



Nathaniel Lichfield  
and Partners

Planning Design Economics

**DANETREE EAST EXPANSION**

**SUPPLEMENTARY  
ENVIRONMENTAL STATEMENT**

**NON-TECHNICAL SUMMARY**

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Offices also in:  
Cardiff  
London  
Newcastle-upon-Tyne

**Nathaniel Lichfield & Partners Ltd**

3<sup>rd</sup> Floor

One St James's Square

Manchester

M2 6DN

T 0161 837 6130

F 0161 833 3741

E [manchester@nlplanning.com](mailto:manchester@nlplanning.com)

[www.nlplanning.com](http://www.nlplanning.com)

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## 1.0 INTRODUCTION

### The Supplementary Environmental Statement

- 1.1 On behalf of the Danetree Village Consortium (DVC), Nathaniel Lichfield and Partners (NLP) submitted an outline planning application (Refs DA/2007/0450 and 07/0096/OUTWND) to Daventry District Council (DDC) and the West Northamptonshire Development Corporation (WNDC) for a sustainable urban extension on 207.35 ha of land to the east of Daventry.
- 1.2 The application was validated on 19 March 2007.
- 1.3 As a result of the scale of the proposed development, an Environmental Statement (ES) was required under Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations (England and Wales) 1999 (as amended) (The Regulations).
- 1.4 An ES considers the environmental effects of the development during construction and subsequent operation and proposes ways of mitigating any significant effects that may arise.
- 1.5 As a result of a request a request by WNDC for 'further information' in respect of the application proposals under Regulation 19(1) of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations (as amended), together with comments received from statutory consultees, amendments to the proposed scheme have taken place. These changes include:
  - a) Re-alignment and reduction of development blocks to accommodate enhanced Green Infrastructure (GI);
  - b) Calibration of development block structure to integrate with and adjust to: ridge lines, watercourses, hedgerow structures and other vegetation;
  - c) Re-alignment of the central boulevard to deflect at key positions to accord with the 'Manual for Streets';
  - d) The addition of notation of existing links, footpaths and bridleway connections;
  - e) Enhanced priority routes for public transport;
  - f) Additional junction details for the northern and southern entrances.

- 1.6 As a result of the proposed revisions to the scheme the original ES (February 2007) needed to be updated to ensure that any environmental effects that may result from the proposed revisions had been properly addressed. A Supplementary Environmental Statement (SES) was therefore undertaken.
- 1.7 In the intervening period, DVC submitted an interim response to WNDC's request for 'further information' under Regulation 19 of the EIA Regulations, the content of which has also been taken into consideration in the assessment that was undertaken as part of the SES.
- 1.8 The SES considers any potential cumulative impacts that might arise as a result of the other proposed urban extensions (at Monksmoor to the north and Church Fields to the north of the Danetree site) and the potential future working of the adjoining Dodford Minerals site.
- 1.9 The purpose of this Supplementary Environmental Statement (SES) is therefore three-fold:
- To ensure that the information pertaining to the amendments to the proposed scheme together with updated survey work are fully considered, and consulted on, as part of the EIA process;
  - To address any outstanding responses received from statutory consultees;
  - To fully consider potential cumulative effects arising from the development of this scheme with that of the Monksmoor and Church Fields proposals and the working of Dodford Minerals site.
- 1.10 For reference, this SES should be read alongside the following documents:
- Original ES (February 2007) submitted with the application, together with its associated Technical Appendices;
  - The interim response to WNDC's request for further information (dated 31 July 2008)
- 1.11 This Non-Technical Summary summarises the findings of the SES using non-technical language. It includes a brief review of the revisions to the scheme together with the findings of each of the 11 Technical Studies that formed part of the SES.

## **General Methodology**

- 1.12 The SES simply updates the original ES (February 2007) to take account of the revisions to the scheme, it does not include any information that was contained in the original ES that remains unchanged. Where this is the case the reader is directed to the relevant part of the original NTS or ES (February 2007).
- 1.13 Although the original ES (February 2007) considered the issue of potential cumulative impacts arising from the Danetree scheme in combination with the other proposed urban extensions in the vicinity of Daventry town, which includes the proposed development of 1,000 dwellings at Monksmoor (to the north of Daventry) and a further 4,000 dwellings at Church Fields to the north of the Danetree site, this issue has been revisited in the SES as additional information has since become available.
- 1.14 Similarly, although the original ES (February 2007) considered the potential cumulative environmental impacts of the proposed Danetree Village development with the possible extraction of minerals from the Dodford minerals site, this has also been revisited as a result of further information becoming available.

