



## 2.0 Methodology

In order to provide a comprehensive baseline (the key environmental features associated with the site) and ultimately, to provide a robust environmental appraisal of the proposed development, the EIA has been informed by a combination of desk based research, site visits and surveys and consultation with key stakeholders. This process ensured that potential environmental impacts could be properly assessed and effective management of environmental risks appropriately developed where necessary.

The EIA followed a structured and logical approach for understanding and determining the nature of the existing environment and how it might be affected by the development proposal, enabling impacts to be assessed throughout the EIA process. In addition, it provided a comprehensive and robust approach to manage predicted environmental risk through avoidance and where necessary, mitigation measures. There are five key stages within this process. These are:

- Environmental Receptors: Identification of the existing environmental receptors (or features of interest) that may be affected by the development proposal.
- Environmental Changes: Identification of the environmental changes likely to occur on receptors identified as a result of the proposed construction and operational phases of the development proposal.
- Environmental Tolerance: Understand the nature of the potential environmental changes e.g. the ability of the receptor to cope with and recover from change.
- Environmental Impact and Significance: Determine the likely impacts on environmental receptors and the significance of impacts (adverse and beneficial) through analysis of receptor vulnerability.
- Environmental Impact Management: Develop appropriate mitigation measures where avoidance of adverse impacts (e.g. significant moderate or major impacts) are not possible to manage environmental risk as a result of the construction or operational phases of the proposal.



# 3.0 Legislation, Planning Policy and Context

A summary of EIA regulations and an outline of policies relevant to the proposed development are presented.

## 3.1 EIA Requirement

The proposed development is has been deemed 'EIA development' by the Borough Council of Wellingborough. This means that due to its size, nature and location, the project may give rise to significant environmental effects. In order to properly address and manage any adverse impacts that may result from the proposed development, an EIA has been undertaken, the results of which are presented within this ES.

## 3.2 Planning Policy Context

Planning guidance and policies considered relevant to the proposed development have been considered.

Relevant information has been collated and appraised from the following planning guidance:

- National Guidance: National Planning Guidance (PPGs) and Planning Policy Statements (PPSs);
- Regional Planning Guidance: Regional Spatial Strategy for the East Midlands (RSS8) (ODPM, March 2005);
- Northamptonshire County Structure Plan (2001 to 2016);
- Borough of Wellingborough Local Plan (1988 to 2006); and
- Borough of Wellingborough Local Plan alterations (1988 to 2006).



# 4.0 The Proposed Development

## 4.1 The Existing Site

The proposed site for redevelopment (the 'Eastfield Road Urban Quarter') is 1.25km north east of Wellingborough town centre (NGR SP 902688 based on centre point) situated behind the residential properties lining Finedon Road to the north and Eastfield Road to the west, and mix of uses along Mill Road to the south. The site's eastern boundary is defined by the railway, associated buildings and sidings.

The site is 16.25ha in size and is characterised as previously developed land, due to its past and present uses. However, much of the land across the site is presently vacant, obsolescent or under-used. Present uses include:

- Industrial sheds for commercial uses;
- Allotments and ancillary buildings e.g. garages relating to adjacent houses;
- Former mineral extraction workings including a small lake and associated areas of trees and scrub; and
- Derelict buildings; and
- Vacant land.

## 4.2 Analysis of Development Alternatives

### Option 1: Do nothing

No development or regeneration of the site will take place and the site and its existing land uses will remain as they are at present for the foreseeable future.

### Option 2: Variable Density Mixed Urban Redevelopment – The Eastfield Urban Quarter

Option 2 provides an alternative mixed urban development that has incorporated the principles and guidelines set out in the Draft Development Brief for Wellingborough East Land East of Eastfield Road (2005).



