

## 14 SUMMARY

### 14.1 INTRODUCTION

14.1.1 Heyford Investments LLP (the "Applicant") is seeking to obtain full planning permission for a 297 residential dwelling development (the "Proposed Development") on land to the south-west of Camp Road, Upper Heyford, Oxfordshire (the "Application Site").

14.1.2 The Proposed Development comprises of:

**"Erection of 297 residential dwellings (Use Class C3) comprising a mix of open market and affordable housing, together with associated works including provision of new and amended vehicular and pedestrian accesses, public open space, landscaping, utilities and infrastructure, and demolition of existing built structures and site clearance works"**

14.1.3 The planning application seeks full planning consent. Therefor the submitted plans within the wider application bundle include plans that propose the landscaping, appearance of buildings and means of access.

14.1.4 The Application Site is situated within the administrative area of Cherwell District Council (CDC).

14.1.5 This Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) which was undertaken alongside the design for the Proposed Development and various supporting technical studies which have informed the design.

### 14.2 APPLICATION SITE AND CONTEXT

14.2.1 The Application Site comprises 12.04 hectares of land at the former RAF Upper Heyford, which is located approximately 8.6km north-west of Bicester, 15.8km south-east of Banbury and 5km south-west of junction 10 of the M40, in Oxfordshire. The Application Site itself comprises land formerly occupied by the Upper Heyford American High School which is situated to the south-west of Camp Road.

14.2.2 There is an existing site access from Camp Road. Camp Road provides access west to the village of Upper Heyford and east to the B430 which in turn provides access south (Ardley Road) towards Middleton Stoney and Bicester, and north (Station Road) towards the village of Ardley and Junction 10 of the M40 beyond. Junction 10 of the M40 motorway is circa 6.3km driving distance to the north-east and provides access north towards Banbury and Birmingham, and south towards Bicester, Oxford and London.

14.2.3 The former RAF Upper Heyford site was a military base owned by the Ministry of Defence that was leased by the United States Air Force from the 1960s until 1994. The Application Site falls within the 'residential area' of the former military base, an area that provided ancillary facilities such as a hospital, supermarket, petrol station, school and sports facilities for the serving the American Air Force personnel and their families.

14.2.4 The Application Site boundary is predominately defined by a chain-link fence topped by raked anti-climb barbed wire mounted on concrete posts, to a height of approximately 2.2m, with the exception of variations to the eastern boundary where it crosses through the former sports facilities.

14.2.5 The Application Site is occupied by:

*Six rows of single-storey classroom blocks, each row generally comprising of between eight to twelve individual classroom buildings, each constructed of rendered brickwork with fibre cement/asbestos profiled sheet roof (noting that the first row of circa 12 classrooms, nearest Camp Road, has been demolished);*

*Central single-storey school building incorporating boiler house to rear, constructed of brickwork and fibre cement/asbestos profiled sheet roof with brick tower and chimney (Building 867);*

*Gymnasium (Building 886) constructed of brickwork and profiled sheets infill wall panels and profiled sheet roof;*

*Leisure Building (Building 515);*

*Interconnecting internal access roads and footpaths; and*

*Sports dug-outs (Buildings 567 and 566).*

*Other infrastructure within the Application Site includes:*

*Water tower (Building UH74) located adjacent to the Application Site's entrance to Camp Road (this has been demolished);*

*Electricity sub-station (Building UH6);*

*Water tank (Building 597); and*

*Some hardstandings including a large area to the south.*

14.2.6 The remainder of the Application Site is generally given over to the former school grounds (predominantly grass) or former sports pitches with trees located primarily along/adjacent to the Application Site's boundary to the north and west, with some trees interspersed between some of the school units. Around the Application Site's perimeter to the north and west is hedgerow.

14.2.7 There is no public access to the site. The buildings are generally in a poor state of repair with broken windows/doors, damaged render with some partial demolition/damage to structural elements; the grounds are overgrown, the internal access roads are showing signs of breaking up and several of the footpaths no longer discernable. In summary, the Application Site is in a poor state and degrading, representing a health and safety risk as well as a local detractor to the environment. The Application Site has no 'active' use but is being used for storage of materials associated with the redevelopment of the wider former military site.

14.2.8 The Application Site falls within the RAF Upper Heyford Conservation Area. There are no other statutory designations falling within the Application Site's boundary.

14.2.9 Beyond the immediate environs of the Application Site, the land is generally used for agriculture and comprises arable/grazing fields of varying size and shape with several woodland belts. There are several villages within proximity to the Application Site, including: Upper Heyford circa 700m to the west (centre to centre); Lower Heyford circa 1.7km to the south-west; the villages of Middle Aston, Steeple Aston and Rousham to the west, the nearest of which being 2.8km; Caulcott circa 1.7km to the south; Middleton Stoney circa 3.8km south-east; Ardley circa 4.2km to the north-east; and

Somerton circa 3km to the north, across the airfield. To the west (circa 1.4km) is a railway line running north-south, with railway station at Lower Heyford, and to the east (circa 3.3km) is a railway line running north-west to south-east. The M40 motorway also follows an approximate north-west to south-east orientation 4.9km. The recently constructed Ardley Energy from Waste facility is circa 3.4km to the east.

14.2.10 Outside the former military site but within the ownership of the Applicant is the sewage treatment works, located to the south-east of the residential area, and a balancing pond, which is accessible from Camp Road to the east.

### **14.3 THE PROPOSED DEVELOPMENT**

3.1.1 The EIA has been carried out with regards to a range of development parameters. These parameters ensure that the Proposed Development as assessed represents the maximum (i.e. worst-case) scenario, whilst providing some limited flexibility for changes that may arise as the scheme evolves with the benefit of subsequent approvals and/or reserved matters.

14.3.1 In summary, the Proposed Development comprises of:

- Land use;
- Demolition;
- Accommodation;
- Building footprints and maximum heights;
- Principal means of vehicle access;
- Internal vehicle/pedestrian access and parking;
- Green Infrastructure; and
- Utilities and Infrastructure. This involves the provision of necessary surface water drainage, flood risk management, and services such as energy, water and telecommunications, as well as street lighting.

### **Construction**

14.3.2 The construction programme is expected to commence January 2018, subject to gaining planning permission and the necessary approvals, taking a total of circa 3 years with completion by December 2021. It is anticipated that first occupation of residential dwellings would commence after September 2018. The details of the construction programme would be prepared by the main contractor once appointed.

14.3.3 The Applicant would prepare a Construction Management Plan (CMP) that sets out the agreed methods and procedures for construction, and standard measures and adoption of construction best practice to ensure that the risks to the environment are avoided or and/or appropriately managed. The details of the CMP would be agreed with the Council and monitored, and revised where necessary, throughout the construction phase.

### **Alternatives**

14.3.4 The main alternatives to the Proposed Developments which the Applicant has considered include:

- The 'No Development' Alternative; and
- Alternative Designs

14.3.5 The 'No Development' Alternative refers to the option of leaving the Application Site in its current use and physical state.