## 2.0 THE APPLICATION PROPOSALS

2.1 Whilst the proposals remain largely as set out in the original ES (February 2007), the amendments to the scheme as outlined in paragraph 1.4 require the description of development to be amended. The new description of development is as follows:

*“Sustainable urban extension comprising 107.88 ha of residential development (up to 5,150 dwellings); 7.56 ha of village centres providing 1,561 sq m of retail development (Class A1) and 1,561 sq m of financial and professional services, restaurants and cafés, drinking establishments and hot food takeaways (Classes A2, A3, A4, and A5); 10.98 ha of employment development, providing 40,600 sq m of knowledge based industries (Class B1(b)) and 1,848 sq m of offices (Class B1(a)); 15.09 ha of educational facilities (Class D1) providing 3 primary schools and 1 secondary school, community and associated uses; 63.42 ha of public open space; new and realigned highways; landscaping and ancillary works.*

### **Layout of development**

2.2 Following recent revisions to the design of the scheme the Development Framework, which sets out the fixed parameters for the scheme against which the environmental effects of the development are to be assessment (including land use, building heights, openspace and transport corridors), has been updated.

2.3 The fixed parameters that have changed include the following:

- The area of land proposed for residential has been reduced to 107.88 ha (including village centres) and it is envisaged that this will still accommodate up to a maximum of 5,150 dwellings;
- The area of employment land has been reduced to 10.98 ha, resulting in a reduction in floorspace.
- There have been adjustments to building densities and heights across the site and these are set out in the plans contained in the Development Framework;
- There has been an increase in the amount of open space to 63.42 ha resulting in significant increases to the extent of the green corridors across the site as set out in Green infrastructure Plan (Appendix A3).

2.4 All other fixed parameters remain as stated in the original ES.

2.5 Although the level of employment floorspace has changed, the total floorspace of the employment uses will not exceed 42,448 sq m (gross external), the size and number

of units will remain flexible so that the Site can be developed in response to the demands of businesses looking to relocate in this part of Daventry.

2.6 It is considered that the revisions to the proposed development will enable the scheme to better assimilate into its surroundings. The key changes and the justification for these are set out below.

### **Environmental Corridors and Landscaping**

2.7 The following minor revisions have resulted from a consideration of the function of green corridors within the site and their inter-linkages with wider Green Infrastructure (GI) networks:

- Realignment of the development blocks to create buffer zones for water courses;
- Increase in width of spine road to accommodate water courses and hedges;
- Removal of residential development in south west corner to widen the green corridor;
- Realignment of primary school and development along secondary school boundary to increase green corridor;
- Re-alignment of the development edge along Dodford Brook to closely mirror the alignment of the Brook and increase the green buffer area;

2.8 This has resulted in an increase in the size and functionality of green corridors across the site and substantial enhancements in terms of GI.

#### *Green Corridors*

2.9 There are three significant green corridors that provide east west links through the site. The northern corridor splits the northern and central parcels and follows a stream. The central corridor splits the central and southern parcels and follows a major ridgeline that extends out from Borough Hill. The final, southern corridor splits the southern parcel and follows the Dodford Brook.

2.10 A number of additional further enhancements are proposed to the strategic landscaping on the site. A range of spaces have also been created which promote activity and well being for the local community. The key GI character areas have been defined below.

### *Managed Landscape Adjacent to Borough Hill*

- 2.11 This landscape character area is proposed to the north west of the site adjacent to the eastern slope of Borough Hill. A number of paths are proposed within this area. These will be routed around clearly designated ecological areas and link into the existing path network. Additional landscaping will also be provided in these areas.

### **Revisions to the Block Structure**

- 2.12 To accommodate the creation of the enhanced green corridors and linkages has required revisions to the layout of the scheme which is now focussed around three connected 'village' centres. The larger district centre is located in the central area, with two smaller neighbourhood centres within the northern and southern areas. These centres will provide the focus for community activity and accommodate facilities to provide for the daily requirements of the surrounding residential population.
- 2.13 Six distinct neighbourhood areas have also been identified: Upper Danetree, Oak Spinney, Danetree Village, Little Danetree, Newham and Borough Hill Rise. Each of these will have a broad range of dwelling types, size and tenures. Each neighbourhood will have its own distinct identity and character and range of community facilities.