## 4.3 The Preferred and Proposed Development – The Eastfield Urban Quarter (Option 2)

The preferred option is Option 2, the Eastfield Urban Quarter. The proposal is for a mixed use, predominantly residential scheme, interspersed with small scale, retail, cafés, bars, employment and live / work studios on site which will create a vibrant mixed use community. The proposed development offers:

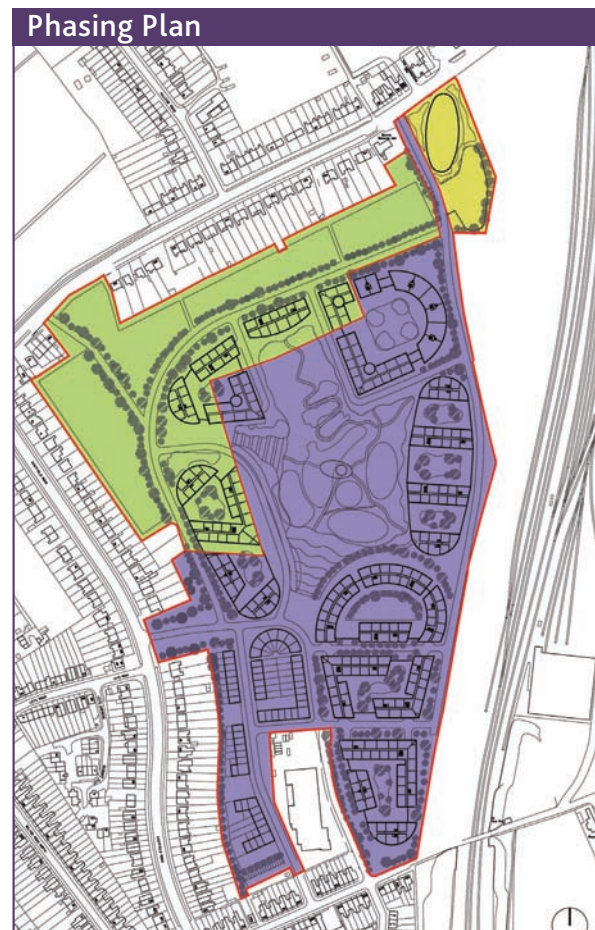
- Up to 1,006 dwellings (Class C3)
- Up to 27 live work units (sui generis)
- Access roads
- Pedestrian and cycle routes
- Up to 1,992 car parking spaces
- Up to 1,122 cycle parking space
- Up to 10.57 hectares of open space and landscaping
- Up to 400 sq.m of community uses to include a green classroom and crèche
- Up to 840 sq.m. of retail, financial / professional services and food and drink (Use Class A1, A2, A3, A4 and A5)
- Up to 11,343 sq.m. of employment space (Use Class B1).
- Up to 10,344 sq.m hotel comprising up to 200 beds (keys) and ancillary uses
- Consolidated allotments

The proposal for the careful and structured development of the Eastfield Urban Quarter is that the site is divided into three phases of development.

**Phase 1:** The first phase comprises the lion share of the development including much of the residential and mixed use proposals on the southern and eastern part of the site. The creation of the central open space both hard paved areas and soft parkland area would also be undertaken as part of the phase 1 construction programme.

**Phase 2:** This stage of the development would cover the northern part of the site to include the rationalisation and improvement of the designated allotments areas, the construction of the access road around the northern edge and the building of the remaining residential and mixed use properties adjacent to the road.

**Phase 3:** This phase of the development provides for the construction of a 5/6 storey hotel on the most northerly part of the whole site adjacent to and accessed from Finedon Road.



- Phase 1
- Phase 2
- Phase 3



# 5.0 Flora, Fauna and Nature Conservation

## 5.1 Introduction

This non-technical summary provides an overview of the ecological impact assessment that has been undertaken to determine the impacts of the proposed Eastfield Urban Quarter on the flora, fauna and nature conservation interests of the site. The proposals comprise a mixed use development consisting primarily of residential units together with a mixture of office, commercial and community uses.

## 5.2 Key Habitats

The following key habitat types were found to be present within the site boundary. Each habitat type was assigned a level of importance (i.e. low, medium, high) with regard to its overall nature conservation value.

