Main Campus
Masterplan

Environmental Statement:
Volume 1:
Non Technical Summary
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Non Technical Summary

Introduction

This Non Technical Summary accompanies the Environmental Statement for an Outline Planning Application by the University of Warwick in support of its Main Campus Masterplan. The Masterplan describes a framework for the development of the University of Warwick over a period of ten years, during which the gross external area occupied by the University’s facilities is expected to increase by over 17 hectares.

This Non Technical Summary provides a concise overview of the key predicted environmental effects associated with development as proposed by the Main Campus Masterplan. Full details may be found within the Environmental Statement, which provides a comprehensive description of the assessment of potentially significant environmental impacts associated with implementation of the Main Campus Masterplan, and is submitted in support of the Planning Application.

The University of Warwick

The University of Warwick was founded in the 1960s on land gifted by the City of Coventry and Warwick District. The University Estate is located to the southwest of the urban fringe of Coventry, where it spans Gibbet Hill Road, which forms the approximate administrative border between the two authorities. Since establishment of its first buildings in 1965, the University of Warwick has now developed to become a leading higher education institution and today serves approximately 19,000 students and employs in the order of 4,600 staff.
The Need for Expansion
Since its founding in 1965, The University of Warwick has become one of Britain’s leading universities. It wishes to become a universally acknowledged world centre of higher education by 2015 (its 50th anniversary), firmly in the top 50 of world universities. To achieve this requires the University to focus on the following strategic ambitions:

- **Goal 1**: to make Warwick an undisputed World Leader in research and scholarship
- **Goal 2**: to make the Warwick teaching and learning experience unique
- **Goal 3**: to make the University into an International Portal
- **Goal 4**: to enhance the University’s reputation with stakeholders in the UK

In support of these goals, the Main Campus Masterplan has been developed in order to achieve the following objectives:

- **Objective 1**: to plan for sustainable long term growth of the university to meet its strategic goals and Government objectives for higher education
- **Objective 2**: to plan for an integrated University optimising the use of its established successful campus
- **Objective 3**: to foster a ‘campus community’ where staff, students and those external to the university can come together to learn, study, research and interact to further human knowledge and understanding
- **Objective 4**: to provide a robust and flexible framework for development of the campus to meet current and future needs
- **Objective 5**: to provide residential accommodation on or near campus for a high proportion of students and an increasing number of staff to maximise their contribution to campus life
- **Objective 6**: to manage travel demand through a sustainable transport strategy to maximise accessibility of the university whilst mitigating the impact of traffic congestion on the area
- **Objective 7**: to pursue a sustainable future for the University and demonstrate long term stewardship of the environment by protecting and enhancing landscape character
- **Objective 8**: to develop further as a social and economic asset to the local community and the region, in broad accordance with governmental policy objectives

The Main Campus Masterplan – Scheme Proposals
The University of Warwick has assessed its development needs for the ten year period between 2008 and 2018. Based on the results of this analysis, the ‘Main Campus Masterplan’ has been developed to provide the framework for it to respond to this need and describes the University's proposals for development of its Main Campus over a ten year period, expected between 2008 and 2018.
The Main Campus Masterplan therefore aims to support the University of Warwick in realisation of its academic and broader institutional goals and seeks to provide the framework for the physical development of the University Estate to ensure progress towards realisation of its strategic goals.

Comprised within the Main Campus Masterplan is provision for a range of academic, social, administrative and residential facilities which are expected to contribute to meeting the University's anticipated requirements, effectively increasing the external area by in the order of 17 hectares. The Masterplan also includes provision to accommodate the range of required supporting services including utilities, transport infrastructure and proposals for landscaping and enhancing the natural environment.

Although the Main Campus includes land within both the administrative authorities of Coventry City and Warwick District Councils, historical development has focused on land to the north of Gibbet Hill Road within Coventry. While the Masterplan seeks to maximise use of its currently developed estate, it also recognises the need to maintain the architectural quality of the area and the visual appearance from surrounding residential and rural areas. While suitable opportunities for infill development are to be used, the Masterplan also seeks to consolidate development at the University Estate through balancing this with increasing the range of facilities on its land to the south of Gibbet Hill Road.

### Gross External Area Proposed (m²)

<table>
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<tr>
<th>Masterplan Provision</th>
<th>Central Campus East</th>
<th>Central Campus West</th>
<th>Westwood Site</th>
<th>Gibbet Hill</th>
<th>Total</th>
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<td>Academic: Teaching and Research</td>
<td>33,750</td>
<td>20,400</td>
<td>7,550</td>
<td>3,300</td>
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<td>Other: Arts Centre / New Initiatives / Student Union</td>
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<td><strong>81,900</strong></td>
<td><strong>9,600</strong></td>
<td><strong>2,000</strong></td>
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* Negative value for demolitions
Environmental Impact Assessment

An Environmental Impact Assessment (EIA) identifies the potentially significant environmental effects associated with a development. It comprises a series of studies, surveys and consultations in order to gain an understanding of the range of facets of the local environmental conditions, and based on this, makes an objective assessment of the potentially significant environmental impacts that may be expected as a result of development. The information generated during the EIA is compiled in an Environmental Statement which provides an objective description of the significant environmental effects of a development and the measures that should be taken to reduce or avoid these.