### **Design of Buildings**

- 2.14 As the application is in outline only, design matters remain subject to the future consideration of DDC and WNDC. However, the issues that are to be fixed at the outline application stage are set out in the Development Framework (Appendix A3 of the SES) and include; the location of the different land uses, densities, building envelopes and open space.
- 2.15 The residential element of the scheme is separated into three distinct zones based on storey heights, where buildings will not exceed 4, 3 or 2 storeys, respectively (as illustrated in the Density and Height Matrix Appendix A3).
- 2.16 The density and height profiles of the buildings are similar to those identified in the original Design and Access Statement (February 2007), with areas of higher density

corresponding directly with the proposed areas of greatest development height. The only three anomalies to this principle will be:

- Employment area - where building heights will correspond with the tallest residential elements and not exceed 12m;
- Schools - which will be between 4 and 8m in height depending on whether the facility is a primary or secondary school; and
- In Danetree Village there is the intention to include a landmark feature or spire, at the heart of the principal centre.

2.17 The residential densities and building heights, proposed by the masterplan reflect the desire to make efficient use of land, whilst responding to the development context and its character. The highest residential densities and tallest buildings will be in the neighbourhood centres, with density and height decreasing as development moves outwards towards the site boundaries. In summary, the three key areas are:

- Village Centres – The highest density band where building heights will be up to the maximum of 4 storeys;
- Intermediate and low density areas – will include a transition from higher densities to intermediate densities and low density areas. Buildings will be predominantly 2 to 3 storeys in height, with a mix of terraces and semi-detached properties; and
- Low and edge density areas – The edge density areas will be designed to provide a semi-rural character where integration with the open countryside is important.

2.18 The density range has increased slightly from a range of 25 dwellings per hectare (dph) – 50 dph to a range of between 30 dph and 60dph. The average overall density of the development is 47.7 dph.

### **Highways and Transportation**

2.19 Following a detailed review of the highways and transportation aspects of the scheme the Central Spine road has been realigned, to reinforce the new focus on a series of linked and integrated neighbourhoods. All of the neighbourhood centres are now located along a central spine linking the main access point from the A45 and the secondary access point on Norton Road. The mix of land uses created reduces the need to travel.

- 2.20 The network of routes for pedestrians and cyclists has also been significantly enhanced. A clear hierarchy of routes for the prioritisation of pedestrians and cyclists has been created to maximise the opportunity to travel using non-car modes. The changes include improved access to Borough Hill, the Marches, Dodford and the countryside beyond.
- 2.21 Minor changes to the horizontal alignment of the spine road have also been undertaken at intervals of approximately 100 metres to enable buses, pedestrians and cyclists to be comfortably and safely accommodated, utilising features such as bus priority, cycleways, footways. A strip of land has also been reserved for the future incorporation of the proposed Private Rapid Transport System, should this come to fruition.
- 2.22 Lanes and Homezones have been incorporated into the scheme to provide enhanced access to the residential areas. Home Zones, which give priority to pedestrians and to children's play, will be established in areas where traffic movements are at a minimum and where traffic speeds are low.

### **3.0 SUMMARY OF IMPACTS**

#### **Agriculture and Soils**

- 3.1 The assessment of environmental impacts in respect of Agriculture and Soils now comprises all of the unamended material contained in Chapter B of the original ES, the information contained in the Stage I interim response to WNDc's request for 'further information', and the SES.
- 3.2 This SES assesses the effects of the Development on agriculture and soil resources, as a result of the proposed revisions to the scheme, it also responds to WNDc's request for 'further information' (Point 3) in respect of whether there will be any significant cumulative effects on the Best and Most Versatile land.
- 3.3 Although the proposed development will permanently remove 137 ha of land from current agricultural use, development in the location proposed not only minimises impacts on Best and Most Versatile Agricultural Land but avoids using grade 2 land that is known to occur to the east and the north of the application area. The overall impact of the project on the best and most versatile category of agricultural land is *minor*.
- 3.4 When considered in combination with other current planning applications and proposals around Daventry, implementation of the Danetree Village project and the Church Fields or Monksmoor Farm proposals would increase the overall impact on the best and most versatile category of agricultural land to *moderate to major*.
- 3.5 Three owner-occupied farms, two large and one small, will be lost as a result of the development but all owners are happy to relocate. Small areas of tenanted land will be taken but this will have only a minor impact on agricultural holdings.
- 3.6 With careful implementation of a soil management strategy, the impact on soil resources and quality will be minor.