14.3.6 Without development the land would continue to remain in its current derelict state. In neighbouring land Cherwell District Council have approved the construction of 1,075 dwellings including the retention and change of use of 267 existing military dwellings to residential use Class C3 and other associated works and facilities including a school, playing fields and social infrastructure. Not developing the application site would result in a large derelict piece of land remaining in close proximity to a large, new, mixed use development in Cherwell Council. Although the site is fenced off and can't be accessed by the general public it is visible within the local area, and if remained in its current state would greatly detract from the perceived quality of the immediate local area and would be a detrimental effect on the local community.

14.3.7 The only 'alternatives' considered therefore relates to a early design concept plan that allocated Character Areas, the main street layout and storey heights. This progressed onto a detailed layout which added a loop road around the parameter of the site and the green landscaping and planting was improved and now offers greater ecological enhancements.

14.3.8 A Design and Access Statement (DAS) accompanies the planning application which describes the design evolution and concepts in more detail.

## **14.4 SUMMARY OF ENVIRONMENTAL BASELINE AND ASSESSMENT EFFECTS**

### **Socio Economics**

14.4.1 The Socio Economic Assessment considered the potential effects of the proposed development during both the construction and operational (occupation) phases, focusing on the availability and use of employment land and subsequent effects on employment and the economy.

#### **Baseline Conditions**

14.4.2 The Application Site comprises 12.04 hectares of land at former RAF Upper Heyford. The land was formerly occupied by the Upper Heyford American High School as well as ancillary facilities such as a hospital, supermarket, petrol station and sports facilities.

14.4.3 The 2011 Census<sup>1</sup> identified 141,868 residents in Cherwell in 2011. At a more local scale, the area assessed within the Socio-Economic study area has a population of 1,758 persons. It also indicates that the population of is younger than Cherwell District with an average age of 37.8 years compared to 38.9 years. Cherwell District itself has a younger population than England.

14.4.4 Included within the baseline assessment (60 dwellings under 13/01811/OUT, 43 dwellings under 16/00263/F and 761 dwellings under 10/01642/OUT). These 864 dwellings would accommodate 830 households based on the rate identified in the 2011 Census. Assuming the average number of residents per household in 2016 (taken from the 2014 based subnational household projections<sup>2</sup>) these 864 dwellings would be expected to accommodate circa 1,998 residents.

14.4.5 The 2014 based subnational population projections<sup>3</sup> identified that the population of Cherwell District had increased to 144,494 in 2014. These then project a further increase of 15,400 persons from 2014 to 2031.

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<sup>1</sup> Table KS101EW, 2011 Census

<sup>2</sup> July 2016, 2014-based Subnational Household Projections for England, DCLG

<sup>3</sup> May 2016, 2014-based Subnational Population Projections for England, Office for National Statistics

14.4.6 There are two schools nearby being the Park Keepers Pre School and Heyford Park Free School. The Annual Monitoring Report of the Council from April 2015 showed that 68 of 864 homes within the baseline assessment had been completed. The remaining 796 will accommodate pupils who will place demands on spare capacity. Without the remainder of these current applications, based on the current vacancy rate there would be 210 vacant places across the 14 year groups (15 per year). In the absence of more detailed information it is assumed that the level of vacancies will be consistent for each year, such that there will be 105 vacant primary places and 105 vacant secondary place).

14.4.7 The baseline position shows that should the remaining 796 dwellings when completed would produce a shortfall of 190 primary places and a shortfall of 118 secondary places.

14.4.8 The closest hospitals to the Application Site are the Bicester Community Hospital in Bicester and Horton General Hospital in Banbury. These hospitals include the provision of accident and emergency departments.

14.4.9 There is 1 GP surgery within 5 miles of the Application Site, namely Deddington Health Centre. Assuming the national averages of 1,625 patients per GP it is estimated that the 7 GPs at Deddington Health Centre could accommodate a further 222 to 277 patients each.

14.4.10 The nearest dentists, opticians and pharmacies are situated within Bicester.

14.4.11 Bicester Outlet Village and Bicester Town Centre are situated within 7 miles of the Application site and there are a number of pubs and restaurants in the surrounding villages.

14.4.12 There are two places of worship namely Cherwell Valley Benefice and The Chapel, Heyford Park. These lie within 400m of the Application Site. Other faiths are provided for in the wider area.

14.4.13 The 2011 Census identified that Cherwell showed more workers commuting out from the area than visiting with the development expected to create 1060 workers based on a 1.28 workers per household.

#### Likely Significant Effects

14.4.14 The proposed development is considered to have a **moderate positive effect** by contributing to the five-year land supply and providing for housing needs as required by the Local Plan (Part 1) throughout the plan period that will respond to the affordable housing needs over a more than local area.

14.4.15 The key socio-economic effects of the Proposed Development (in isolation) can be summarised as follows:

- Delivery of accommodation for a population of up to 663 persons, although a proportion of these will already live in the local area such that 347 of these people are estimated to be new to the area;
- Provision of accommodation for in-migration (both from other parts of the UK and internationally) which will result in a younger population and reduce the effects of the ageing population;
- Delivery of 90 affordable homes to contribute to current and future housing needs
- (including for shared, concealed and homeless households);
- Contribution to the deliverable land supply in Cherwell;

- Provision for existing and future housing demand and thereby support the affordability of housing;
- Delivery of housing of an appropriate size, mix and tenure to respond to local needs;
- Support for and generation of jobs in the construction sector; and
- Provision of an additional £4.2M to £8.0M worth of household expenditure annually, with the potential for this to be spent in the local economy.

14.4.16 The Proposed Development would have minor positive effects on the area by providing a much needed residential development to respond to population growth and household formation. It provides a complementary offer to the neighbouring developments, which include infrastructure and employment land. This development is in accordance with the emerging Local Plan<sup>4</sup> and is required to fulfil the growth requirements of Cherwell.

14.4.17 The Proposed Development also forms part of the new settlement for which the socio-economic effects have also been assessed. This will provide a significant number of homes with corresponding positive effects on the accessibility of the housing market, as well as providing very significant areas of employment land that will significantly reduce the need to travel as well as supporting the local economy in their own right. It will also provide a range of infrastructure to meet the needs of the new and existing residents.

#### Mitigation and Enhancement

14.4.18 Only one adverse effect was identified. This relates to educational provision. It is understood that proposals are being developed for additional educational facilities that at present these are not available for consideration.

14.4.19 These proposals may provide for the full educational needs (or more), but prior to these being available for consideration, the development is likely to require mitigation in the form of financial contributions for future educational provision.

#### Conclusion

14.4.20 Overall the Proposed Development is considered to represent a step forward in the strategy for residential development as part of the proposed new settlement within Cherwell.

#### **Transport and Access**

14.4.21 The Transport and Access Assessment considered the potential effects of the Proposed Development on traffic and access in relation to car and non-car users (pedestrians, cyclists and users of public transport) as well as the potential for users to experience separation, fear and intimidation and diver delays, specifically with regards a number of key transport links.

14.4.22 The Transport and Access Assessment was carried out using information contained within the separately prepared Transport Assessment (TA) incorporating a Framework Travel Plan (FTP).

