Bow Brickhill Milton Keynes
Masterplan Document

1 Numbers within the Bowbrickhill site plus church farm will be a total of 2,800 dwellings

The purpose of this document is to establish the guiding principles for future delivery of a sustainable urban extension at Bellow Hill Farm to the south of Milton Keynes. The site has a history of being identified as potentially suitable for housing, latterly in the Strategic Housing Land Availability Assessment (SHLAA). The site is being promoted by the Bow Brickhill Consortium (Fox Strategic Land and Property, Manor Farm Development Ltd and Kier Residential Ltd) and extends to 115 Hectares in which they control the majority of the land within the Councils identified assessed site MKSA8. This document illustrates how the proposals effectively integrate into Milton Keynes existing urban edge close to existing employment and road infrastructure. Unlike other potential directions for growth this site is wholly within the administrative boundary of Milton Keynes. The document will illustrate how this site can sustainably deliver:

- **Homes** - Up to 2,200 dwellings with a balanced mix of homes including affordable housing of a mix of tenures.
- **Infrastructure** - An extension to the Milton Keynes grid system that will enhance north south links in the area with the added benefit of easing traffic within the village of Bow Brickhill.
- **Facilities** - New local facilities to serve both new residents and the existing community of Bow Brickhill.
- **Education** - New primary schools providing a better choice of education for the local area.
- **Green Infrastructure** - Up to 40 Hectares of multi-functional Green Infrastructure that will enhance the bio-diversity of the site and provide new areas for sport, play and informal recreation.
- **Footpaths and Cycleways** - Improved access to the countryside on the south edge of Milton Keynes through an enhanced footpath network.
It is important to compare this site with the Council’s favoured Strategic Land Allocation (SLA) which has been the subject of a post Core Strategy (CS) Consultation in 2011. The SLA sites and Bow Brickhill are shown in the Strategic Context plans (figures 1 to 3). This ably demonstrates that growth to the South of Milton Keynes in this location would compare favourably in sustainability terms with the SLA’s (highlighted figure 1). The three plans show:

- The site is ideally located close to the existing transport corridors, MK grid network and taken with Church Farm has a much stronger association than the remaining part of the SLA South of the A421.

- There will be no coalescence between the city and adjacent settlements due to the retention of green corridors and fields to the south and east.

- The proposals will establish a new defensible and enduring boundary to South East MK. It also provides an opportunity to establish a new improved interface between Milton Keynes and the wider countryside to the south through footpaths and linear parks.

- The site is located adjacent to Bow Brickhill Railway station and lies south of the MK network of cycle paths and bridle ways providing opportunities for alternatives to vehicular travel and maximising accessibility for all.

- The proposals will deliver new facilities to serve both new and local communities.

- The proposals are ideally located next to existing employment and will support economic growth and local employment by improving accessibility to the adjacent employment area at Tilbrook.

- The proposals will enhance the biodiversity of the site with new integrated multi-functional green infrastructure.
The CS raised a number of environmental issues in the context of the proposed Bow Brickhill site and the Strategic Allocation. These issues refer directly to the ability of the respective areas to satisfy the relevant CS and Sustainability Appraisal (SA) Objectives. The main points for consideration for the Bow Brickhill site can be summarised as follows:

- The potential significance and development implications of the rail line corridor, in biodiversity and wildlife habitat terms;
- The potential significance and development implications upon landscape character and particularly upon the area locally designated as an “Area of Attractive Landscape” to the south of the MKSA8 area;
- The potential for coalescence with the settlement of Woburn Sands to the east and Bow Brickhill to the south west.

The Core Strategy MKSA8 site boundaries included land to the east of the proposed site yet FLP revisions to the site area now significantly reduce the potential for coalescence with Woburn Sands. In conjunction with the proposed design and landscape principles of the revised area, the result would be a significant and enduring green “buffer” maintained between the existing and future settlement areas.

In respect of Bow Brickhill, similar design and Green Infrastructure principles would be adopted. The open landscape setting would be conserved around this existing settlement, retain existing pasture fields and paddocks and provide new landscape and public open space areas. Consequently, there would be no significant effects on this potential issue.

