 The Site

### Topography

The Mepal Airfield site sits on an elevated plateau at 22m above sea level, offering a plot for development free from steep slopes or flood risk. The site rises slightly towards its centre, draining naturally towards its edges.

There is a significant drop in level of around 15m between the site and the centre of Mepal. Sutton is at a similar level to the site, with a steep downward slope to its south.



View towards North

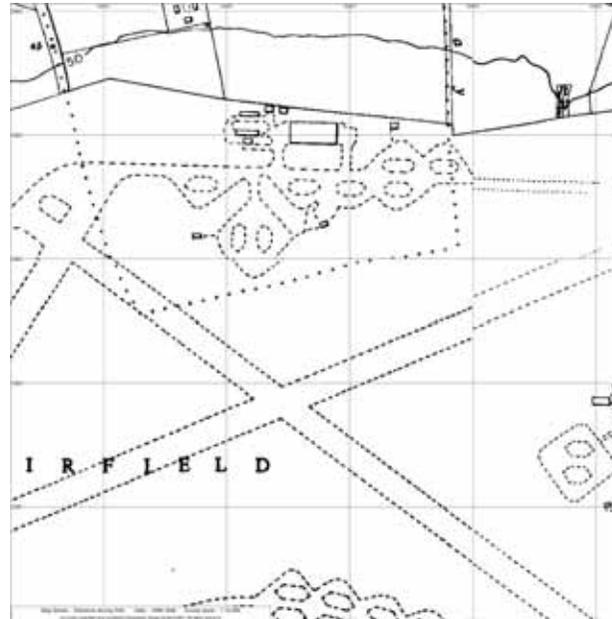


View of the site from South-West

# 3.0 Background



Historical Plan 1886



Historical Plan 1958



Historical Plan 1979

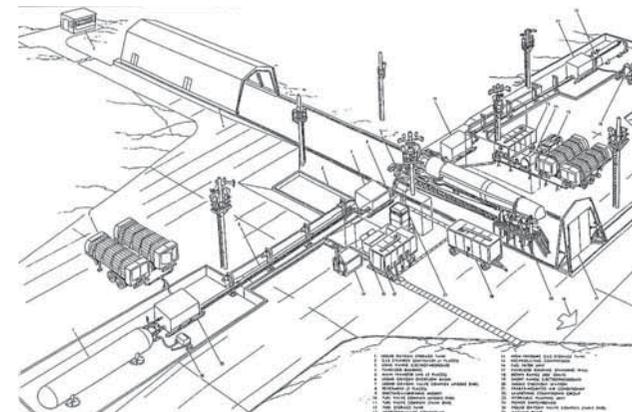
The area between Sutton and Mepal was known as "Sutton Field". The above 1886 map shows a building, Sutton Mill, with an enclosed orchard on the southern edge of the proposed Eco Village site. It also shows a pub at Six Bells, along the old road connecting Sutton to Mepal.

During the Second World War a large part north of Sutton was occupied by Mepal Airfield, which opened in June 1943. It was used to prepare Avro Lancaster bombers squadrons.

In 1957, the airfield was one of the sites selected to deploy Thor medium-range missiles and emplacements were built on the original airfield.