#### Baseline Conditions

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<sup>4</sup> January 2014, Submission Draft of the Cherwell Local Plan and August, October and December 2014, Proposed Modifications



14.4.23 Former RAF Upper Heyford is located within a network of predominantly rural roads, many of which are unclassified, although Junction 10 of the M40 motorway is located 6.1km to the east of Land South of Camp Road, and the A4260 Banbury to Oxford road runs from north to south some 4.7km west. The Application Site is currently accessed via Elgin Street, which is on the western side of Camp Road close to the junction with Somerton Road.

14.4.24 Camp Road forms the arterial route through the southern part of former RAF Upper Heyford. The former runway, taxiway and employment buildings associated with the Flying Field, as well as the former officers' mess (the new free school), lie to the north of Camp Road whereas the existing residential and auxiliary buildings lie to the south. The previously consented housing will be located both to the north and south of Camp Road. The Application Site lies to the south of Camp Road. Camp Road is restricted to a 30mph speed limit along its length. Street lighting is provided and pedestrian footpaths are present along its length, although not all of the footways have been formally adopted and are therefore not maintained at public expense by the local authority. Camp Road connects the Application Site to Upper Heyford village and Somerton Road / Station Road to the west, and to Chilgrove Drive and the B430 in the east.

14.4.25 Somerton Road provides connections to the village of Somerton to the north and is subject to a 30mph speed limit through Upper Heyford which increases to 60mph when leaving the village. Somerton Road links to Station Road at the junction with Camp Road which continues to the B4030 which runs parallel to Camp Road and onwards to the A4260 to the west. The B430 forms a north-south link between the M40 and the A34 Trunk Road at Weston-on-the-Green, providing access to other key destinations including Bicester and Oxford. To the north the B430 terminates at Junction 10 of the M40 immediately north of the village of Ardley. The road is subject to a 60mph speed limit which decreases to 40mph through Ardley. To the south the B430 terminates at the A34 Trunk Road. The road is subject to a 60mph speed limit until it reaches the village of Weston-on-the-Green where it decreases to 40mph through the village. The B430 meets the B4030 at a staggered crossroads in Middleton Stoney, located around 3.0 kilometres to the south east of former RAF Upper Heyford.

14.4.26 Camp Road provides walk and cycle access from the main entrance of the Application Site towards Upper Heyford to the west, providing commuting, education and leisure travel opportunities for walkers and cyclists. It is well lit with footpaths towards Upper Heyford. There are also a number of PRoW that cross the wider Heyford Site. These can be seen on the figure below that shows the existing and consented public transport and walking/cycling provision. The nearest railway stations are Heyford, located in the village of Lower Heyford (2.8km from the Application Site), and Bicester (10km from the Application Site). Heyford Railway Station is served by direct trains to key destinations, notably Banbury, Oxford and London Paddington with typical service frequencies of between 90 minutes and 150 minutes on weekdays and Saturdays.

14.4.27 Environmental receptors have been identified in the study area encompassing A4260 to the west, north and south of Hopcrofts Holt junction; the A430 from the M40 junction 10 to the north, to past the Middleton Stoney junction to the south; and the extent of Camp Road from Somerton Road junction to the B430. The following sensitivities are considered applicable to the various sections:

- High sensitivity around the middle of Camp Road due to location of the school; and
- Medium sensitivity for Camp Road at the local centre, the B430 close to the villages of Ardley and Middleton Stoney and both sides of the B4030 in Middleton Stoney.

*Likely Significant Effects*

14.4.28 It is proposed that it will take till 2021 to construct all the dwellings at the Site. Therefore, Proposed Development was modelled over a four-year period (assuming construction would start in 2017). This assessment showed that there would be a rise in the level of traffic on all local road sections if the Proposed Development was built when compared to if it was not built. The only road that was an exception to this rise was on the B4030 Lower Heyford Road, which showed no increase in traffic.

14.4.29 The rise in traffic on all the road sections is 'slight' apart from the rise in traffic on the Camp Road from the Somerton Road junction to the B430 junction, and also the B430 north of this road to the M40 Junction 10. Camp Road (Minor Road) between Chilgrove Drive and B430 is predicted to experience a 19.4% growth in all traffic due to the Proposed Development.

14.4.30 The Camp Road section between Somerton Road and Chilgrove Drive has an access for the Heyford Free School. This section is considered of highly sensitivity due to this reason, but the school is not next to the road but rather at least 150m from the road and blocked by other buildings. It is therefore, not expected that a rise in traffic on the road would have adverse effect with regards to noise, etc. There will be a slight increase in traffic using this section of road, but this can be mitigated by travel planning measures and the increased opportunities for public transport access for local pedestrian and cycle movement.

14.4.31 Analysis of the available accidents data close to the Application Site indicate no accident patterns associated with the location. It is envisaged that there will be an insignificant effect on accidents and safety within the pertinent area as a result of the Development.

14.4.32 Given the nature of the Proposed Development, hazardous loads are not expected either during its construction or operation. It can therefore be seen that the Proposed Development does not have any concerning implications related to traffic and access, but mitigations are required to ensure that the local road network can assimilate the predicted increases in traffic flows.

**Mitigation and Enhancement**

14.4.33 The following mitigation measures have been identified and will be implemented as part of the Proposed Development or are already agreed for implementation as part of the previously consented development:

14.4.34 Three new principle site accesses will serve the site. Two will be located on Camp Road to the east and west of Eglin Street, and the third will be located off Izzard Road, which will also lead to Camp Road. Each of the three principle accesses will take the form of priority T-junctions.

- In addition to the principle site accesses, a further 4 small cul-de-sac access points will provide access to 6 dwellings each.
- The TA presents a mitigation package for the Middleton Stoney junction and the M40 junction 10 southern roundabout which will lead to a reduction in delays for traffic at the junctions.
- The implementation of a Construction Environmental Management Plan (CEMP). This will reduce the effects of the demolition work on the local environment in terms of delays on the local road network. A CEMP will mitigate against the delays and severance that may result from the construction traffic including HGVs.



*Improvement of Walking, Cycling and Public Transport*

14.4.35 As a result of the Proposed Development, it is expected that there will be an increase of cyclists and pedestrians in the local area. Within the Proposed Development, a shared footway/cycleway will be provided along the principle internal highway network to enable pedestrian and cycle movement through the Proposed Development and to the site access points on Camp Road.

14.4.36 The existing footpath running adjacent to Camp Road will be retained for pedestrian access which will connect to the shared footway/cycleway east of the Proposed Development currently under construction. This will provide a net minor beneficial effect.

14.4.37 The Proposed Development will lead to a higher demand for public transport for residents. It is proposed to enhance the bus stops on Camp Road to improve the uptake of this mode leading to a net minor beneficial effect.

14.4.38 Travel planning to be implemented as part of the Proposed Development will help enhance the uptake of sustainable modes of transport with the resultant reduction in traffic on the local roads.

*Conclusion*

14.4.39 The Assessment has shown that the Proposed Development will have some negative effects on the local road network and therefore these need to be mitigated to minimise this effect. If the mitigations that are listed above are implemented, then the local road network can accommodate this scheme of new housing.

**Noise and Vibration**

14.4.40 The Noise and Vibration Assessment considered the potential effects on local residents arising from noise and / or vibration from the demolition and construction phases of the proposed development, and from noise following the occupation of the buildings.