#### **Archaeology and Cultural Heritage**

- 3.7 The assessment of possible environmental effects in respect of Archaeology and Cultural Heritage now comprises all of the unamended material contained in Chapter

C of the original ES, the information contained in the Stage 1 interim response to WNDG's request for 'further information', and the SES.

- 3.8 Chapter C of the SES reassesses the archaeological, historic building, historic landscape and other cultural heritage resources within the proposal Site, taking account of the recent revisions to scheme. Chapter C of the SES also responds to Point 5 of WNDG's request for 'further information' and assesses whether there will be any significant cumulative effects on cultural features from all proposed developments in the surrounding area.
- 3.9 In respect of the Danetree development a number of moderate adverse impacts have been identified on archaeological resources. Although development at Danetree would alter the setting of two scheduled monuments, no significant adverse effect is identified to the setting of either monument.
- 3.10 At Church Fields, as a result of an impact on archaeological remains associated with the nationally important Bannaventa roman town, a moderate to major adverse impact is identified. Elsewhere on the Churchfields scheme a number of moderate adverse and minor adverse impacts are identified on archaeological resources. Although development at Church Fields would alter the setting of two scheduled monuments, no significant adverse effect is identified to the setting of either monument.
- 3.11 Interpretation of the data submitted for the Monksmoor planning application suggests a small number of moderate and minor adverse impacts.
- 3.12 In respect of the Dodford Mineral site, at present the only requirement is for a watching brief which may or may not yield archaeological results. At this stage therefore, it is not possible to predict what archaeology will be found at this site.
- 3.13 A range of mitigation measures are proposed in the original ES (February 2007) to mitigate the effect on the setting of Borough Hill and Burnt Walls SAMs and significantly, important hedgerows will be retained. Archaeological excavation and recording will be undertaken.
- 3.14 In respect of cumulative effects, it is considered that there would be no significant adverse effects on archaeology and cultural heritage, and this is likely to be the case for each of the site combinations.

- 3.15 It is considered that the cumulative effect could result in positive impacts by adding to the archaeological understanding of the Daventry area and providing a focus for an inclusive community.

### **Transport**

- 3.16 The assessment of environmental impacts in respect of Transport now comprises all of the unamended material contained in Chapter D of the original ES (February 2007), and the SES (which includes a Supplementary Transport Assessment (STA)).
- 3.17 Chapter D of the SES assesses the likely impact of the proposed Development on the local and surrounding transport network taking account of the proposed revisions to the scheme. Chapter D of the SES also responds to Point 6 of WNDC's request for 'further information' which questions whether there will be any significant cumulative effects from construction traffic from all of the proposed developments in the surrounding area.
- 3.18 The chapter assesses the potential construction and operation impacts of the proposed development together with the cumulative transport impact from Danetree Village, Church Fields, Monksmoor and Dodford Minerals sites. The potential traffic generation resulting from these proposed developments has been factored into the traffic figures which demonstrate that the resulting cumulative impacts can be suitably mitigated.
- 3.19 A number of off-site highway mitigation measures are proposed to mitigate the increase in traffic flows including the additional flows from the Danetree Village Development and cumulative impacts of other development sites. The enhancements are identified as:
- Improvements to the pedestrian and cycle connectivity along the A45 between the Danetree development access and the A45 – A425 (London Road Roundabout) to include bus priority
  - Improved capacity at the A45 / Stefen Way / London Road / South Way Roundabout
  - Improved capacity at South Way / North Way / Eastern Way roundabout
  - Eastern Way / Admirals Way roundabout
  - M1 junction 16

- A45 / A5 – Weedon crossroads

3.20 In addition to the above, further mitigation is proposed at other locations as follows:

- Traffic calming to be provided within Norton;
- New pedestrian crossing on Admirals Way;
- Improved pedestrian / cycle link along Norton Road, towards Daventry.

3.21 Although the impact of increased traffic flow due to the development is mitigated across the whole network in the context of overall infrastructure provision, there may be a small number of individual locations where traffic flows (or conditions) on the network do result in a minor or insignificant residual impact.