The regulatory framework for EIA is defined in Statutory Instrument 1999 No. 293 ‘The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999’. The EIA Regulations provide thresholds to assist in determining whether development proposals require EIA based on various criteria. The University of Warwick identified at the outset that the site exceeded the threshold requirement for Urban Development Projects of 0.5 ha, as described under Schedule 2 of the EIA Regulations, and would require EIA.

Consultation and Scoping

In accordance with the EIA Regulations, formal ‘Scoping Opinions’ on the content and approach of Environmental Impact Assessment were sought from Coventry City Council and Warwick District Council in December 2005. This request for Scoping Opinions was supported by a ‘Scoping Report’ which presented the proposed approach to the Environmental Impact Assessment and the content of the proposed Environmental Statement.

In response to the Scoping Report, and during investigation and assessment of the significant issues associated with the proposals, consultations have been undertaken with a range of statutory and non-statutory consultees, including local authorities, the former English Nature and Countryside Agency (now subsumed into Natural England), the Environment Agency and English Heritage. Comments received during this process of consultation have been taken into account during the EIA.

Ecology and Nature Conservation

In order to identify the potential impacts of implementation of the Main Campus Masterplan on ecological resources, a range of consultations, desk studies and field studies of ecological resources at the University’s Main Campus and its surroundings were undertaken during the period 2005 to 2006. Based on the findings of these studies, the intrinsic values of habitats and the ecological values of resources within, and in the immediate vicinity of, the Main Campus have been determined. In accordance with best practice guidance for Ecological Impact Assessment, the potential effects of the Masterplan on a range of habitats and protected species have been assessed.

There are no nationally designated conservation sites on or near to the Main Campus, although in the immediate vicinity are three locally designated ‘Sites of Importance for Nature Conservation’ in the form of the woodlands of Tocil Wood, the Old Brickyard Plantation and the Whitefield Coppice. A further network of wildlife corridors exists across the Main Campus in the form of hedgerows, streams and interconnecting waterbodies. Field surveys identified several species of conservation importance and protected species including great crested newts, bats, water voles and badgers, which are known to use the site. A number of bird species, listed as priorities for conservation, were also identified.
Construction activities related to implementation of the Main Campus Masterplan may result in some temporary disturbance to local ecological resources, primarily through disturbance of habitats that lie within currently rural areas to the south of Gibbet Hill Road. Nevertheless, ecological mitigation measures, which have been included within design proposals and the Landscaping Strategy, are expected to contribute to ensuring that long-term adverse impacts on protected species are not expected. The principal long-term adverse impacts are expected to be a consequence of the conversion of agricultural areas and the associated loss of nesting and foraging sites for birds, including the skylark, yellowhammer and song thrush. While this may result in a reduction in ecological value of the land to be occupied by the Main Campus, it is not expected to have a detrimental effect on bird populations of the wider area.

Long-term operation of the expanded Main Campus, as proposed by the Masterplan, is also expected to support beneficial impacts on ecological resources. The adoption of sustainable drainage features is expected to contribute to increasing the quality of aquatic habitats, while landscaping proposals would seek retention and enhancement of the established hedgerows, which act as wildlife corridors and provide a wildlife-sensitive habitat management approach. As a result, several species’ habitats are expected to experience long-term benefits, in particular those supporting populations of great crested newt and water voles.

**Landscape and Visual**

A study of the landscape value and visual amenity of the Main Campus and its surrounding area has been undertaken through site visits and reviews of landscape and planning policy documents. Based on an understanding of the current site conditions, a landscape and visual assessment has been undertaken to determine the potential effects of the proposals on the local landscape and to examine the effects on the main views of the site from a range of viewpoints in the surrounding natural and built areas.

Implementation of the Main Campus Masterplan would be expected to result in further development of built facilities on land located to the south of Gibbet Hill Road within Warwick District. In contrast with land to the north of Gibbet Hill Road, the University Estate within Warwick District still retains rural characteristics and development may affect the openness of the surrounding landscape. Nevertheless, construction of existing University facilities on Warwickshire land has already resulted in human interference in the area, which is expected to be reinforced by the proposals.
Rural land to the east of the University of Warwick is described as typical of ‘Arden Parklands’. None of the wider Arden Parklands characteristics would be expected to be removed or threatened by the development, although since Arden Parklands typically describes a rural condition, expansion of the built environment may result in an impact on the landscape by, in effect, reducing the total pool of land which shares the characteristics of ‘Arden Parklands’. Recognising the value of the local landscape, the Masterplan has been developed in parallel with a Landscape Strategy, which seeks to improve the relationship between the site and its setting by drawing on the pattern and scale of the surrounding field patterns to create a series of fields into which new buildings will be placed. The Landscape Strategy also includes for reinforcing the characteristic structure of hedgerows that encircle the Main Campus and follow the main watercourses.