*Baseline Conditions*

14.4.41 A survey was undertaken from 1 to 2 April 2014 to determine the typical background noise outside nearby residential properties.

*Likely Significant Effects*

14.4.42 The main sources of noise during the demolition and construction phase were considered likely to include site clearance, ground excavation and road construction. However, best practice measures have been recommended to further reduce noise from construction and demolition activities.

14.4.43 The construction of new development is not normally considered to be a source of vibration unless piling operations are required. It is recommended that alternative methods that do not involve driving piles into the ground using impact forces would be used.

14.4.44 The assessment shows that daytime noise would be at its highest levels on along Camp Road. Noise levels at the application site, on land proposed for residential use adjacent, as per the parameter plan, could be up to approximately 55- 60 dB LAeq,16hour.

14.4.45 For outdoor living spaces such as gardens this means the noise will exceed a desirable target of 50dB LAeq and mitigation would be required during the construction phase.

14.4.46 Once occupied, the main source of noise is considered to be road traffic. All road links would see an increase in traffic flows of less than 25%. Which would lead to a negligible change in ambient noise levels.

#### Mitigation and Enhancement

14.4.47 The assessment predicts that noise on land overlooking the main roads would exceed the desirable limit for outdoor living space such as gardens and mitigation measures will have to be put in place for gardens that have a line-of-sight with roads.

14.4.48 It is proposed that gardens are located at the rear of the dwellings in order to shield them from road noise. With this in place it is likely that no further mitigation will be required.

14.4.49 Internal noise will be limited by the use of typical thermal double glazing. The provision of standard double glazing with trickle ventilators would be sufficient to achieve the proposed internal noise criteria.

14.4.50 An assessment of plant and equipment to be used once the site is occupied should be undertaken at the detailed design stage to ensure that proposals meet the identified noise limits.

#### Conclusions

14.4.51 The assessment has demonstrated that with the incorporation of the identified measures the proposed development could be delivered with no significant effects with regards noise and vibration.

#### **Air Quality**

14.4.52 The Air Quality Assessment considered the potential effects from the construction and occupation of the proposed development with regards achieving European Limit Values or UK statutory objectives for nitrogen dioxide and particulates (i.e. fine particles such as dust), and the effect on local residents.

#### Baseline Conditions

14.4.53 The Council has not declared an Air Quality Management Area in the vicinity of the site indicating that there are no existing concerns with regards meeting the UK statutory air quality objectives. The Council routinely measures nitrogen dioxide levels adjacent to the B430 at Ardley and more recently Camp Road. The current levels are well below the relevant UK statutory air quality objectives.

#### Likely Significant Effects

14.4.54 During construction the main potential effects are dust and local increases in fine particulates. The suspension of particles in the air is dependent on a number of factors including weather conditions and construction activities. Accordingly, effects are most likely to occur when construction activities coincide with dry, windy days, and where people are located downwind and close to the activity being undertaken.

14.4.55 The assessment considered the demolition and construction activities that will be undertaken and assigned a medium risk that they would give rise to localised reductions

in air quality. In accordance with standard practice, appropriate measures were identified in accordance with the assessed level of risk. The identified measures will be included within the Construction Environmental Management Plan (CEMP) which will be agreed with the local Council before construction works start. With such measures in place the effect of dust from construction activities would not be significant.

14.4.56 Once completed, the main potential effects of the proposed development would arise from the increase in traffic on local roads. The potential for reductions in air quality arising from the increased traffic was assessed at those locations adjacent to the road network where the effects were considered most likely to occur. The effect on air quality from increased road traffic was not considered to be significant as it is not predicted that the European Limit Values or UK Air Quality Objectives would be exceeded.

#### Mitigation and Enhancement

14.4.57 During demolition and construction, standard measures would be carried out to reduce the risk of dust as appropriate to the level of risk of dust occurring. These measures would be included within the Construction Environmental Management Plan (CEMP) and agreed with Local Planning Authority. As stated, with such measures in place the effect of construction dust would not be significant.

14.4.58 The effects of increases in traffic were assessed as not being significant and therefore no further measures were proposed.

#### Conclusions

14.4.59 There are no air quality constraints to the Proposed Development.

### **Water Resources and Flood Risk**

14.4.60 The Water Resources and Flood Risk Assessment considers the potential effects of the proposed development on water quality, flood risk, the drinking water supply and foul drainage. The assessment was based on the findings of a separately prepared Flood Risk Assessment.

#### Baseline Conditions

14.4.61 It is understood that the Proposed Development site currently drains either via a pipe network or via overland flow to a watercourse that originates from the south of the site.

14.4.62 The Environment Agency's (EA) flood maps show that the site is entirely within an area of low risk of flooding (Flood Zone 1). Information gathered from the British Geological Survey (BGS) shows the site to primarily consist of limestone and assumed to have poor ability for water to drain through the soils.

14.4.63 The site is located in the upper region of the Cherwell water catchment (area of land receiving draining water). In general, the Cherwell catchment is rural with some urban areas including the towns of Banbury to the north of the site and Oxford to the south. Water quality is assessed with regards the ecological status, as set out within the River Basin Management Plan (RBMP) for the catchment. The watercourse immediately downstream of the site is not identified within the RBMP, although the watercourse into this stream flows, Langford Brook, is identified as having a 'Moderate' ecological status. This is considered to be similar to the rest of the Cherwell catchment, although Langford Brook is identified as having a high concentration of phosphates.

14.4.64 The existing combined drainage network is owned and operated by the Applicant. The Applicant employs Kelda Water to oversee and manage the existing foul water treatment works on their behalf and to ensure that it is fit for purpose and complies with the necessary consents and regulations.

14.4.65 With regards drinking water, the site is within an area that is supplied by Thames Water. Thames Water records indicate that there are mains services within Camp Road.

Likely Significant Effects

14.4.66 The proposed development incorporates an outline surface water management strategy which seeks to address the impacts of the proposed development upon the both water quality and flood risk. The strategy is presented within the Flood Risk Assessment and in summary comprises the following:

- That built development is located entirely outside of any identified flood risk areas.
- Measures to reduce the speed at which surface water runs off the site so it matches the existing 'greenfield' rate (i.e. the current rate) to ensure flood risk downstream is not increased.
- Measures to manage the surface water running off water to protect water quality.

14.4.67 The construction works for the proposed development has the potential to introduce pollution from construction plant and vehicles, and silt (fine particles) into the surface water running off the site and potentially draining into the nearby stream. However, the construction process will allow for the management of surface water using temporary ponds/lagoons and pollution control systems, such that the potential for effects to water quality during construction would not be significant.

14.4.68 The construction works have the potential to produce a temporary change in the way surface water runs off the site before the proposed surface water management scheme is installed. In particular the removal of vegetation and compaction of the soil has the potential to increase the speed at which surface water runs off the site. This could potentially increase flood risk. However, measures would be put into place to control the surface water such that there would be little/no effect.

14.4.69 Whilst heavy localised rain has potential to cause some localised flooding within the site, the risk of flooding is considered to be low.

14.4.70 Once completed and occupied, surface water running off the site could contain urban pollutants that could enter the nearby stream, increasing pollution in the stream and further downstream. The surface water management strategy proposes to use a range of 'Sustainable Urban Drainage System' (SuDS) measures to remove any potential pollution.