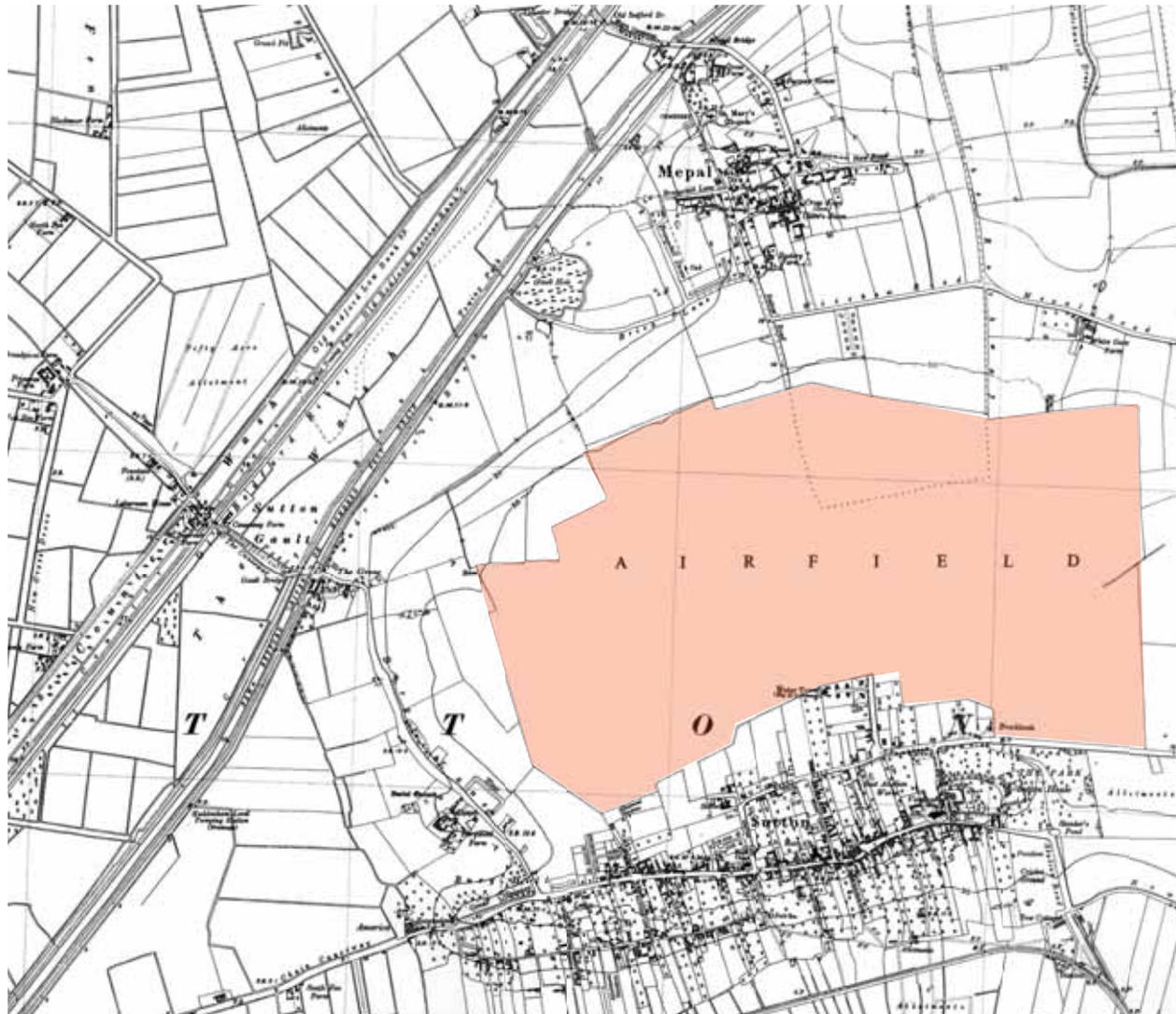


Squadron 19 on Mepal Airfield in 1943



Drawing of the Thor Missile deployed at Mepal Airfield

# 3.0 Background



Historical Map 1950

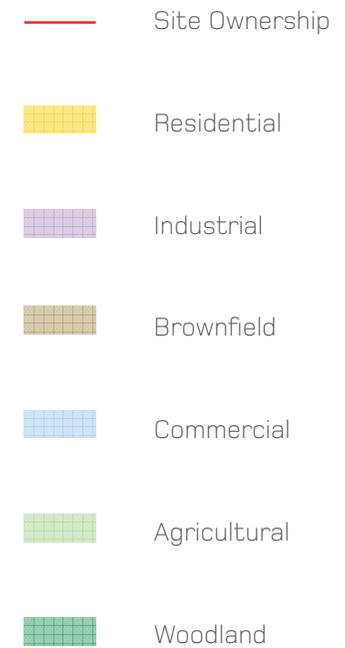
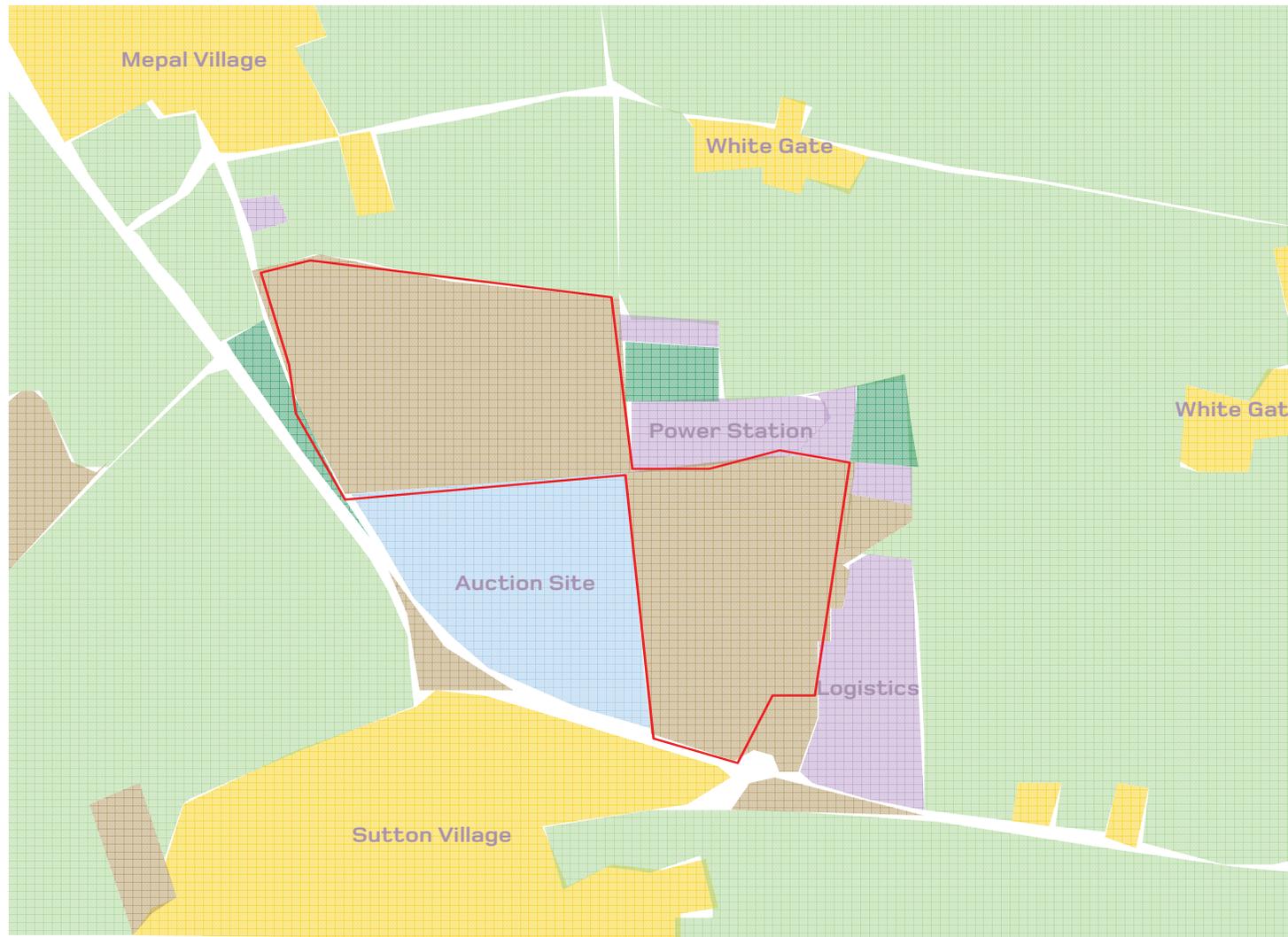
3.1 The site is part of a former Second World War airbase and it is characterised by some large areas of concrete and rubble. In 1941, the Government decided to construct the Mepal airbase and thousands of tons of rubble/hardcore from London's blitzed buildings were sent to Mepal for the foundations of the three new runways and perimeter roads. After the War, the base was home to the RAF until the early 1960's when it became a base for trident missiles. In 1985, when there was no further need for either an airbase or a missile base, ARC purchased the site to extract the concrete from the runways and crush it for re-use elsewhere.