3.22 However, due to the extensive level of additional pedestrian, cycle and public transport facilities to be provided by the development (both on and off-site) there are also some beneficial residual effects arising from the development.

3.23 The development supports and reflects national, regional and local policy with respect to land-use / transport planning by ensuring that the location and mix of land-uses proposed for the site reduces the need to travel. In addition, the principles supporting development of the site, and as set out in the STA, are aimed at actively encouraging non-car modes of transport. From an overall sustainable development policy perspective therefore, it is considered that no adverse effects are likely.

### **Noise and Vibration**

3.24 Chapter E of the SES considers the potential noise and vibration impacts of the proposed Development on existing and future noise sensitive receptors within the Site and surrounding areas taking account of the recent revisions to the scheme. Chapter E also responds to Points 7 and 8 of WNDC's request for further information.

3.25 The assessment of possible environmental effects in respect of noise now comprises all of the unamended material contained in Chapter E of the original ES (February 2007), and the SES.

3.26 In order to address points 7 and 8 of WNDC's request for 'further information' the following work was undertaken which takes into consideration the revised traffic forecasts resulting from the proposed revisions:

- A revised assessment of potential construction noise impacts;
  - A revised assessment of road traffic noise impacts in respect of both existing and proposed development;
  - A revised assessment of the impacts of existing industrial noise sources on the new dwellings;
  - An assessment of the potential cumulative construction and operational impacts of the Danetree development together with the proposed Dodford minerals extraction site and the development of the Church Fields and Monksmoor proposed urban extensions.
- 3.27 The assessment finds that some noise impacts on existing (and future) noise-sensitive receptors during the construction of the Danetree development are inevitable. However, for the nearest receptors, impacts will be temporary in nature and kept to a minimum due to the adoption of mitigation measures.
- 3.28 The potential cumulative noise impacts of construction works for the Danetree site overlapping with operations at the potential Dodford minerals site and other developments in the area (Church Fields and Monksmoor) have been considered, but do not alter this conclusion. Vibration during the works is unlikely to be significant.
- 3.29 Satisfactory internal and external noise levels can be achieved in respect of the proposed new dwellings. Similarly, with the adoption of appropriate mitigation measures, the noise environment at the proposed schools and Neighbourhood Centre and Extension Heart, will also be within acceptable levels.
- 3.30 Noise design criteria have been developed for the commercial elements of the proposed development so that they will not affect new and existing residential premises.
- 3.31 During the construction of Danetree, the change in traffic noise at all representative receptors is predicted to be insignificant. During the operation of Danetree, a minor increase in traffic noise is predicted at Borough Hill Farm, Jubilee Cottages and Burntwalls Farm and a moderate increase at Norton Grounds.
- 3.32 Assessments have also taken into account the cumulative effects of the change in road traffic noise associated with other developments (Church Fields, Monksmoor and the potential Dodford minerals extraction site). During the construction phase a minor increase in traffic noise is predicted at a small number of locations (as set out in

Chapter E) and this will increase slightly during the operational phase, rising to moderate at Norton Grounds.

- 3.33 With the implementation of appropriate mitigation measures the potential noise impact of the Dodford mineral site on the dwellings closest to the Dodford quarry is considered to be insignificant.

### **Flood Risk and Hydrology**

- 3.34 Chapter F of the SES considers hydrology, flood risk and drainage issues taking account of the recent revisions to the scheme. Chapter F also responds to Point 10 of WNDG's request for 'further information' and assesses whether there will be any potential flood risk impacts on Dodford Brook and other smaller catchments within the southern part of the site. Chapter E of the SES has also been informed by the outcome of further discussions with the Environment Agency.
- 3.35 The assessment of potential environmental impacts in respect of flood risk and hydrology now comprises all of the unamended material contained in Chapter F of the original ES, the information contained the Stage I interim response to WNDG's request for 'further information', and the SES.
- 3.36 The primary potential impact to the hydrology, flood risk and land drainage regime of the Site is caused by an increase in impermeable areas and a resultant increase in surface water runoff which could increase the flood risk downstream to the village of Dodford and beyond. Runoff rates and volumes will increase significantly as the site is constructed and response times will shorten without mitigation.
- 3.37 A Surface Water Management System is proposed that will manage runoff from the site to allow for all events up to and including a 200-year storm plus the impact of climate change. The drainage system will incorporate source control, sustainable drainage systems (such as swales) and will provide attenuation in balancing ponds for excess runoff. These systems will also provide some surface water treatment and in particular the removal of suspended solids and to some degree hydrocarbons and dissolved pollutants.
- 3.38 The implementation of this drainage system will commence from the start of construction and will therefore provide protection against increases in runoff and sedimentation to receiving watercourses throughout the construction phase and into