14.4.71 The on-site flood risk of the completed development and the end users is likely to low if at all, given that all buildings would be entirely within an area of low probability of flooding and would involve measures set out in the surface water management strategy.

14.4.72 Consideration has been given to the potential for increasing the risk of flooding in the surrounding areas. However, the surface water management strategy includes for the temporary storage of additional surface water before leaving the site and limits the speed at which water would flow. Therefore, it is considered that there is little/no risk of increasing flood risk off-site.

14.4.73 The proposed foul sewers will be constructed in accordance with industry standards and would not therefore have a significant effect. However, it may be necessary to carry out upgrades to the foul network to the north of Camp Road and reduce the amount of foul sewerage going into the treatment works.

14.4.74 The proposed development would also be constructed to industry standard to reduce the water demand from occupiers of the employment units.

#### Conclusions

14.4.75 The Flood Risk Assessment including the surface water management strategy concluded that the proposed development would be acceptable and does not have a detrimental effect on the surrounding area when compared to the existing use of the Application Site.

#### **Ground Conditions and Contamination**

14.4.76 The Ground Conditions and Contamination Assessment considered the potential for significant effects with respect to the existing ground conditions and contamination and their effects on human health and the environment.

#### Baseline Conditions

14.4.77 The Application Site is part of the former RAF Upper Heyford airbase and currently comprises a former school and associated buildings. The school was previously in use when the airbase was occupied by the United States Air Force (USAF) and is now in a state of disrepair. A pipeline which was used to supply the NATO POL on the flying field to the north crosses the east of the Application Site. A surface water oil interceptor is also located at the southern boundary.

14.4.78 The earliest historical map from 1884 – 1885 shows the Application Site is used as agricultural farmland. This use continues until the early 1900's. It is known that the construction of former RAF Upper Heyford began in 1916, Upper Heyford was occupied by the Royal Air Force (RAF) throughout World War II (WWII), although the aerial photograph from 1945 does not show the land to be occupied. By 1966 the Application Site is referred to as RAF Upper Heyford and roads and taxiways associated with the flying field to the north are located across the Application Site. In 1974 the Application Site was subject to further development with the building of housing, a water tower, electricity substation and boiler house for families living at the airbase. It is known above ground storage tanks (AST's) and underground storage tanks (UST's) were present at this time. By this period the Application Site and former RAF Upper Heyford were occupied by USAF. The wider airbase underwent further expansion in 1982 and the houses were converted into the 'Upper Heyford American High School' with associated playing fields and baseball pitches. In 1993 operations at the airbase were closed, and the school was no longer occupied. The school buildings, water tower and electricity substation were still present on the 2006 and 2014 Ordnance Survey (OS) maps, but are now in state of disrepair. The POL system and supply pipeline has been cleaned and made safe by this time.

14.4.79 Geology maps and site investigations indicate that the site lies over a series of interbedded Limestones, Sandstones and Mudstones, and Siltstones of varying thickness which lies over a significant thickness of Mudstone.

14.4.80 The site comprises a two underground water bearing layers (aquifers) separated by a Mudstone/Siltstone layer of a lower ability to allow water to pass through. A small stream (Gallo's Brook) adjacent to the southern boundary of the Application Site issues

into the River Cherwell. Potential contamination sources on the Application Site includes the likelihood of made ground across the Application Site.

14.4.81 Sources of potential contamination included pollution present within the soils, beneath the existing structures and paved areas. It is considered that human health, property and the below ground and surface waters would be the most likely affected by pollution. Ways in which contamination could occur include direct contact, breathing in and eating, movement of contaminants through soils and contaminated water running off the site and spillage.

#### Likely Significant Effects

14.4.82 It was determined that there would be a negligible effect to construction workers from the demolition and construction works as workers would be required to comply with health and safety regulations and use appropriate personal and respiratory protection equipment.

14.4.83 The general public nearby the site may be exposed to contaminated dust during demolition and construction works. A Construction Environmental Management Plan (CEMP) will be prepared setting out the actions to reduce dust escaping the site. This would ensure that at worst the likely effect would be indirect, short-term and not significant.

14.4.84 Surface and below ground waters may be affected during the demolition and construction phase with the introduction of fuels and chemicals to the site and the lifting of ground slabs exposing previously covered (contained) contamination. Without appropriate measures in place, this effect could be indirect short-term and significant. The CEMP would include measures for the appropriate storage of fuels and chemicals to manage this risk.

14.4.85 Due to the site being part of a former airbase and having potentially contaminating sources in both the soils and surface and ground waters, it is considered that once occupied the likely contamination effect on future users as a result of direct contact, breathing in of dust and vapours would be direct, long term, permanent, adverse and significant in the absence of any controlling measures.

Furthermore, due to the site being part of a former airbase there is potential that, without any controlling measures, contaminating sources could affect surface and below ground waters, vegetation (trees, grass and other planting) and the building structures. This would arise as a result of the contamination, which was previously capped by existing buildings or hard surfaces, being exposed. Therefore, the effect would be permanent, direct, long term and significant in the absence of any controlling measures.

#### Mitigation and Enhancement

14.4.86 Before any demolition and construction work starts, it is proposed that site investigations be carried out to inform a detailed strategy to identify and remedy, where necessary, contamination. The strategy would identify ways to break the link between any sources of contamination and those likely to be affected through appropriate control measures. The use of such control measures would reduce the risk of contamination to negligible.

#### Conclusions

14.4.87 Following the implementation of appropriate control measures the effect of contamination from the proposed development on the environment and future users would be reduced to acceptable levels.



**Landscape and Visual Amenity**

14.4.88 The Landscape and Visual Amenity Assessment considered the potential effects of the proposed development on the character and features of the landscape, and effects on views from a number of publically accessible locations.

**Baseline Conditions**

14.4.89 The Proposed Development is located in the south western corner of the former Air Base, in the area known as School Huts. Kirtlington Road forms the western edge of the Application Site with Camp Road abutting it to the north and Izzard Road to the east. Access to the Proposed Development would be from Camp Road and Izzard Road.

14.4.90 The character of the site is influenced by the mature hedgerows along its western boundary, mature trees in its western and northern part and non-native evergreen belts of trees in the south eastern corner. The site is relatively enclosed by these trees and hedgerows with limited views out to the west, towards the surrounding countryside. To the east, views of the recently built houses (Bovis Homes) can be seen. Views of the open countryside can be gained mostly to the south, though these are influenced by the chain link fence surrounding the former Air Base.

14.4.91 Three Landscape Character Areas (LCAs) have been considered, plus one that is described within the Oxfordshire Wildlife and Landscape Study. The Application Site and land around it lies within the area identified as Upper Heyford Plateau LCA/Farmland Plateau LCA. The Cherwell Valley LCA is the nearest adjacent LCA and is located approximately 0.3km away to the west. Other LCAs have not been considered due to distance from the Application Site.

14.4.92 The character of both the Upper Heyford Plateau LCA and the Farmland Plateau LCA is influenced by the former Air Base. Elsewhere these LCAs are characterised by elevated and generally simple topography, agricultural land use, sparse settlements and limited tree cover

14.4.93 Cherwell Valley LCA lies to the west, and broadly speaking covers the floor and upper slopes of the River Cherwell valley. It is characterised by its topography and small settlements. Tree cover is frequent, but due to the changes in levels distant views can be gained locally.