3.2 In February 1997, outline planning permission was granted for 35 acres of glasshouses on the airfield site, which proposed a glasshouse building based upon a regular 4.5 x 8 metre grid construction and a height of 5.1 metres. The committee report for the outline application stated "This proposal can be seen to be a beneficial re-use of land which is mainly scrubland at present and which is also registered as Derelict Land, being part of the former Mepal Airfield."



Mepal Airfield New Zealand Squadron 75

## 4.0 Strategic Objective 1 - Brownfield



# 4.0 Strategic Objective 1 - Brownfield



Old Mepal Road from South

4.1 The site comprises mainly scrub land characterised by areas of rubble and concrete associated with its previous military past. The site can therefore be defined as previously developed land in accordance with the definition set out in Annex B of PPS3. It is to be noted that in recent correspondence with Natural England in response to the Elean Business Park outline planning application, Natural England described the Airfield as brownfield.

4.2 Paragraph 41 of PPS3 sets the national annual target for developing new housing on previously developed land at a minimum of 60 per cent. This includes land and buildings that are vacant or derelict as well as land that is currently in use but which has potential for re-development. The Government intends to maximise the use of vacant, under-used

and derelict land, i.e. brownfield as opposed to greenfield sites. Former military establishments are seen as possessing considerable potential for employment, wealth creation and housing.

4.3 Strategically therefore, the site comprises previously used land and its development is clearly preferable to developing greenfield sites, in accordance with emerging policy CS2(2). Also, as a former airfield site, the environmental impacts arising from development are likely to be considerably less than with a greenfield site. The site is eminently suitable for residential-led mixed use development, which would support and compliment the uses at the Elean business park.



Old Mepal Road from North



Current aerial photograph of the site

## 5.0 Strategic Objective 2 - Housing



Proposed Site Plan

5.1 The site can accommodate in the order of 450 new homes in a combination of houses, flats and retirement/ sheltered housing. There will also be a mix of unit sizes, ranging from 1 and 2 bedroom flats to terraced townhouses and detached homes on the perimeters of the village. As a consequence, the main benefit of providing a diverse range of dwellings types, sizes and tenures will be to encourage the establishment of a diverse community. Indeed, sheltered housing in close proximity to the village green will ensure constant movement of people and vitality during the day.

5.2 The village will contribute to both the Sub-Regional and District Council's targets for future housing development. The East of England Plan (RSS14) sets out the distribution of, and targets for, the dwelling provision within the region (which are considered to be minimum targets). Therefore this development will assist the District Council to achieve the targets for the Plan period. The site is located on previously developed land, which can be built to a density which allows for the efficient use of land. It is therefore considered that the site supports the principles for new residential development as set out in planning guidance.

5.3 The illustrative masterplan submitted with these representations results in a net residential density of at least 30 dwellings per hectare, in accordance with emerging policy H2. Development at this density is considered acceptable given its location, its accessibility to public transport and the character of the surrounding area. The illustrative masterplan also demonstrates how the informal open space requirement can be achieved on the site at this proposed density. On this basis the proposals accord with both national guidance and local policy requirements.

5.4 Whilst the precise dwelling mix is not a consideration at this stage, it is proposed that a variety of different types of unit sizes will be proposed which will meet the requirement of securing a balanced community in accordance with emerging policy H1.

# 5.0 Strategic Objective 2 - Housing



——— High Density Edges  
- - - - - Low Density Edges



↔ Main Connections  
- - - - - Nodes



——— Neighbourhoods Units



——— Woodland Buffer / Corridor  
■ Open Recreational Green  
■ Planted Recreational Green  
■ Lake/Ponds and Wetlands

5.5 The proposal seeks to address housing needs in terms of both affordable and private accommodation. PPS3 advises that local authorities should assess housing need to ensure that a range of housing across all tenures is provided. We would work with the Local Planning Authority to develop a strategy for the delivery of affordable housing on the site, and we would anticipate that this would include a range of affordable tenures including affordable rented, shared ownership and key worker housing in accordance with emerging policy H3. There would not be any difference in quality or design between the various tenures of development.

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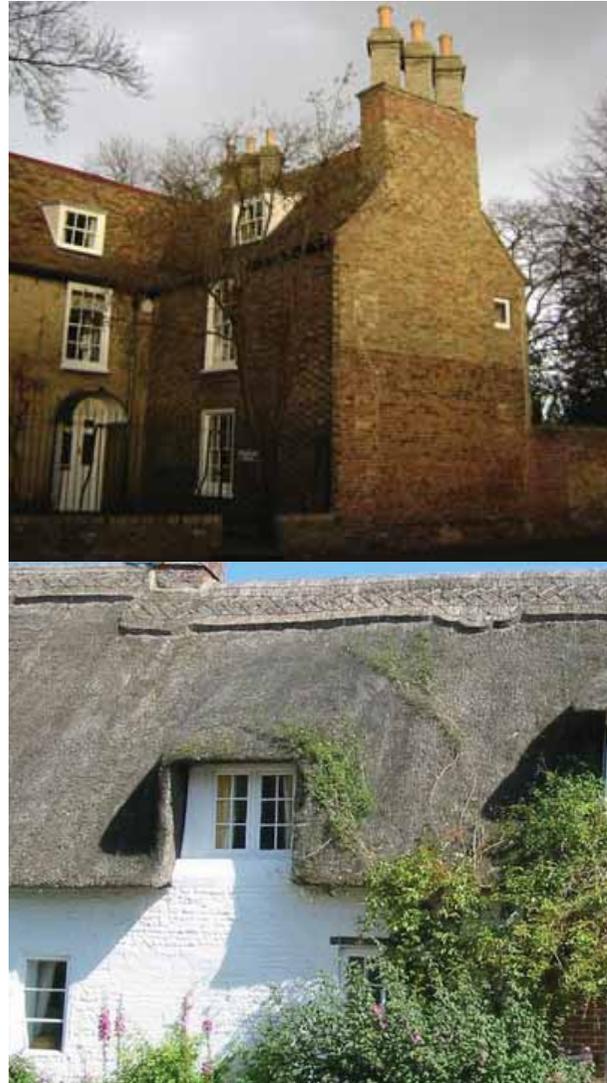
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# 5.0 Strategic Objective 2 - Housing