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Habitat Type	Present Nature Conservation Value
Lake (County Wildlife Site)	Medium
Woodland (County Wildlife Site)	Medium
Woodland / trees/hedge (outside County Wildlife Site)	Low / Medium
Tall Ruderal Vegetation with scattered Scrub (including allotments)	Low
Improved Grassland	Low
Amenity Grassland	Negligible

Taking the sites history into account, most of the habitats can be described as either 'managed' (e.g. the areas of allotments) or 'improved' (e.g. all other areas of habitat). Given the nature and history of the site, the diversity of habitat types is unsurprisingly low with the majority of the site (apart from areas of buildings and hard standing) dominated by tall ruderal vegetation with scattered scrub (including allotments).

The area associated with the County Wildlife Site (CWS) contains the most diverse range of connected habitats; the lake, trees and woodland, tall ruderal vegetation and improved grassland, some of which are priority Northamptonshire Biodiversity Action Plan habitats.

## 5.3 Key Species

Several UK protected species have been noted as potentially being associated with the site including bat, great crested newt, breeding birds, badger and reptiles, some of which are also afforded protection under international law. Surveys to be undertaken in spring 2006 will help establish the presence or absence of these species.

The site contains an interesting and diverse range of plant species (113 species recorded) associated with the above habitat types. The overall diversity of animal species present on the site at this stage is considered to be quite low and most likely reflects the diversity of habitat types present. It may also be the case that many species (e.g. insects, amphibians, reptiles etc) may be under-recorded at this location.



## 5.4 Key Impacts

Those habitats most likely to be impacted by change include the small lake (susceptible to draining and dredging works during construction and increased pollution and incorporation of urban features / increased disturbance during the operational phase), the small woodland area including individual trees across the site and the hedge (susceptible to habitat loss and damage) and the areas of vegetated habitat associated with scrub, grassland and the allotment area (the existing, albeit unmanaged, green spaces susceptible to loss during construction).

Species associated with the County Wildlife Site will be particularly sensitive to any permanent works proposed to the lake and surrounding tree and woodland habitat.

## 5.5 Impact Management

It will be necessary to develop and implement a suite of avoidance and mitigation measures to ensure that all 'moderate adverse impacts' identified are reduced to residual 'minor adverse impacts' or 'no perceived impact at this stage' scenarios. No major impacts were identified at this point in time.

The balance of natural habitat (retained / incorporated) verses amenity areas associated with the County Wildlife Site needs further consideration to ensure that permanent effects on this non-statutory designated site of nature conservation value do not impact on the integrity of the site and / or the reason for which the site was originally designated.

## 5.6 Environmental Opportunities

The County Wildlife Site (lake, trees and woodland and associated terrestrial habitat) has significant potential for improvement for nature conservation. Value could be added through the implementation of a conservation management plan for this area (at present it appears to be unmanaged). Potential enhancements may include the creation of more diverse aquatic habitats (e.g. open water, reedbed, shallow marginal vegetated areas, increased diversity of emergent and submerged aquatic plants etc), sowing and management of wild flower meadow areas adjacent to proposed amenity grassland and retention and management of the existing woodland.

Assuming that adequately designed wildlife corridors are incorporated into the final design of the site, there is the potential to connect sites within the existing boundary (i.e. the County Wildlife Site with the allotments and the railway embankment (this provides an existing continuous corridor along the eastern edge of the site)). There may also be scope to provide linear and / or other connections to the proposed Nene Valley Floodplain and Ecology compensation areas associated with Wellingborough East.

## 5.7 Conclusion

The overall impact assessment of the proposed development is that through sensitive and appropriate design and implementation of the recommended avoidance and mitigation measures, the ecological and nature conservation value of this site will result in a no perceived impact scenario.



# 6.0 Air Quality

## 6.1 Introduction

The existing ambient air quality is considered within the study area (the Eastfield Urban Quarter) and an assessment has been made with regard to the changes that may occur due to construction and operational phase activities on local residents and other sensitive receptors such as schools in the study area. The construction impacts were assessed qualitatively.

## 6.2 Conclusions

The results of the assessment can be summarised as follows.