14.4.94 Those persons likely to gain views of the proposed development would be the users of public rights of way and road users in the vicinity, such as Camp Road, Izzard Road, Kirtlington Road and The B4030 Lower Heyford Road. Upper Heyford is the closest settlement outside of the former Air Base, located to the west some 0.3km away. Other settlements are more distant and are screened by trees and hedgerows.

14.4.95 There are a number of historic parks located in the surrounding landscape, mostly to the south and south west, with Rousham Park (Grade I) being the most relevant. Other visual receptors, such as cyclists and those travelling along railway lines have also been considered.

14.4.96 A number of viewpoints have been identified in consultation with Cherwell District Council's Landscape Officer at varying distances and locations to represent different type of receptors.

**Likely Significant Effects**

14.4.97 The landscape and visual effects during construction and operational phases of the Proposed Development has been considered. The effects upon the landscape

elements found within the Application Site, the surrounding LCAs and a number of identified visual receptors and viewpoints have also been assessed.

14.4.98 The effects of the Proposed Development upon the character of the Upper Heyford Plateau LCAs during the construction stage have been assessed as negligible and not significant. The operational phase would also result in negligible effects with the character of this LCA prevailing.

14.4.99 The Proposed Development would have little effect upon the landscape elements such as trees. The visibility of the Proposed Development is also likely to be limited to close range views and the overall appreciation of this landscape would be largely unchanged with the buildings within the former Air Base providing an appropriate context. The Application Site already includes buildings such as the derelict school huts, roads, lighting and signage.

14.4.100 The Cherwell Valley LCA has been assessed as subject to minor indirect landscape effects both during the construction and operational phase of the Proposed Development; there would be no direct physical effects. The appreciation of this landscape would be largely unchanged and the overall character would continue with only limited areas where the Proposed Development would be visible.

14.4.101 The Proposed Development would help to fulfil some of the Oxfordshire County Council guidelines as it would add to the tree belt around the former Air Base and concentrate new development in and around the existing Heyford Park settlement, resulting in minor beneficial effects upon this character area.

14.4.102 During the construction stage receptors at eight viewpoints would be subject to negligible and/or negligible (no change), including receptors at Rousham Park. Receptors at four viewpoints would experience moderate significant effects. Three viewpoints which experience close proximity views of the derelict buildings and underused site would experience neutral effects as this is replaced by construction activities, being of neutral significance.

14.4.103 During operation, viewers at 8 viewpoints, including Rousham Park, would be subject to no change or negligible effect, which would be not significant effects.

14.4.104 Viewers at two viewpoints would experience moderate and significant effects at Year 1, reducing to minor or negligible at Year 15 with the retained vegetation along the western boundary providing some limited screening. Viewers at two viewpoints would be subject to major and significant effects due to close proximity. Such effects would be similar at Year 1 and 15 for one of these viewpoints, but new landscape planting long the southern boundary of the Application Site would reduce the effect to moderate and significant for the other viewpoint at Year 15.

14.4.105 Neutral effects at Year 1 would rise to major beneficial and significant effects for receptors at three viewpoints due to the replacement of derelict buildings on the brownfield site with high quality residential development and Green Infrastructure.

14.4.106 The potential for cumulative visual effects to arise between the Proposed Development and the Stage 1 and Stage 2 cumulative schemes varies according to the relationship between the sites and any buildings or vegetation that lies between them. Cumulative sites in proximity to the Application Site or those south of Camp Road are likely to give rise to the most notable effects upon viewpoints that lie within close range

14.4.107 Two representative viewpoints would experience cumulative major to moderate temporary effects during construction, although this would be offset to some degree by

beneficial effects arising from the Application Site and other brownfield sites being redeveloped.

14.4.108 During operation, one viewpoint would experience major effects, and one viewpoint would experience moderate cumulative effects in relation to the Proposed Development, although such effects would lessen over time as landscape proposals reach maturity. Again these effects would be offset by major beneficial effects arising from the comprehensive redevelopment of brownfield land within the former Air Base.

#### Mitigation and Enhancements

14.4.109 The proposed tree belts and groups of trees that will be planted along the boundaries of the Application Site would tie-in with existing boundary planting outside of the site and in doing so will meet Oxfordshire County Council Landscape Strategy guidelines.

14.4.110 Landscape features, that are to be kept will be protected throughout the construction phase.

14.4.111 Construction compounds will be sensitively sited to limit or reduce their visibility from the surrounding areas. The use of site hoardings will be considered in key locations to reduce or remove sight of the works from nearby receptors.

14.4.112 The Proposed Development will be carefully considered to reduce its visual appearance and help integrate it into the landscape. Native tree and shrub planting will be considered to provide high quality designed open space.

#### Conclusions

14.4.113 In summary, the Proposed Development is appropriate to the character of the local landscape and of the site and offers suitable landscape mitigation measures in terms of visual amenity. Certain high sensitivity receptors such as those travelling along the public footpath between Upper Heyford and the B4030 would experience a higher level of effects but these would be few and would generally be limited to those close to, but separated from, the Application Site by agricultural land. It also has to be remembered that this site contains derelict structures that have worsened since development began on the wider area of the former Air Base. Their removal from the site will be a significant beneficial gain to receptors immediately adjacent to the Application Site and users of the local area and the Landscape Character Area in which the former Air Base lies.

#### **Ecology and Nature Conservation**

14.4.114 The Ecological and Nature Conservation Assessment considered the potential significant effects on legal and locally protected ecological sites, valued habitats for wildlife and protected species.

#### Baseline Conditions

14.4.115 The Application Site was surveyed in May 2015 using methodology recommended by Natural England, with update surveys undertaken in June 2016. The Application Site is not subject to any statutory nature conservation designation. The nearest statutory nature conservation designation is located approximately 2.9km to the north-east of the Application Site, whilst the nearest non-statutory nature conservation designation is located approximately 0.8km to the west of the Application Site. These and other designations are separated from the Application Site by development and open countryside.

14.4.116 The trees and hedgerows associated with the Application Site are considered to be of low to moderate ecological value at the local level, whilst all other habitats including buildings, hard-surfacing, semi-improved grassland and recolonising ground are deemed to be of low to negligible ecological value at the site/local level. The habitats within the Application Site provide opportunities for bats, Badger, Great Crested Newts, reptiles and nesting birds.

14.4.117 Three bat feeding perches were recorded within three buildings within the Application Site, and are used by common species on an infrequent basis and are therefore of low conservation significance. In addition, foraging/commuting activity was low and limited to a few registrations of Common Pipistrelle. Overall, the Application Site is considered to be of low value for bats at the local level.

14.4.118 No Badger setts are present within the Application Site, although it affords foraging potential and mammal paths indicate Badgers roam through the Application Site. Overall, the Application Site is considered to be of low value for Badgers at the local level.