Proposed Village in Context

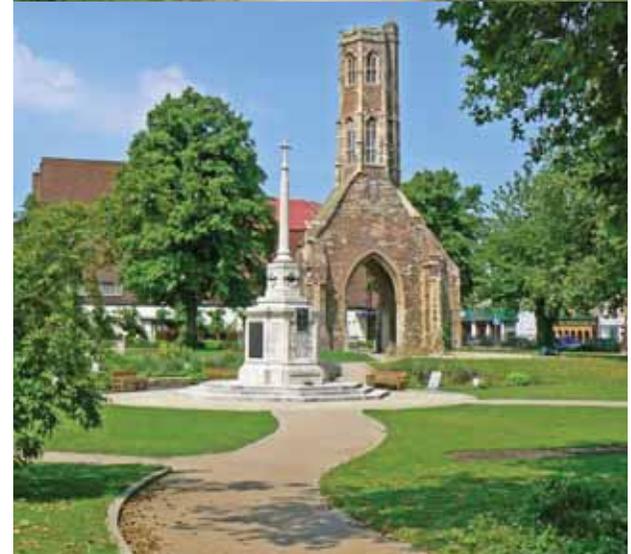
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## 6.0 Strategic Objective 3 - Mixed Use

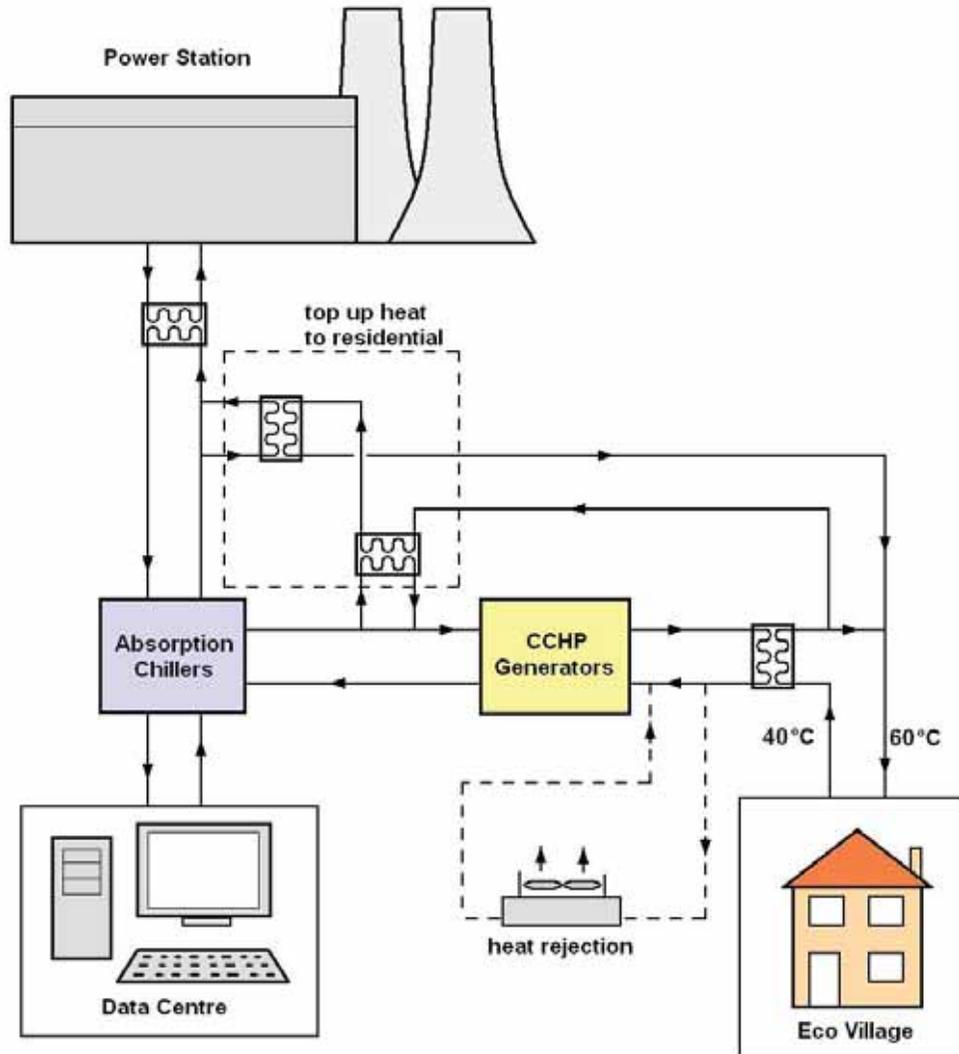


6.1 A mixed use community will be created with the new homes proposed as part of the village and the data centre recently approved by the District Council on the adjacent business park. A residential-led mixed use development on this site would be intended to complement adjoining development on the Elean business park site and the jobs that will be created. The recently approved data centre will create in the order of 1000 jobs, many of which will be suitable for local people.