the operational phase. Regular monitoring and maintenance is proposed to ensure that this continues until completion. In addition to the drainage system, the correct management of stockpiled topsoil and other construction materials, protection of buffer zones, management of vehicle movements and storage and use of oils and fuels will ensure that runoff rates are minimised and that sediment loads are limited in any overland flow generated. Measures are also recommended to manage the potential impact associated with concrete and cement batching and use on site.

- 3.39 The assessment therefore identifies that the overall impact on hydrology, flood risk and drainage is of low significance. However, there remains a residual risk of spillages or accidents, which although unlikely, could cause a pollution event of low to high significance.
- 3.40 Due to the proposed East Daventry Urban Expansion being situated at the very top of the catchment area, the overall impact of the Danetree scheme will not be increased by the Monksmoor and Church Fields proposals.
- 3.41 The mitigation measures proposed in respect of Danetree site will not compromise the ability of the Dodford Minerals site to implement its own mitigation measures in the future. The Surface Water Drainage System proposed in respect of the Danetree scheme will result in a net reduction in downstream flood risk, benefits that would extend to the Dodford Minerals site.

### **Ground Conditions and Contamination**

- 3.42 Chapter G of the SES provides an assessment of any potential cumulative impacts that may arise as a result of the possible future development of the Dodford Minerals site, taking account of the recent changes to the scheme.
- 3.43 The assessment of potential environmental impacts in respect of ground conditions and contamination now comprises all of the unamended material contained in Chapter G of the original ES (February 2007), and the SES.
- 3.44 The assessment finds that during the construction phase, exposure to windblown dusts could result in impacts considered to be of minor adverse significance but that these will be temporary and can be effectively mitigated using measures such as dust suppression techniques. Monitoring of dust at the boundary of the site will also be undertaken to ensure that the mitigation measures employed are effective.

- 3.45 Although hypothetical at this stage, should the sand and gravel resource identified at Lower Dodford Farm be excavated the resultant pit may be utilised for the infilling of degradable materials. There is potential for landfill gas to be generated through this which has the potential to migrate through the underlying soils. It is assumed that any such activity will be subject to an appropriate environmental permit and it is considered that such effects can be suitably mitigated through the provision of gas protection measures (radon resistant membrane and venting).
- 3.46 In conclusion, the potential cumulative adverse effects of construction at the application site and quarrying activity at the Lower Dodford Farm mineral site are considered to be low providing that the mitigation measures identified in Chapter G of the SES are implemented.

### **Air Quality**

- 3.47 Chapter H assesses the effects of the development on air quality, taking into account of the recent revisions to the scheme. The chapter also responds to Points 13 and 14 of WNDC's request for 'further information' and assesses whether there will be any significant effects on existing receptors resulting from construction traffic. The chapter also considers any cumulative effects that may result from the proposed Church Fields and Monksmoor urban extensions and potential extraction of minerals from the Dodford minerals site.
- 3.48 The assessment of potential environmental impacts in respect of air quality now comprises all of the unamended material contained in Chapter H of the original ES (February 2007), and the SES.
- 3.49 In order to address these points, Chapter E of the SES considers potential impacts resulting from the proposed Development in respect of:
- Levels of dust deposition and soiling as a result of activities undertaken during the construction phase;
  - Local pollution concentrations as a result of activities during the construction and operation of the development;
  - The cumulative impacts on local air quality arising from the Danetree scheme in combination with other proposed developments in the vicinity of the site; and
  - The potential exposure of future residents to pollution concentrations which may exceed national air quality standards and objectives.