14.4.119 A single waterbody is present within the Application Site and a second waterbody lies off-site 55m to the east. No Great Crested Newts have been recorded. The Application Site supports suitable terrestrial habitat, although the Application Site is separated from the nearest known breeding population by existing development. Overall, the Application Site is considered unlikely to support Great Crested Newts, although there is possibility they migrate through the Application Site on occasion, and therefore the Application Site is considered to be of low value to Great Crested Newts at the local level.

14.4.120 Suitable reptile habitat is present within the Application Site, although no reptiles have been recorded during the surveys. Accordingly, the Application Site is considered to be of low value to reptiles at the local level.

14.4.121 The Application Site habitats provide nesting opportunities for birds, such that overall, it is considered to be low value for birds at the local level.

#### Likely Significant Effects

14.4.122 The nearest ecological designations are separated from the Application Site by existing development and the open countryside, and therefore no likely significant effects on the designations are anticipated from the Proposed Development.

14.4.123 The Proposed Development will result in the loss of approximately 2.6ha of semi-improved grassland, recolonising ground, and a 10m section of hedgerow, as well as all the buildings, hard-surfacing and amenity planting areas. The hedgerows and trees associated with the northern and western boundaries will largely be retained.

14.4.124 Prior to mitigation, general construction effects on habitats are anticipated to be at most minor adverse at the local level, and temporary over the short term. Prior to mitigation, general operational effects on habitats are anticipated to be at most minor adverse at the local level, and permanent.

14.4.125 Due to their legal protection, protected species have been considered irrespective of the value level, and safeguarding measures are proposed.

14.4.126 During construction works, there is potential for any feeding/flying bats to be disturbed through the use of lighting (although some lighting already exists on and around the site). Three feeding perches will be lost, as will a very short section of hedgerow with trees. Prior to mitigation, effects on bats are anticipated to be minor

adverse at the local level, and temporary during construction over the short term, and minor adverse at the local level, and permanent during operation.

14.4.127 During the construction works, there is potential for the movement of any Badgers through the Application Site to be disrupted. In addition, in terms of operational effects, the Proposed Development of the Application Site will result in the loss of suitable foraging habitat. Prior to mitigation, construction effects on Badgers are anticipated to be minor adverse at the local level, and temporary over the short term, and not significant during operation.

14.4.128 With regard to Great Crested Newts, the on-site waterbody will be lost to the development, as will suitable terrestrial habitat. However, given the distance and separation of the Application Site from the nearest known breeding pond, Great Crested Newts are unlikely to occur within the Application Site, and therefore no likely significant effects on this species is anticipated from the Proposed Development.

14.4.129 During construction works there is potential for the movement of reptiles to be disrupted, and for harm to reptiles to occur during works without mitigation in place, whilst retained areas of suitable habitat could also be adversely affected. In terms of operational effects, a proportion of habitats that afford limited opportunities for foraging, shelter and movement will be lost. Prior to mitigation, effects on reptiles are anticipated to be minor adverse at the local level, being temporary over the short term during construction, and permanent during operation.

14.4.130 The proposals will result in the loss of the buildings and vegetation, which would reduce general nesting opportunities. There is also potential for nesting birds to be disturbed during the construction works. Prior to mitigation, effects on birds are anticipated to be minor adverse at the local level, and temporary over the short term during construction and permanent during operation.

#### Mitigation and Enhancement

14.4.131 Best practice in line with the current British Standard for tree protection will be followed during construction to safeguard retained habitats, whilst advice issued by the Environment Agency will be followed to safeguard against any potential soil or water pollution during construction.

14.4.132 Existing buildings will either be demolished at a time of year when bats are unlikely to be using the roosts, or subject to a careful dismantling by hand and under ecological supervision. Replacement roosting opportunities will be incorporated within the Proposed Development. Following mitigation, construction effects on roosting bats are not anticipated, with operational effects on roosting bats anticipated to be minor adverse to not significant at the local level, and permanent.

14.4.133 Measures will be taken to minimise light-spill onto retained habitats during construction. Any new lighting scheme for the Proposed Development will be sensitively designed to minimise lighting of boundary vegetation, where appropriate. New hedgerow planting will maintain connectivity of flight paths across the Application Site. Following mitigation, construction and operational effects on foraging/commuting bats are anticipated to be neutral.

14.4.134 Measures will be undertaken during construction to avoid disturbance and harm to Badgers that may use the site. The landscape planting will include fruit and nut bearing plants to maintain foraging interest at the Application Site, whilst green open space will be retained to enable Badgers to move around the Proposed Development. Following mitigation, construction effects on Badgers are anticipated to be neutral,

whilst operational effects on Badgers will be minor beneficial at the local level, and permanent.

14.4.135 Habitats will be managed prior to construction to safeguard reptiles, even though they have not been found within the site. Following mitigation, construction effects on reptiles are anticipated to be neutral, and operational effects are anticipated to be minor adverse at the local level, and permanent.

14.4.136 Building demolition and site clearance will be undertaken outside of the nesting season (i.e. outside March to August inclusive) or if within the nesting season, conducted by a suitably qualified ecologist. As an enhancement, bird boxes will be incorporated within the Proposed Development to provide new nesting opportunities for birds. Following mitigation, construction effects on birds are anticipated to be minor adverse at the local level, and temporary over the short term. Prior to mitigation, operational effects on birds are anticipated to be minor adverse to not significant at the local level, and permanent.

#### Conclusions

14.4.137 In conclusion, based on the evidence obtained to date from ecological survey work and the implementation of the safeguards/mitigation described above, it is concluded that ecological designations, habitats of nature conservation interest or protected species will not be significantly harmed by the proposals.

#### **Archaeological and Cultural Heritage**

14.4.138 The Archaeological and Cultural Heritage Assessment considers the potential effects on historic buildings and structures, the historic landscape, and potential archaeology.

#### Baseline Conditions

14.4.139 The potential for the Application Site to contain archaeology from deposits from the Palaeolithic period is very low as the Limestone upland on which former RAF Upper Heyford stands is likely to have been eroded away.

14.4.140 Similarly, the potential for the Application Site to contain significant archaeological deposits of the Mesolithic period is very low, although there is a higher potential for artefacts of this period to remain in the plough/top soils.

14.4.141 Despite the presence of Neolithic features at nearby Steeple Aston, there are no archaeological features and artefacts within the Application Site and Study Area. In addition, the overall lack of Neolithic evidence to the east of the River Cherwell suggests a low potential for archaeology of this period to be discovered within the Application Site.

14.4.142 There are fewer recorded Bronze Age sites to the east of the River Cherwell than to the west, but there is a higher potential for Bronze Age archaeology to occur. Therefore, there is an uncertain but moderate potential for Bronze Age archaeology within the Application Site.

14.4.143 There is a very high potential for evidence of Iron Age settlement to be present within the Application Site. Iron Age ring ditches have been found in the Flying Field to the north and evidence for settlement has been found throughout the Study Area.

14.4.144 Many of the enclosures identified as being potentially Iron Age in date within the Study Area may well have continued in existence into the early Roman period. The



Roman Road, Port Way, which forms the western boundary of the Application Site, is well known and is likely to have attracted settlement and burial in places along its length and there may be evidence for the road itself below ground within the Application Site.