6.2 The jobs are likely to range from office workers, maintenance teams, electronic technicians, computer sciences, senior management and janitorial staff. It is anticipated that half of these jobs could be sourced locally. This means that jobs requirements of many new residents can be met in the immediate vicinity, allowing workers to commute without using their cars. The Submission Core Strategy paper does not take into account the jobs created by the development of the business park (and subsequent requirement for housing).

6.3 In addition, the village will incorporate a mix of other uses. The supporting land uses will include open space and recreation, local centre uses including small scale retail, a public house and community uses. The retail component is likely to comprise convenience retail needs in the form of village shop and would offer workers from the data centre a place to buy their lunch.

## 7.0 Strategic Objective 4 - Energy



7.1 The location of the village site adjacent to a renewable straw-burning power station creates the opportunity to deliver an energy strategy that is feasible and achievable in a way few other projects in the UK would be able to match. The location of the site provides a unique opportunity to provide carbon neutral heating to the homes.

7.2 The adjacent straw burning power station uses new techniques to burn surplus straw to generate electricity. The 36 MW plant generates over 270 GWh of electricity a year. The electricity generated feeds directly into the National Grid via an 11 km connection to a nearby substation. This straw is considered a carbon neutral fuel source.

7.3 BNB Developments Ltd have an 'off-take' Agreement with the owners of the power station for all of the power station's waste heat, which is currently vented into the atmosphere (75MW).

7.4 A low grade heat source from the condensing end of the power station's steam cycle can be used as the primary heat source at around 55C, for the residential district heating, which can be fed into a tri-generation energy system – combined cooling, heating and power (CCHP). The tri-generation system would comprise natural gas fuelled reciprocating engine generators and hot water and steam driven absorption chillers.

7.5 Heat recovery from the gas reciprocating generators comes from 3 sources; the exhaust gas, engine high temperature (HT) water system and the engine low temperature (LT) water system. The high grade heat recovered from the exhaust gas and HT water system is suitable to drive the absorption chillers and the chilled water output serve the cooling requirement for the data centre. The remaining low grade heat from the LT system at around 60C can be fed into the district heating system for the village and can be used for under floor heating. The tri-generation plant also would provide a large proportion of the electrical demand of the data centre (whilst in turn the district heating system can also utilise waste heat from the data centre). This will ensure that the CCHP plant runs at an optimum utilisation all year round.

## 8.0 Strategic Objective 5 - Food Production



8.1 The waste heat from the straw burning power station and the data centre can also be used in association with greenhouses and allotments and therefore residents will have the opportunity to grow fruit and vegetables all year round. It is proposed to incorporate private and communal 'Victorian greenhouses' suitable for growing exotic fruit and vegetables. The allotments and greenhouses will provide convenient and attractive space for growing food.

8.2 Allotments are privileged sources of sustainability, because they promote the consumption of locally grown food. The allotments will give residents the opportunity to enjoy the green spaces away from the pressures of modern living. Tending to an allotment will provide residents with regular physical exercise. Meanwhile, the produce that residents grow can contribute towards a balanced, healthy diet. In addition, being part of the gardening community on an allotment site brings an opportunity to meet and share experiences with people from all walks of life – a chance to learn from others and mentor newcomers or simply have a chat to pass the time of day.

8.3 The allotments and greenhouses will help to make the village greener, a more pleasant place to live while providing healthy and affordable food. The masterplan layout also provides an area for a farmers market to encourage the buying and selling of local produce, both from those grown within the village and also from local farms. The provision of a market stalls assist in making links with local farms to supply food.

# 9.0 Strategic Objective 6 - Sustainability & Transport

9.1 All homes will be built to standards better than the carbon dioxide emission targets determined from Building Regulations Part L and its successors. The homes will also be designed to optimise window areas and shading to minimise electric lighting use through intelligent lighting controls and reduce heat loss/heat gain. Furthermore, opportunities for enhancing natural ventilation will be employed by ensuring openable facades are not blighted by noise, providing openings in the fabric that siphon air from rooms using the energy from sun and wind without risk of discomfort from excessive air movement.

9.2 A water conservation strategy will be developed which will focus on minimising consumption through the installation of dual flush WC cisterns and A+ rated washing machines and dishwashers. Other measures will include:

- Water metering is intended to encourage water conservation;
- A mix of rainwater harvesting and grey water recycling will be used to minimise demand from the mains;
- Sustainable urban drainage systems (SUDS) will be employed to dispose of storm water and provide attenuation to restrict the surface water discharge to current levels. A pond will be provided, which will also aid biodiversity enhancements in the village;
- Green roofs will also help with rainwater attenuation.

9.3 Materials will be selected for their low embodied impacts and where feasible will achieve an 'A' rating against the BRE's Green Guides to Specification.

9.4 The success of the garden-village is heavily dependent upon the delivery of sustainable transport infrastructure. Meeting the challenges of new traffic generated by increasing housing stock through encouraging modal shift to enhanced public transport services and upgrading existing highways systems is integral to the new life styles of the 21st century.

9.5 The village is in an accessible location, on a main road and existing public transport route. The transport strategy includes providing additional bus services, providing pedestrian and cycle friendly environments, traffic management and innovative upgrades to the existing local highway network. The village can link into sustainable transport links, including public transport, cycle paths, and walking. The provision of a significant number of employment opportunities at the business park provides a substantial opportunity to reduce travel to work.

9.6 Priority will be given to pedestrians and cycles via a network of footpaths and cycle ways, linking to the business park and the surrounding communities. It is anticipated that a significant number of those employed at the business park will live in the village. In addition, all homes will have space for home offices, allowing people to work from home.

9.7 Provision will also be made for residents and employees for the secure and sheltered storage of cycles. It is also proposed to provide a car club, including a proportion of electric and hybrid vehicles. It is proposed that each home in the village will be connected to an intranet system to communicate travel plan initiatives and community notices and events, as well as provide local public transport information. A main boulevard is proposed to run west-east to link the village with the A142.