- 3.50 The air quality impacts of the construction phase will arise from dust and particulate matter (PM<sub>10</sub>) generated by site clearance, construction, and landscaping. Suitable mitigation methods can be employed to ensure that nuisance from dust deposition is kept to a minimum. Site traffic and plant will cause a slight increase in nitrogen dioxide (NO<sub>2</sub>) and PM<sub>10</sub> concentrations both on the site and around the surrounding road network. Mitigation methods should ensure that any possible adverse impacts are reduced. The residual effects of the construction phase are considered to range from *moderate adverse to not significant*.
- 3.51 The operation of the proposed Development will generate an increase in traffic on the local road network. An assessment of the effect of this increase in road traffic on local air quality was undertaken at a number of locations in the vicinity of the Site. At all of the assessment locations studied, increases in both NO<sub>2</sub> and PM<sub>10</sub> concentrations due to traffic associated with the proposed Development were predicted. However, the predicted increase in annual average NO<sub>2</sub> and PM<sub>10</sub> concentrations will not result in any exceedences of the current statutory Air Quality Strategy (AQS) annual average objectives for these two pollutants.
- 3.52 The residual effects of the Development on air quality are considered to range from *minor adverse to not significant* for NO<sub>2</sub>, whilst for PM<sub>10</sub> they are considered to be not significant.
- 3.53 The cumulative impacts of the proposed Development and three other local proposed developments (Monksmoor, Church Fields and the Dodford minerals site) were also assessed. The conclusions of this assessment were that the cumulative impacts would range from *moderate adverse to not significant* for NO<sub>2</sub>, and would be not significant for PM<sub>10</sub>. No exceedences of the AQS objectives were predicted for these modelled scenarios.

### **Landscape and Visual Impact Assessment**

- 3.54 This chapter assesses the effects of the proposed Development on the site, taking into account the relationship of the Site to its surroundings in terms of its visual prominence; the impact of the proposals on the Site in relation to existing baseline conditions; and potential mitigation measures. The chapter also responds to Point 15 of WNDC's request for 'further information' in respect of those locations which have been identified as experiencing the highest magnitude of change and also any

potential cumulative visual impacts arising from the construction of the Danetree, Monksmoor and Church Fields proposals. The chapter also considers the cumulative visual impacts of the proposed Development and the Dodford mineral site.

- 3.55 The assessment of potential environmental impacts in respect of landscape and visual impacts now comprises all of the unamended material contained in Chapter I of the original ES (February 2007), and the SES.
- 3.56 In order to address the above points a detailed review of the Landscape and Visual Impact Assessments (LVIAs) and Viewpoints used in respect of the three proposed urban extension sites was undertaken. From this process four visual assessment receptor locations were identified that were considered to be representative enough to allow for an assessment of the potential cumulative impacts of the proposed developments.
- 3.57 This assessment found that the phased development of the three sites at Danetree, Church Fields and Monksmoor, would have limited cumulative visual impacts both during the construction period, and after the development is completed. There would be no cumulative impact arising from the development of the Danetree and Monksmoor sites, and the cumulative impacts arising from the development of the Danetree and Church Fields sites would be limited in both location and duration. The implementation of substantial landscape proposals early in the development of the Danetree and Church Fields sites will have significant benefits as additional phases of construction occur, but it is the phasing of the proposals which result in the assessment having limited cumulative impacts.
- 3.58 The assessment found that the phased development of the Danetree and Dodford minerals sites will result in limited cumulative visual impacts during the construction period and after the development is completed. The phasing of the mineral extraction, and the associated progressive restoration of the worked site, will result in overall terms, in two development sites having limited cumulative visual impact. Moreover, such impacts experienced, particularly in the earlier stages of the development of Danetree, would be progressively mitigated through the development on new planting within the Danetree site, and as part of the phased restoration of the Dodford Minerals site.

3.59 The assessment considered the relationship of the proposed development on the setting of the Borough Hill Scheduled Ancient Monument (SAM) and found that the proposals would have no direct effect upon Borough Hill SAM.

### **Ecology**

3.60 Chapter J assesses the effects of the proposed development on ecology taking into account of the recent revisions to the scheme. Chapter J also responds to Point 16 of WNDK's request for 'further information', provides updated survey information where requested, and has been informed by further consultation with statutory consultees. An assessment of the cumulative impacts of the Danetree scheme with the proposed developments is also included.

3.61 The assessment of potential environmental impacts in respect of ecology now comprises all of the unamended material contained in Chapter J of the original ES (February 2007), and the SES.