14.4.145 The majority of the surrounding villages were in existence by the 11th century. It is therefore likely that these were the main settlement sites throughout the medieval period, and as such it is unlikely that there were additional settlements within the Site. During the later medieval and post-medieval periods, the Site probably lay within one of the communal open fields of Upper Heyford, used for arable purposes. It is unlikely that there would be settlements dating to these periods on the Application Site, although the finds to the south east of the Flying Field may suggest an unknown early settlement nearby. The 19th century maps show the Application Site as a field with no development upon it until the RAF airfield was laid out before the Second World War.

14.4.146 The historic villages of Upper and Lower Heyford date from the medieval period, and contain a significant number of historic buildings dating from the medieval centuries to the 19th century. These comprise churches, farmhouses, cottages and other dwellings, many of them listed buildings, and occur both in compact village streets and linear extensions of the villages. The villages are in conjoined conservation areas that also include Rousham.

14.4.147 Rousham is one of the most renowned English designed landscapes, and of outstanding importance. On the north side of the house overlooking the Cherwell valley, a more formal garden by Charles Bridgeman of the 1720s was transformed by William Kent in the 1730s. It has come to be seen as the quintessential English garden and is a Grade I registered park and garden.

14.4.148 The history of RAF Upper Heyford is a complex story of development from an early RAF airfield of 1916, through expansion as a bomber base in the 1920s and developed and extended in the 1930s period of re-armament, and then fully used during World War II for training and bombing operations. The wider RAF Upper Heyford site is a Conservation Area.

14.4.149 The use of the RAF Upper Heyford site during the various episodes of the Cold War, and its use predominantly as an American Airbase, resulted in some of its most remarkable and enduring features of 'hardened' buildings capable of surviving aerial bombardment, and the special requirements of intelligence gathering and storage of nuclear weapons.

14.4.150 The Application Site was originally the site of a late or post-war barracks, which was used for Prisoners of War before becoming the Upper Heyford High School.

#### Likely Significant Effects

14.4.151 Whilst the details of development have yet to be finalised the impacts from the Proposed Development likely to affect the archaeological heritage resource are removal of buildings and existing foundations/hardstanding on the Application Site; and construction of housing, insertion of services and any landscaping.

14.4.152 Housing will be 2-3 storeys high, will not have basements, but will have strip foundations. No significant earth moving or landscaping is proposed. Drainage trenches will be excavated and it is likely that topsoil will be stripped across the Application Site prior to construction. The topsoil stripping, and the excavation of the footprints of the houses and the drainage trenches will all impact upon any archaeological remains present.

14.4.153 There are no known sites of significant archaeological interest within the Application Site, although remains of the Port Way Roman Road may extend into the western strip of the Site. Remains of the Roman Road would be of medium sensitivity depending on its survival and extent. If affected by the Proposed Development, below-ground impacts on any remains may be large and may result in its total destruction in this area. However, given that only one small section of a much longer road will be affected, the impact is considered overall to be moderate leading to a moderate adverse effect.

14.4.154 Remains associated with the surfaced areas of the 1920s airfield were present on the Application Site, but it is likely these were removed prior to the 1980s development. If any remains did survive they would be of negligible sensitivity and the effect upon them would be none.

14.4.155 It is possible that along the whole route of Port Way as yet unknown sites and finds may be present dating from the Roman period, as cemeteries/burials and buildings were often located along these roads.

14.4.156 .The whole Application Site has a high potential to contain deposits relating to settlement dating to the Iron Age and Romano-British periods. The evidence for this relates to the large amount of such sites seen in the Study Area.

14.4.157 There may be evidence in the Application Site from the medieval and post-medieval periods but this is likely to relate to the agricultural use of the land and whilst their sensitivity is unknown, any such remains found are unlikely to be important.

14.4.158 In areas which have been identified as relatively undisturbed, such as the majority of the Application Site below the concrete hut bases and the grassed and surfaced areas, survival of any archaeological features is likely to be good, particularly within the grassed areas. Given the unknown sensitivity of the potential archaeological remains, it is not possible to provide an assessment of the actual impact or significance of effect at this stage, and further work would be needed to define the presence and sensitivity of this resource.

14.4.159 The hedgerow running along the western side of the Application Site is 'important' using the criteria of the 1999 Hedgerow Regulations. However, this will be retained during development as the western boundary of the Application Site.

14.4.160 There are no significant impacts on Listed Buildings and Conservation Areas in Upper and Lower Heyford villages. Outside of the villages the potential visibility of the site from parts of the Conservation Area between Upper and Lower Heyford would be a minor or negligible impact of slight significance.

14.4.161 The minor effect of change in setting to the scheduled Avionics Building on the Flying Field to the north would be a slight/moderate effect, while the loss of the unlisted conservation area buildings of the former Upper Heyford High School would be no more than a slight effect.

14.4.162 The Proposed Development has the potential to impact upon the setting of the Rousham Registered Park and Garden and Conservation Area. The Landscape and Visual Assessment has identified two views from Rousham in which the Proposed Development would be visible. The Proposed Development would comprise a very small portion of these views, and would not change their overall character. As a result, the magnitude of impact of the Proposed Development upon these very high value viewpoints is considered to be negligible resulting in a minor overall effect.

14.4.163 It is not known whether the street lighting associated with the Proposed Development would be visible above the screening provided by the hedgerow running along the western edge of the application area, although it should be noted that the Application Site has existing street lighting. Were the proposed street lighting to be visible, this would cause a minor impact upon the setting of the very high value Registered Park and Garden, resulting in a moderate overall adverse effect. This would be mitigated in the design phase by the application of a sensitive design code, reducing the overall effect to minor.

14.4.164 The cumulative developments known as Stage 1 and 2 are unlikely to have a cumulative effect on the archaeology or built heritage within the Application Site and surrounds.

14.4.165 There is potential for a cumulative impact upon RAF Upper Heyford Conservation Area, which is considered to have a high sensitivity. The developments set out in Stage 1 represent piecemeal erosion of the sensitivity of the conservation area, resulting in a potential adverse effect that is greater than that of the individual developments. This would cause a minor to moderate impact on the Conservation Area, resulting in a slight/moderate adverse effect.

14.4.166 The land parcels identified in Stage 2 have a greater significance within the Conservation Area than the areas affected by Stage 1 and are a valuable element of the Cold War landscape within the Flying Field. These areas contribute to the character and completeness of RAF Upper Heyford as a whole. The cumulative effect of these developments would have a moderate impact upon the Conservation Area as a whole resulting in a moderate adverse effect.

#### Conclusions

14.4.167 There is some potential for impacts to the designated sites and Conservation Areas around the site in Upper and Lower Heyford, and Rousham, as well as to the historic features within the RAF Upper Heyford site and its own Conservation Area. The effects of the Proposed Development would have no more than slight or slight moderate effects, and concerns can mostly be met by proposed mitigation by design and recording of lost historic structures. The cumulative effect of the Proposed Development and cumulative developments outlined in Stage 1 would result in a slight/moderate adverse effect on the RAF Upper Heyford Conservation Area. The Stage 2 developments encroach into more significant parts of the Conservation Area resulting in a moderate adverse cumulative effect.

### **14.5 SUMMARY**

14.5.1 With the proposed mitigation strategies outlined within this Environmental Statement it has been determined that the residual significance of this development is not significant.