- Local monitoring data collected by the Borough Council of Wellingborough indicate that exceedences of the Air Quality Objectives are unlikely and consequently, there are no Air Quality Management Areas in the Borough.
- The construction phase assessment indicated that the proposed development has the potential to adversely impact upon air quality. However, should appropriate mitigation measures be employed, the impacts of construction dust would be reduced to a minor adverse nature and the impacts of emissions from construction vehicles would be result in a neutral impact.
- The localised assessment indicated that predicted concentrations of all pollutants would be below UK Air Quality Objectives despite a neutral or deterioration in air quality at all receptors. The effect can be classified as medium priority according to NCSA guidance.
- The generalised assessment indicated that all roads involved in the study would be subject to a deterioration or neutral impact in exposure to air quality. No improvements were predicted. The net total assessment for PM10 and NO2 were small in comparison with the total assessment scores so the impact could be classified as minor adverse impact.

The regional assessment indicated that the 2012 Do-Something case shows a predicted increase of 8% in all pollutants over the Do-Minimum case due to the increase in traffic. The increase in CO2 is a 5% increase over the Base Case whereas other pollutants are predicted to decrease to between 60% and 80% of the concentrations predicted for the Base Case by 2012. This effect can be classified as a minor adverse impact.



# 7.0 Surface Water (drainage, flood risk, water quality)

## 7.1 Introduction

This non-technical summary provides an overview of the surface water assessment undertaken for the proposed development of the Eastfield Urban Quarter in Wellingborough.

## 7.2 Surface Water Assessment

A flood risk assessment was undertaken for this site by Royal Haskoning in 2004 and was reviewed as part of this assessment.

Fluvial flooding does not appear to be a problem within the site and is unlikely to be affected by the proposed development.

The report concluded that the primary risk across the site is flooding as a result of surface water runoff and that during extreme flood events, the existing surface water drainage infrastructure is inadequate to accommodate the runoff volumes generated.

The findings of the flood risk assessment were reviewed in light of the proposed development and a number of impacts were identified.

## 7.3 Key Impacts

The proposed development would introduce additional surface water runoff and foul water flows, and without mitigation this could result in flooding of both on site and off site receptors.

It is anticipated that the proposed development will have a drainage strategy incorporating Sustainable Urban Drainage (SUDS). Options include the use of the existing pond as a storage, the use of infiltration/soakaways in selected areas of the site, and the use of permeable paving and surface water storage cells beneath areas of hard landscaping. Increases in foul flows can be mitigated by introducing water economy measures into the sanitary system. If these measures are insufficient then offsite drainage improvements may need to be considered.

## 7.4 Conclusions

Assuming that the necessary improvements are made to the on site drainage system and that off site flows are limited to those as present, there should be no perceived impact on identified receptors.

The proposed buildings should be designed to prevent flooding, e.g. basement car parks should be designed to prevent the ingress of ground water and also surface water runoff.



# 8.0 Noise and Vibration

## 8.1 Introduction

This non-technical summary provides an overview of the noise impact assessment undertaken for the proposed development of a key brownfield site known as the Eastfield Urban Quarter in Wellingborough.

The proposals comprise a mixed use development consisting primarily of residential units, together with a mixture of office, commercial and community uses. Additionally, a 200 bed hotel is proposed near the Finedon Road access.

## 8.2 Noise Assessment

A noise measurement survey of the existing railway line and industrial units in and around the development area was carried out. The results were then used, along with traffic flow data, plan data and topographic information, to create a model for the distribution of daytime and night-time noise intensities.

Models were created for situations, with and without development, for the current year, the opening year (2012) and the design year (2022) to assess the impact of changes on the site, on both future residents of the area and existing residents situated on Finedon Road, Eastfield Road and Mill Road.

The potential noise as a result of the demolition and construction has been assessed.

## 8.3 Key Impacts

The PPG 24 assessment indicated that the majority of the development site would fall into Noise Exposure Category A, which means that 'Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as a desirable level.'

## 8.4 Conclusion

Comparison of the non-developed situations with the situations after development in both the opening and design years indicated that there is likely to be a minor adverse impact on the existing residents of Mill Road.

