

# **Proposed West Linslade Urban Extension (WLUE)**

## **An Assessment of the Role of Valley Farm in Local Biodiversity and Green Infrastructure Networks**

**Prepared on behalf of South Bedfordshire Friends of the Earth**

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# **Valley Farm Green Infrastructure Assessment**

## **Author**

This document has been produced by Philip Irving, who has worked as an ecologist for over ten years providing ecological advice on management of nature reserves and other wildlife sites, writing management plans and undertaking habitat and protected species surveys.

## **Introduction**

The aim of this document is to assess the role of Valley Farm, the site of the proposed West Linslade Urban Extension (WLUE), in the context of local biodiversity and Green Infrastructure (GI) networks and assess what impact the proposed development would have on these networks.

Green infrastructure is the physical environment within and between cities, towns and villages. It is a network of multi-functional open spaces, including formal parks, gardens, woodlands, green corridors, waterways, street trees and open countryside. It comprises all environmental resources, and thus a green infrastructure approach also contributes towards sustainable resource management.

## **The Location of Valley Farm**

Valley Farm is situated on the western edge of the Leighton-Linslade conurbation with the county boundary between Bucks and Beds forming the edge of the built up area and the eastern edge of the site, and the new Linslade Western Bypass running along its western edge. The farm ranges in altitude from c. 115 -130m and is situated on clay and greensand soils on the west facing slopes at the head of a side valley of a stream that eventually flows into the River Ouzel.

## **Biodiversity and Heritage Interest of Valley Farm**

The most important ecological feature on the farm is a small fen that is identified as a County Wildlife Site (CWS). The farm also supports a range of other habitats, predominantly unimproved and semi-improved neutral grassland with small amounts of acid grassland, dense and scattered scrub, mature trees and hedgerows. In terms of heritage interest, various earthworks are present including extensive ridge and furrow, evidence of past quarrying activities, and a possible lynchet.

A full description and assessment of the ecological interest of Valley Farm can be found in “Proposed West Linslade Urban Extension (WLUE) – An Assessment of Existing Ecological Information and Impacts” (Philip Irving, March 2009).

### **The Importance of Valley Farm in Local Biodiversity**

Intensive farmland and housing have rendered much of the countryside hostile to wildlife with semi-natural habitats surviving mainly as small, isolated fragments. The barriers between these fragments often make it impossible for plants and less mobile animal species to move around the countryside, making them susceptible to local extinction due to disease or environmental factors such as flooding or drought. Global warming will make it necessary for some wildlife to move north under changing climatic conditions, but in many cases there will be no way for it to move, or nowhere for it to move to.

This realisation that current land use and green spaces are insufficient for the needs of people and wildlife has led organisations such as the Wildlife Trusts to come up with the idea of ‘Living Landscapes’, which is a vision to connect mosaics of habitats and green spaces through countryside and within towns to enable wildlife populations to move and expand and give people a better place to live.

By ensuring a ‘joined up’ landscape of semi-natural habitats, species of plant and animal will have a better chance of surviving extreme events by allowing their populations to become larger and more robust. This would be achieved by linking up rich areas of wildlife habitat through green corridors or ‘stepping stones’ of semi-natural habitat.

This principle of a ‘Living Landscape’ is as relevant in a local area such as Linslade as much as over a wider area such as a river valley or range of hills.

Valley Farm serves both functions in a Living Landscape – not only does it contain small areas of high quality semi-natural habitats such as Valley Farm Fen CWS and the areas of unimproved grassland to the south, but it also acts as a green corridor around the western edge of Linslade that, as described below, is part of a circle of green spaces and habitats surrounding the town and linking it to the wider countryside. The mosaic of grassland, woodland and other habitats that this green corridor creates is of much greater value for wildlife than individual isolated habitats because many species utilise a mix of habitats e.g. buzzards will nest in woodland but need areas of grassland over which to hunt for rabbits; likewise badger setts are usually in woodland, but need pasture to forage for earthworms. Hedgerows bordering open grassland or farmland provide corridors of woodland edge habitat that allow species such as woodland invertebrates to move

between wooded areas. If these are lost, the less mobile species become isolated and are more at risk of dying out locally due to factors such as disease or changing environmental conditions.

Looking at these two aspects of Valley Farm in more detail:

### High quality habitats within the farm

The species-rich lowland fen and meadow communities at Valley Farm are both priority habitats in the National and Local Biodiversity Action Plans (BAP). The UK BAP is the Government's response to providing a legal framework for dealing with biodiversity conservation in response to the Convention on Biological Diversity held in Rio de Janeiro (The Rio Convention) signed by 159 governments in 1992. One of the targets in the UK Lowland Meadows BAP is that there should be "no loss of the current extent of Lowland Meadows in the UK" with similar targets for other habitats including Lowland Fen. Areas of Lowland Meadow would be lost if the development went ahead which would be in direct opposition to the targets in the BAP. The fen itself would not be lost but there is a possibility that it would become degraded due to changes in water quantity and quality resulting from the development.

Species rich grassland and fen communities support a range of uncommon plant and animal species such as green-winged orchid and marsh valerian that have become rare in the wider countryside as these habitats have been lost through intensive agriculture and development. As an example, we have lost about 97% of our species rich lowland meadows over the last 50 years. These remaining fragments of habitat such as found at Valley Farm therefore act as reservoirs of biodiversity from which rare species can colonise wider areas of the countryside when conditions become more suitable e.g. through habitat creation schemes.

As well the rare and specialised species that are present, these habitats also have a role to play in supporting wider biodiversity as they may contain features that more common species can utilise that are not present elsewhere, e.g. the anthills that are often present in old grasslands are an important feeding site for green woodpeckers.