9.8 Currently, Mepal and Sutton are served by the X9 bus service, which runs hourly between Cambridge and Wisbech. It is considered that the development of the village will offer the opportunity to create a viable service servicing both the business park and village site, and an increase in the frequency of this bus service. This will have additional major benefits to existing local residents in Mepal and Sutton by reducing their dependence on travel by private car and also to assist those without access to a private vehicle, such as the elderly. In addition, the garden village and data centre may create the opportunity to provide a peak-hour shuttle service to surrounding centres such as Ely.



# 9.0 Strategic Objective 6 - Sustainability & Transport



9.9 While the transport strategy is underpinned by policies to promote public transport, sustainable modes (walking and cycling) and limit car use, it is inevitable that a development of this scale will generate vehicle trips. To prevent congestion (and thus to contain air pollution impacts), improvements will be made to the A142 and road infrastructure. The provision of a new roundabout layout to access the village, off the A142, will both reduce the existing bottleneck for vehicles exiting Mepal and increase safety on this road generally (by reducing overall speeds of vehicles in the vicinity of the new junction).

9.10 The presence of the St Ives to Cambridge express bus-way with park and ride provides a realistic opportunity to make the development attractive to commuters to Cambridge in addition to the local data centre employment opportunities. The fact that the short car trip to the park and ride will provide an attractive and easy alternative to driving into Cambridge would undoubtedly ensure that the number and length of journeys from the site to Cambridge is reduced.

9.11 The development of the village will offer the opportunity of safely linking the site with Sutton, and additionally Mepal, via a dedicated cycle / foot route via Old Mepal Road and a potential foot / cycle bridge over the A142 and thus provide opportunities for improving the cycle network and pedestrian network in the vicinity of the existing centres. This route and pedestrian footbridge is shown on the illustrative masterplan.

9.12 In addition to the above, the routes through and to the site by non car modes of travel are also shown on the illustrative masterplan. Good urban design and safety engineering will be used to ensure that the village roads are functional and practical but also limit speeds of traffic and allow mixing of pedestrians and cyclists as set out in Manual for Streets. This thought-process and design criteria has been fully supported by Cambridge County Council in the discussions we have had to date with them.

9.13 All these measures will help reduce the use of the private car, reduce congestion (particularly into Cambridge and Ely) and pollution and reduce CO2 production, in accordance with national, regional and local policy.

## 10.0 Strategic Objective 7 - Community facilities



# 10.0 Strategic Objective 7 - Community facilities



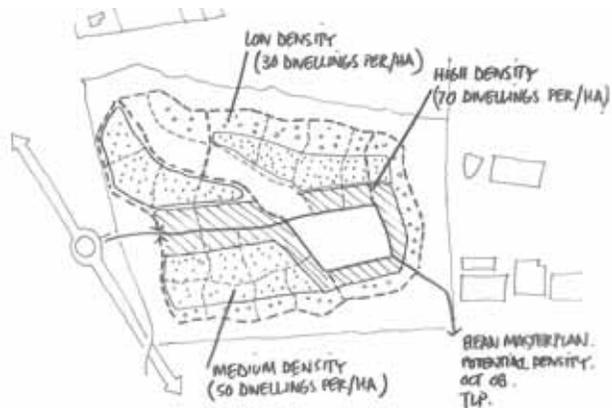
10.1 A community centre is the core of a thriving village. It is proposed to provide a multi purpose community centre in the village, which would help to create bonds between the different components of the community. This could occur both through the casual interaction of different users groups who might not ordinarily interact with each other and more formally if the centre was managed through some sort of community based management structure. BNB Developments will also commit to providing funds for the start up and initial running costs for community and youth groups such as girl-guides and boy-scouts, in the community centre.

10.2 The illustrative masterplan shows how the provision of formal and informal open space requirement can be met on site, through private gardens and communal gardens and general open space. Provision for children's play spaces, in accordance with emerging policies, have been incorporated into the indicative masterplan but are not distinguished from the informal open space provision at this stage. The village provides a mix of high quality outdoor communities – a green, play areas, allotments and paths for walking and cycling. The village will also incorporate local areas of play, local equipped areas for play, and neighbourhood equipped areas of play. These amenities will be inviting for residents, encouraging them to use and enjoy their public realm and live social, active and healthy lifestyles.

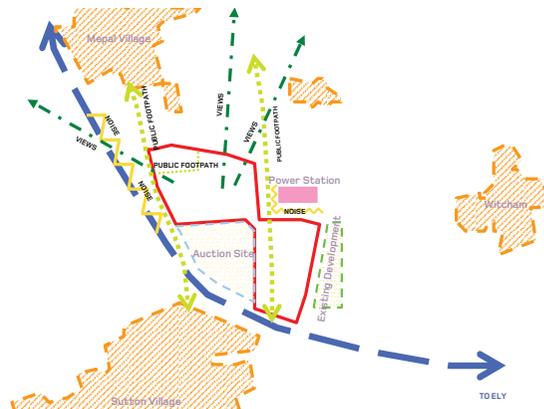


10.3 As part of the development of the masterplan for the village, a thorough assessment of the needs of the new community, together with any shortfall within the adjacent community would be undertaken, particularly with reference to health care and educational needs. However, in relation to education provision, the Submission Core Strategy notes that there is scope for the primary school [Sutton] to be expanded on-site, to cater for the additional pupils generated by future housing growth. In addition, it states that Witchford secondary school serves the surrounding villages, including the Key Service Centres of Sutton and Haddenham, and notes that there is spare capacity at the secondary school, and there is also room for on-site expansion if required. In relation to doctors surgery we have been advised that the surgery at Sutton has spare capacity.