The figure below highlights the ‘Area of Attractive Landscape to the south of the site. In landscape terms the Councils own Landscape Character Assessment (2007) does not make any direct reference to the outdated local designation of “Areas of Attractive Landscape” as referred to in the CS studies. Appropriate development on the revised MKSA8 area should not result in any notable effects on the setting or character of this wider landscape to the south which is enclosed and dominated by mature woodland and the steepening hillside topography.
Opportunities

The proposals provide opportunities for a number of benefits for the existing local community and every opportunity will be given to ensure that the aspirations of local residents are considered through the iterative design process. Current benefits identified for the local residents would include:

- Highway improvements and the proposed distributor road would also provide much needed relief to road traffic through Bow Brickhill village.
- Improved access to the network of footpaths within the countryside to the south of Bow Brickhill. With the FLP proposed railway road crossing there is potential to remove the existing at grade footpath/bridleway routes over the railway giving a safer alternative. A further rail crossing for the bridleway (BW14) could also be considered which would both assist connectivity to the Church Farm development and negate the need for a bridleway diversion (subject to support from the Council and adjoining landowners.)
- Improvements to existing off site bridleways and footpaths including potential kissing gates to enhance access and create new circular links.
- A purpose built Community Centre within the site and new and improved footpath links from Bow Brickhill.
- A reduction in car travel for locals, with local shops linked to Bow Brickhill via pedestrian and cycle paths.
- Housing near to the existing employment area at Tilbrook providing local housing near jobs.
- Greater educational choice, with new primary schools within walking and cycling distance of Bow Brickhill.
- Improved recreational facilities for local residents with new sports pitches, footpaths, play areas and public open space.
- The development affords the opportunities to give direct support to the proposed East West Rail by both patronage and significant infrastructure which could assist the operational requirements of the route.
A number of opportunities exist to increase access to a wide range of community facilities and benefits, building on existing provision in the wider area. The health and well being of residents is one of the development’s primary objectives. This is met through the provision of accessible interconnected public open spaces, providing access to formal and informal recreation and equipped children’s play areas, and through the provision of local amenities.

Sited strategically within the development a Community Hub can provide a point of focus, activity and social interaction. It is anticipated that the community hub(s) could provide the following:

- A small range of shops/retail outlets targeted specifically to meet the local need of both the new development and the existing community, such as a local convenience store, newsagents, delicatessen, café etc;
- A health centre, including a doctor and dentist surgeries, a pharmacy;
- A community hall, providing meeting space for community groups.
- The Community Hub will be located to ensure ease of access both by car, public transport, bicycle and on foot, and will seek to provide a point of focus for a new primary school, public open space and a Neighbourhood Equipped Area for Play (N.E.A.P).

New Rail Crossing

The net result of creating a new rail crossing will enable a significant decrease in journey times for local residents of the Bow Brickhill site and other surrounding communities. Travelling distances will become shorter to local schools, shops and health facilities.
Access

Milton Keynes is a city designed for growth. The structure of the city is built upon a hierarchy of streets and green infrastructure. The figures below show how the site would be designed to integrate into the Milton Keynes layout whilst also safeguarding the separation from the adjacent villages.

The Grid
The grid structure of Milton Keynes lies immediately to the north of the site. There are corridors reserved for the continuation of the V11 and H10 roads.

The extension of this City-wide Grid Structure movement network south across the railway into the site, as shown in the adjacent figure would also provide a relief road to Bow Brickhill and create a strong defensible edge to the city.

Local Routes
The local routes within Milton Keynes run separately from the main grid. There are opportunities to extend these across the site to allow continuous movement for all modes of transport across the grid, linking neighbourhoods and community hubs. These include vehicular and pedestrian links.

Community Hubs
The local centres within Milton Keynes are served off the local routes although as shown in the adjacent figure, they are often close to the junction with the grid. There are opportunities to continue this layout within the site creating new neighbourhood centres.

Green Infrastructure
The green infrastructure within Milton Keynes is generally linear and predominantly lies along the grid layout. It provides a buffer between the housing & traffic grid and also an important recreational resource. The proposals can extend the existing green links through the site to the north and also into the woodland to the south.
Framework Development

FLP have worked closely with all members of the design and environment team in order to prepare a scheme which has evolved in response to the constraints and opportunities presented by the site. It has been an iterative process, with the masterplan developing through a series of concept, capacity and framework plans towards the current illustrative masterplan as shown below.
Plan 1
Delivery and Benefits

Studies and engagement with stakeholders have been carried out to establish any issues or abnormal infrastructure that would need to be considered. Consultation has included discussions with the Highways Agency, Network Rail, Milton Keynes Highways and the Utility Companies.