Initial calculations indicate that noise from demolition and construction activities during certain phases may, under very worst-case scenarios, exceed limits identified in the literature relevant at local sensitive properties (residential and office). It is recommended that upon appointment of the demolition and construction contractor, a specific noise prediction exercise is undertaken to identify a more accurate likely impact and the potential for reducing noise at the closest noise sensitive receptors. Mitigation measures can be implemented through a CEMP.



# 9.0 Ground Conditions

(geology and soil, hydrogeology, contaminated land and land stability)

## 9.1 Introduction

The following text summarises the findings of an assessment of the existing ground conditions for land east of Eastfield Road, also known as the Eastfield Urban Quarter. The assessment took account of the following factors; geology and soil, hydrogeology, contaminated land and land stability.

## 9.2 Geology, soil and land stability

The Eastfield Urban Quarter (the site) has a history of mineral extraction and industrial uses. Northampton Sands were extracted for their iron rich bands and a former brick works extracted Lias Clay from the central area of the site surrounding the pond.

As a result of this mineral extraction the majority of the site is underlain by loose sand and gravel and soft gravelly clay, and existing properties on Eastfield Road and Finedon Road have suffered from subsidence. Methods of ground improvement or deep foundations will be required for new buildings at the site, and these should be designed to avoid causing any additional movement to existing properties.

There are also a number of steep slopes both within the site and along the eastern edge of the site. The proposed development should ensure that foundations are designed to avoid causing instability in existing slopes.

## 9.3 Contaminated Land

The sediment of the pond in the centre of the site contains elevated concentrations of contaminants. This sediment should be removed prior to the redevelopment of the pond as a recreational facility / balancing pond, and will result in a beneficial impact on the water quality.

The historical and current industrial activities have resulted in hydrocarbon and metal contamination of made ground deposits across the site. Further investigation is required in order to establish the nature and extent of this contamination, and to design an appropriate remediation strategy for the development. The remediation should be appropriate for residential end use, and should ensure that risks to all identified receptors have been identified and mitigated against.

## 9.4 Conclusion

The design of the development must take account of the existing ground conditions. Assuming that an appropriate remediation scheme is carried out to address contaminated land issues, this would result in a minor beneficial impact in the short-term and a potential major beneficial impact in the long-term.



# 10.0 Landscape and Visual Aspects

(including trees and woodland)

## 10.1 Introduction

This non-technical summary presents the findings of the Landscape Impact Assessment and the Tree and Woodland Impact Assessment prepared for the proposed re-development of land to the east of Eastfield Road in Wellingborough known as the Eastfield Urban Quarter.

The development is primarily residential with up to 1006 flats and 27 live/work units. There will also be office, commercial and community buildings incorporated as part of the development.

Most of the identified visual receptors overlooking the site will have their current views into the allotment areas retained. Where existing properties currently back onto industrial units, with the proposals in position, some will abut new back gardens. The scale of some of the proposed buildings will have an adverse impact, however, views of domestic scale architecture are generally perceived to be preferable to views of large industrial units. The proposed housing layout will incorporate extensive areas of high quality planting to augment the existing landscape resources of the area, including views over the River Ise valley.

## 10.2 Landscape and Visual Aspects

The 16.25ha site, lying on the eastern edge of Wellingborough town centre on the western slopes of the River Ise valley, is a brownfield site, overlooked on three sides by existing residential properties, with the mainline railway forming its eastern boundary.

Land uses on and around the site determine local landscape character areas, but the overall impression is of an untidy and poor quality landscape with significant opportunities for environmental improvement. Existing landscape resources on the site will be retained and enhanced within the parameter plan for the site. Some tree losses will be inevitable, but the more substantial areas, for example, in the area of the former quarry should remain intact. Some of the more interesting aspects of the site's landform will also be retained.

The visual impact assessment addresses the proposed changes with the development of the Stanton Cross (WEAST) housing area (Bovis Homes) on the east side of the Ise Valley. Although it would be desirable to promote views across the valley from the Eastfield Road site, these views are liable to be very different to those currently experienced. The wide valley landscape will become more enclosed with the encroachment of housing into the open countryside. Equally, if the 'do-nothing' option were pursued, the views from the WEAST site towards the town centre will be of industrial units rather than domestic scale architecture.