### The role of the farm as a green corridor

The extensive areas of less species rich grassland at the farm are currently of lesser biodiversity value but they have the potential to be restored to more species rich communities by appropriate management through schemes such as Higher Level Stewardship, so themselves becoming a link in the 'living landscape' of the area. If the grasslands are lost as a result of development then their potential to become this link in the future is lost forever.

## Surrounding Green Infrastructure

Valley Farm is part of a network of Green Infrastructure that surrounds Linslade and links up to other areas to the north and south of the town. The various Green Infrastructure features shown on the map at the end of this document are described below, starting to the south of the Farm and running in an anticlockwise direction around Linslade:

- **Rock Lane CWS** – an unsurfaced green lane containing numerous mature oak and ash standards that runs along the southern edge of Linslade and links up to the southern fields of Valley Farm. The lane also links the farm to the grasslands of Southcourt Stud Farm to the southeast.
- **Southcourt Stud Farm** – situated c. 0.5km to the southeast of Valley Farm, contains numerous small hedged fields of improved and semi-improved pasture, many of the fields containing lynchets and other earthworks of heritage interest that are registered on the Historic Environment Record (HER). The farm also includes copses of mature wet and dry broad-leaved woodland and plantations. A public footpath runs through the middle of the farm.
- **Disused Quarry and New Woodland** – situated just to the southeast of Southcourt Stud Farm, and consisting of a disused sand quarry containing two waterbodies surrounded by an extensive area of recently planted broad-leaved woodland. A public footpath runs through part of the woodland.
- **Ledburn Pit** – situated to the east of the above site on the other side of the railway line, consists of a disused sand quarry containing two waterbodies with public access around the southern lake.
- **Tiddenfoot Park CWS** – situated directly to the east of Ledburn Pit, a disused sand quarry managed as a country park and containing a large waterbody with areas of semi-improved grassland, scrub and wet woodland surrounding it.
- **Rackley Hill Pit** – situated directly to the northeast of Tiddenfoot Park, a disused sand quarry surrounded by mature scrub that is owned and managed by Leighton Buzzard Angling Club.

- **Grovebury Quarry** – an extensive area of sand workings to the south of the Leighton Southern Bypass that contain extensive waterbodies and areas that are listed on the HER. Public footpaths run around the edges of the quarry
- **Church Meadows CWS** – Areas of unmanaged flood meadow with willow-lined ditches in the Ouzel Valley that run from the northern edge of Rackley Hill Pit to the southern edge of Leighton Buzzard town centre. Currently no public access on the meadows though they can be viewed from adjacent rights of way. In landscape terms they provide an important setting to All Saints Church.
- **Ouzel Valley CWS & SSSI** – An extensive area of floodplain habitats alongside the River Ouzel including semi-improved floodplain grassland, wet woodland, scrub and wetland habitats, some of the land at Old Linslade identified as a Site of Special Scientific Interest (SSSI). Runs from the northern edge of Leighton Buzzard town centre to the county boundary at Old Linslade. Includes areas of public open space such as the Ouzel Meadows and Heath Meadow, with public footpaths and the Grand Union Canal running through much of the remainder.
- **Heath wood CWS** – Area of mature mixed woodland with public access surrounding an area of housing and situated directly to the northeast of the Ouzel Valley CWS on the northern edge of Leighton Buzzard.
- **Rushmere and Stockgrove Area CWS & SSSI** – Very extensive area of mixed habitats on Greensand soils including ancient semi-natural woodland, conifer and mixed plantations, waterbodies, heathland and semi-improved/ unimproved grassland. Much of the land in the north of the area is SSSI. Includes areas of public access land at Stockgrove Country Park and Oak Wood with public rights of way running through private areas. Linked to the Ouzel valley CWS via Heath Wood CWS.
- **Old Linslade Churchyard CWS** – Small area of semi-improved grassland in the churchyard on the western side of the Ouzel Valley.
- **Linslade Wood CWS and Linslade New Wood** – a small ancient semi-natural woodland surrounded by an extensive area of more recently planted woodland, the whole of which is now owned by Central Bedfordshire Council and managed as an area of open space for the local community. Part of the new woodland is also on an area identified as being of archaeological interest on the HER. The western edge of the new woodland lies less than 200m from the northern edge of Valley Farm.

The land to the west of Valley Farm beyond the bypass is a mixture of arable farmland and pasture with scattered blocks of mixed woodland, and includes Liscombe Park with its extensive area of parkland containing numerous scattered mature trees and neutral grassland.

### Conclusion

From the map at the end of the document, it can be seen that Valley Farm acts as an important link in a circle of Green Infrastructure that surrounds Linslade and extends outwards to link up with additional areas to the north and south of the town, providing both valuable wildlife corridors and existing or potential public open space and access routes.

The loss of much of Valley Farm to housing would create a major break in this circle of Green Infrastructure, with the urban area of Linslade effectively intruding into the green ring around the town. This would result in fragmentation of the network of habitats described above, resulting in the less mobile species (e.g. plants and some invertebrates) becoming isolated and at greater risk of local extinction. Though areas of green space could be retained within the proposed development, these would be a poor replacement for the existing area, and what remained would most likely be of lesser value, in terms of biodiversity, landscape and access. There is potential for new Green Infrastructure on the farmland to the west of the Linslade Western Bypass, though the road acts as a major barrier to wildlife, with access also restricted to a couple of crossing points.

Developments such as that proposed for this area can also have wider implications. As an example of this, increased run-off resulting from the development will enter the River Ouzel, and in turn, the Great Ouse river system, via the stream at the base of the side valley in which Valley Farm is located. In times of high rainfall the collective effect of increased run-off from sites such as this throughout the entire river system could exacerbate flooding of nationally important sites such as the Ouse Washes SAC.

**Map showing location of Valley Farm in relation to other areas of Green Infrastructure around Linslade**