**New rail road crossing** - Discussions with Network Rail have not identified any major concern where the operational benefits of such a link have been recognised. Our consulting engineers has estimated the construction cost as being between £5.7-£7.9M (over bridge/underpass)

**Utilities** - High Voltage cables run across the site which can be diverted or accommodated in the masterplan. There is a need to bring a 11kv supply which can be provided and with the rail crossing reduces the length and complexity of servicing the site.

**Gas** - A main within the site is capable of diversion or retention within the design. A medium pressure main exists in the vicinity of the site. Costs of servicing the site are as expected for a development of this size.

**Water** - Mains within the site could be diverted if necessary and to bring water to the site is relatively straight forward for a development of this size.

**Telecoms** - Given the size, the development will be able to take advantage of a site wide fibre optic network allowing each property to access high speed broadband facilities in addition to a BT network.

**Surface water drainage** - The site is well served by existing drainage channels which can be utilised to maintain current flows with the use of SUDS techniques.

**Foul water** - Anglian Water has advised that there is capacity at the treatment works but as there is insufficient sewer capacity in the immediate vicinity a new main may be required to the network further from the site.
Design Principles

The design principles for the site will follow closely the guidance provided in the MK New Residential Guide - November 2011, namely.

Landscape, Public Space and Biodiversity
• Public green space will be associated directly with residential areas with residential open space fronted onto by development - this will ensure principles of good access & passive surveillance.
• Incorporation of SUDS, green roofs, new ponds and structures of wildlife friendly trees.
• Green character of the city will be reinforced through street tree varieties and hierarchy, verges, green front gardens, green roofs and green walls.

Layout for Passive Solar Gain Capture
• The ‘Street’ layout design will allow orientation of maximum 30 degree south buildings with the use of north - south aligned streets.
• Overshadowing avoidance - taller buildings will be to the north of residential blocks.
• Planting of appropriate species to limit overshadowing

Movement Framework will:
• Promote pedestrian/cycle movement
• Create a clear and legible street hierarchy with direct access onto plots and good sense of orientation.
• Provide short, safe, direct walking distance to schools.
• Enhance links to long established cycle/walking links in the surrounding countryside.
• Provide overlooked pedestrian routes.
• Provide bus stops located no more than 400m away.

Block Principles
• Plots will generally face outwards with public frontage and private backs.
Sustainable Living & Energy Efficiency

Aspects of sustainable living are at the heart of our proposals both in respect to individual homes and community living.

- **Connecting People** - The high bandwidth that could be provided by the network cable operator will allow residents to communicate using a variety of channels, enabling an alternative means of communications than face to face interactions. Community living and shared responsibility would be encouraged and assessed to ensure such services as car lift schemes can be operated successfully.

- **Reducing Electricity Consumption and Efficient Home Heating** - The site is relatively flat, and many of the roofs will be south orientated which are ideal to also maximise winter solar gain. The likely principal on site electricity generation will be through the application of solar hot water flat plate technologies and PV Cells. Such heating technologies could generate around 12% of typical household energy demand.

- **A CHP Community network will be assessed or a community bio-mass facility** - Such evolving technology including Micro-CHP in individual dwellings will also be considered to reduce energy consumption and provide heating as will air source heat pumps.

- **Reducing Water Consumption** - There are now well documented fittings that reduce water usage but more importantly we would ensure those selected products enable water conservation without behavioural change.

- **Rainwater Recovery** - Both individual and community spaces would be able to collect and store rainwater from roofs for non-potable use. As the site is very well suited to SUDS techniques in regulating the flow of water there is an opportunity to use the storage areas provided to irrigate other areas of open space.

Sustainable Living would also be inherent in the masterplan by:

- A reduction in need for car use through a network of new footpaths/new local facilities/ideal location near train station/improved bus routes.

- Location adjacent to existing employment to encourage living/working in close proximity.