# 11.0 Strategic Objective 8 - Design



Initial Concept Sketch



Potentials and Constraints Sketch



Extract and projection of the Green Infrastructure Strategy from Cambridgeshire Horizons on the Site Plan



11.1 It is proposed to utilise exemplar levels of architecture and urban design throughout the village. It is intended that the masterplan is developed for the site in accordance with best practice guidance outlined below. This strategy builds on a thorough investigation of the site context, site conditions, local and national planning policy and a strong design concept for the development that seeks to create a place with a strong identity and character. In working up the design, it will meet all of the design standards:

- **By Design** – Urban Design in the Planning System: Towards Better Practice provides a set of urban design principles that should underpin good design. It provides detailed examples of how these principles may be put in practice. The principles may be summarised as: character, continuity and enclosure, quality of the public realm, ease of movement, legibility, adaptability, diversity.

- **Cambridge Landscape Guidelines** describes a series of ways in which new, richer and more diverse landscapes can be developed. Landscape criteria for new developments include:
  - minimising impact on existing landscape qualities and features including habitats of value;
  - contributing positively to landscape quality, the potential for enjoying the countryside, creative nature conservation and environmental education opportunities;
  - ensuring new landscapes are endowed with sufficient management resources for securing long-term care.

# 11.0 Strategic Objective 8 - Design



Nolli Map



- **Code for Sustainable Homes** measures the sustainability of a new home against categories of sustainable design, rating the 'whole home' as a complete package. The Code uses a 1 to 6 star rating system to communicate the overall sustainability performance of a new home. The Code sets minimum standards for energy and water use at each level.

- **Manual for Streets** with its key recommendation that increased consideration should be given to the 'place' function of streets.

- **Lifetime Homes** is a standard that ensures that dwellings are flexible and adaptable to the changes in their residents' life and that they cater for the needs of all, from the youngest to the older people. It has 16 design features that apply both to the interior and exterior of dwellings.

- **Building for Life** is a set of 20 criteria that cover four main aspects: the character of the development, roads, parking and pedestrianisation, design and construction, environment and community.

- **Inclusive Design** is a process by which the needs of all people, regardless of physical ability, age, gender or circumstances are integrated into the design of the development.

- **Secured by Design** is a standard set by the police to encourage developers to design safe and secure environments. Its focuses on four main aspects: natural surveillance, defensible space, community interaction and Crime Prevention through Environmental Design.



Proposed Site Plan

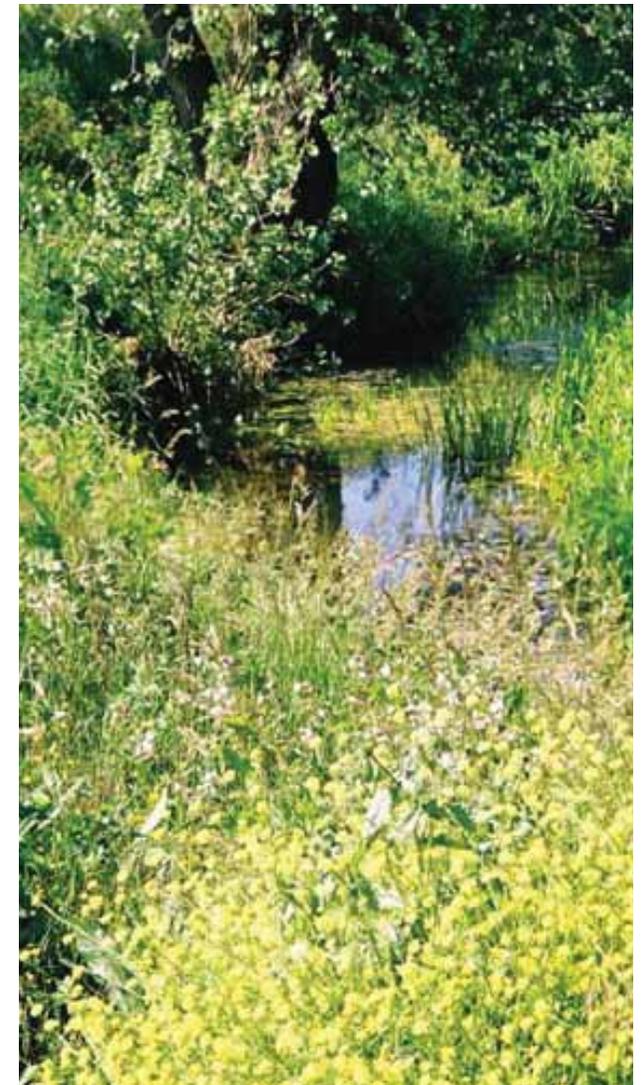
# 11.0 Strategic Objective 8 - Design



- Recommended Greenspace Provision per 1,000 population  
2.2 - 2.6 ha  
(Pitches, green and courts 1.6 - 1.8 ha  
Playgrounds 0.2 - 0.3 ha  
Informal play space 0.4 - 0.5 ha)
- Proposed water body / pond (2 acres)
- Site boundary



- LAP (Local area for play)
- LEAP (Local equipped area for play)
- NEAP (Neighbourhood equipped area for play)
- Indicative areas needing play space provision
- Parish Council's perception of current local play provision



# 12.0 Strategic Objective 9 - Other matters and studies undertaken



1



2



3



4

## Typical Village Form

In designing the layout we have taken into consideration the morphological layout and grain of typical English Villages

Case Studies:

1. Bunnham Market, Linear village
2. Earl Soham Village, Typical village green
3. Saxtead Village, Extended village green / common
4. Evenly Village

12.1 **Contamination** - There is potential for some contamination given the previous use of the site but development of this brownfield site provides the opportunity to clear the land of any contaminated materials.