3.62 Chapter J of the SES updates a range of ecological survey work in response to a request from WNDK. The surveys updated include:

- Extended Phase 1 Habitat Survey
- Badger Survey
- Breeding Bird survey
- Water Vole Habitat and Species Survey

3.63 The above survey work also identified a need for the following additional assessments which are included in the SES:

- Brown hare survey;
- Review of habitat quality for invertebrates;
- Review of Green Infrastructure;
- Review of wildlife sites;
- Production of an Ecological Management Plan.

3.64 No sites of international or national importance for nature conservation or geological interest will be directly affected by the proposed development.

- 3.65 The three non-statutory nature conservation sites (County Wildlife Sites) within the development area (Borough Hill Plantation, Borough Hill Spring Fields and Borough Hills Springs) will be retained and be unaffected by the current proposals. These sites will be buffered by appropriate semi-natural habitat. In addition; specifically designed wildlife corridors will connect these sites to the wider landscape.
- 3.66 In respect of the five Potential Wildlife Sites within the development boundary, although some area will be lost, all the Potential Wildlife Sites within the proposed development (either wholly or partially) will remain connected to the wider landscape through specifically designed north-south edge habitat and specific east-west green corridors. Additionally, enhanced habitat will be created across the site, notably acidic grassland (and heath where possible), species rich neutral grassland, woodland and hedgerows. Therefore, although some habitat will loss as a result of the development there will also be significant habitat retained and/or enhanced.
- 3.67 A detailed package of mitigation measures is proposed that updates the measures set out in the original ES (February 2007).
- 3.68 Impacts following the suggested mitigation measures on 13 out of the 14 species considered in the assessment are either neutral or positive. The only negative impact is in respect of brown hare, for which the impact is classified as '*low negative*'.

### **Green Infrastructure**

- 3.69 Green Infrastructure has been an underlying consideration throughout development of the scheme. In summary, the provision of the green corridors both east-west and north-south across the development site support the GI by providing semi-natural links into the wider countryside.
- 3.70 With the proposed mitigation it is anticipated that there will be positive enhancements to GI. However, it is acknowledged that the benefits will take time to establish and become fully functional.
- 3.71 Additionally, the quarrying at the Dodford mineral site provides opportunity to further support to GI should the site come forward as part of the restoration of the site.
- 3.72 It is important to note that the layout of the development has been designed in an iterative way with consultation between the ecological assessment and planning teams. It has consequently been shaped to avoid the most species-diverse habitats,

to make maximum use of agricultural land with low ecological diversity and to minimise all impacts on protected species.

### **Waste and Waste Water**

- 3.73 Chapter K of the SES considers the potential impacts of the proposed Development in terms of Waste and Waste Water taking account of the recent revisions to the scheme. Chapter K is also informed by further discussions that have taken place with statutory consultees, allowing a more robust consideration of cumulative impacts.
- 3.74 The assessment of possible environmental effects in terms of Waste and Waste Water now comprises all of the unamended material contained in Chapter K of the original ES (February 2007), and the SES.
- 3.75 It is considered that the Danetree Village development and Dodford Minerals Extraction proposals are not in conflict with each other. There are opportunities which, subject to the detailed design and programming of the schemes, could be explored to the mutual benefit of both schemes and the environmental benefit of all.
- 3.76 No adverse impacts that cannot be mitigated are anticipated as a result of the combination of the Danetree scheme with the other urban extension proposals.

### **Socio-Economic Assessment**

- 3.77 Chapter L of the SES assesses how proposed changes to the Development will affect the local and regional economies during the scheme's construction and operation in terms of employment generation, commuting patterns and the local labour market, taking account of recent revisions to the scheme.
- 3.78 The assessment of Socio-economic impacts now comprises all of the unamended material contained in Chapter L of the original ES (February 2007), the information contained in the Stage 1 interim response to WNDG's request for 'further information', and the SES.
- 3.79 This chapter of the SES was only required to consider changes to the employment space as a result of the revisions to the Master Plan.
- 3.80 The reduction in employment space provision in comparison with the original proposal is not considered likely to give rise to any significant additional adverse impacts.

Furthermore, the proposals will have a positive economic impact on Daventry and its labour catchment area through substantial creation of new jobs, along with a scale of housing that will increase labour supply. While the scale of housing and job growth will be substantial for a town of the scale of Daventry, these effects will be reduced by the proposed development programme which will be phased over a 16 year period.