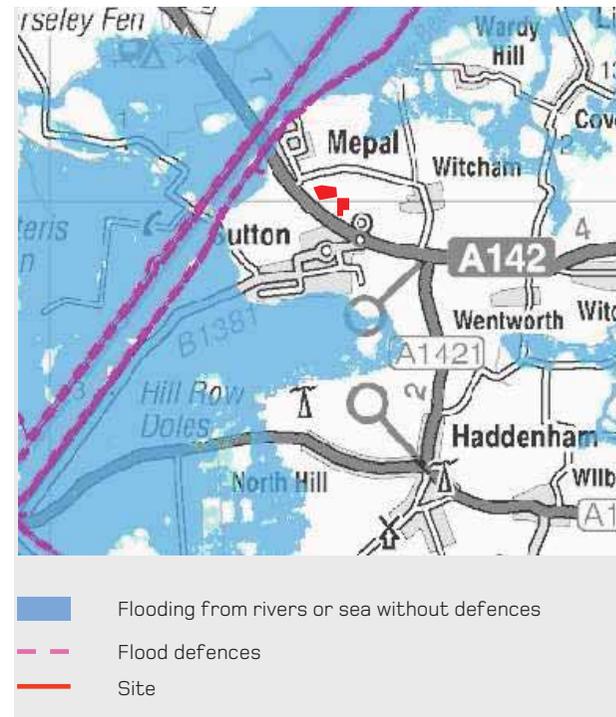
12.2 **Archaeology** - The potential for archaeological remains on the site is considered to have been severely compromised by previous development on the site. Excavations took place in 1942 when the airbase was constructed for the RAF. In the early seventies, the site was once again extensively excavated when the American Air Force sited nuclear missiles in solid concrete bunkers. Following on from that

clearance, gravel extraction occurred and the site was then backfilled. In August 2007, trial pit investigations were undertaken by Halcrow Yolles and the report concluded that the gravel deposits shown on the British Geological Survey map are no longer present and have been replaced with predominantly engineered fill material. The intrusive works confirmed that the fill material is underlain by the Kimmeridge Clay Formation.

12.3 **Flooding** - The site sits on an elevated plateau at 22 metres above sea level, offering a site free from flood risk. The site is within Flood Zone 1 so the risk of flooding from fluvial sources is low/ minimal (as required by PPS25).

12.4 **Ecology** - Halcrow Group has carried out an ecological appraisal of the proposal site comprising a desk study and a field survey. The appraisal has identified the potential for the site to support bats, reptiles, birds, great crested newts and invertebrates and has recommended undertaking further detailed surveys for bats, reptiles, birds, great crested newts and invertebrates during optimal survey times. The appraisal concludes that subject to the implementation of the recommended measures identified, the proposed re-development of the site can be implemented without significant adverse ecological impacts and be in accordance with relevant legislation and planning policy.

12.4 **Air Pollution** - Whilst the site is located adjacent to the straw burning power station, emissions from the plant are reduced to negligible levels. The plant has a lime scrubber and a baghouse filter system to neutralise emissions. The Cambridgeshire Air Quality Review and Assessment (2006) deemed the emissions as nil/ insignificant from the power station.



# 13.0 Strategic Objective 10 - Delivery



13.1 The village site and the adjacent business park are both owned by BNB Developments Ltd, a development group, specialising in the promotion, project management, construction, and letting of real estate schemes in the United Kingdom and Europe. In addition to Elean village and business park, BNB Developments has and is involved in projects throughout the UK and London. A detailed history of their past experience can be found at [www.bnbdevelopments.com](http://www.bnbdevelopments.com) (Lasercharm Limited is the asset holding company of BNB, and owns the site freehold with Title absolute).

13.2 BNB Developments has an agreement with energy power resources (EPR) Ely Ltd, to utilise the waste heat from the adjacent straw burning factory. This arrangement was initially set out in the Legal Agreement which accompanied the grant of planning permission for the straw burning power station in June 1996 (clause 2(i)(b)). Dialogue is continuing with EPR on the details of the off-take facility for the business park and village site.

13.3 It is proposed that BNB would seek a joint venture partner to deliver these strategic proposals. The ambition is to enter into a partnership with an East-Anglian house builder. BNB would retain a permanent interest to ensure the strategic objectives are met and the proposals are delivered.

13.4 Subject to planning approval, it is proposed to commence on site in approximately 2011.

13.5 BNB Developments will commence construction of the data centre site in the second quarter of 2009, and has engaged the services of Mace PLC, as Project / Construction Manager for all on site construction and co-ordination.

# 14.0 Conclusion - Compliance with strategic objectives



14.1 The policies at a strategic level deal with a very wide range of planning issues. In promoting the development of a garden village on this site, there are clearly a number of competing demands, including economic development, residential development, energy provision, transport proposals and the enhancement of East Cambridge's environment. An assessment of the priorities is therefore necessary before any decisions are taken.

14.2 Residential-led mixed use development at the former Mepal airfield substantially powered by the adjacent straw-burning factory, together with a data centre at the Elean business park, is considered to represent a 'sustainable settlement'. The site is brownfield and such a development would be in accordance with national and regional planning policy. The location of the village site is unique, in terms of achieving these energy savings, due to the close proximity of the power station and the data centre. The development of the Elean business park will create a significant demand for housing, which is not currently catered for in the Draft Submission Core Strategy. Collectively the mix of uses would make a significant contribution towards the economic and environmental future of the area, and support and promote the renaissance and regeneration within this part of the District. It would also ensure that the existing and future economic, environmental, social and cultural infrastructure needs are met.

14.3 The site is located in a sustainable location with good accessibility to Sutton and other nearby centres and provides an opportunity to create a high quality development that would enhance the area, create private and affordable housing contributing to housing supply in the sub-region whilst using previously developed land.

14.4 The potential of the site to utilise the straw-burning energy plant and the opportunity for general bio-diversity enhancements satisfies sustainable objectives of national, strategic and local policies. Due to the size of the site and having regard to the guidance in PPS12, the site is of a strategic nature and the principles of sustainable development identified in national and strategic planning guidance. It should therefore be considered at this stage of the preparation of the Core Strategy.