In terms of the visibility of the Main Campus, it has been determined that the visual impact of the Masterplan proposals would be minimal from the majority of the surrounding rural land. The Main Campus would remain screened by the Whitefield Coppice and other local woodlands, while from the majority of surrounding residential areas, views of the University would be limited to overlooking from first floor windows of a small number of properties. From the vantage points where the development would be visible, new facilities would be seen against the backdrop of the existing University buildings and no new building would exceed the current ridgeline of the Main Campus.

The scale and distribution of new buildings proposed within the Masterplan would not be expected to significantly impact upon the character and status of the existing Main Campus. Within currently developed areas of the University Estate, the Masterplan would provide the opportunity to raise the visual quality of the Main Campus and provide a greater sense of architectural cohesion and unification.

**Traffic and Transport**

A Transport Assessment has been undertaken to assess the potential impact of the scheme on traffic and transportation patterns.

Growth of the University in line with the Masterplan over the next ten years would require a 40% increase in built area and a similar growth in staff numbers. If car parking provision and thus traffic generation for the site (which is largely influenced by car parking provision) were to increase by a similar amount then congestion would reach unacceptable levels even allowing for improvements to local junctions. However, in line with the national and local policy agenda it is proposed to limit the increase in car parking to 9% of the existing provision and to set a target to limit traffic generation to 12%.
The management of transport issues associated with the Main Campus Masterplan would be covered by a Travel Plan, which accompanies the Planning Application. The Travel Plan describes a series of initiatives to support more sustainable travel choices together with a framework for monitoring, and overseeing implementation. In order to ensure that the Masterplan can be delivered, a number of options have been developed which seek to mitigate adverse effects of traffic on the local highway network and to create a campus environment which encourages sustainable travel.

**Air Quality**

An assessment of local air quality, and the potential impacts associated with the proposals has focussed on the current air quality at, and in the vicinity of, the Main Campus. The primary effects of implementation of the Main Campus Masterplan with respect to air quality are expected to be realised in emissions of fugitive dust produced by construction activities, vehicular emissions resulting from changes in traffic patterns, and from potential emissions from permanent plant employed by the Main Campus, including those of a biomass-powered Combined Heat and Power plant.

Air quality impacts from construction of facilities included within the Main Campus Masterplan are primarily expected to result from dust nuisance caused by construction operations. Adherence to procedures described within a pre-approved Code of Construction Practice would ensure that dust-related emissions would be minimised and that nuisance associated with dust would be avoided.

Following consultation with Coventry City Council and Warwick District Council, a model to predict air quality impacts resulting from vehicular movements at, and in the vicinity of, the Main Campus, has been developed. Informed by predictions of traffic flows obtained from the Transport Assessment which supports the Planning Application, concentrations of air pollutants included within National Air Quality Objectives have been predicted for a number of sensitive locations in the vicinity of the Main Campus. Concentrations of nitrogen dioxide and fine particulates, the two main vehicular related air pollutants, have been forecast for a range of future years, based on traffic flow predictions both with, and without the Masterplan.

Findings from the air quality model indicate that in general, with the Masterplan proposals in place, air pollutant concentrations would be expected to progressively decrease in comparison to current levels. While it is predicted that implementation of the Masterplan may contribute, by 2018 to a slight increase in nitrogen dioxide concentrations at a minority of the locations, this is considered a negligible impact and all national air quality objectives and EU limit values are still expected to be met at all locations modelled. Furthermore, for all locations considered, airborne concentrations of particulate matter are predicted to decrease year-on-year.
The potential impacts of airborne emissions resulting from a biomass fed Combined Heat and Power plant have been modelled based on typical performance criteria for the plant expected. Results of modelling show that, in combination with the expected emissions of vehicular traffic, a significant increase in nitrogen dioxide levels is not expected and air quality would remain well within air quality objective levels.

Noise and Vibration

An assessment of the noise and vibration effects that may result from the implementation of the Main Campus Masterplan has been undertaken based on an understanding of the local noise environment, informed through field surveys of the ambient noise conditions. Noise and vibration effects associated with implementation of the Masterplan are expected to relate primarily to temporary noise from construction of the various aspects included. In the long-term, noise sources are expected to be associated with operational plant employed by buildings and from the increase in vehicular traffic generated by implementation of the Masterplan.

While, given the current level of detail regarding proposals, construction methods and requirements have not been finalised at this time, a construction noise assessment has been carried out based on assumed typical construction activities. With the location of current and proposed buildings, the site geography and topography, ‘noise mapping’ has been undertaken to identify potential construction related impacts on surrounding residential properties. Findings from this indicate that there would be no significant noise impacts resulting from construction activities.

Noise impacts related to changes in traffic levels caused by implementation of the Masterplan have been assessed based on predictions of traffic flows produced as part of the Transport Assessment. Findings of the assessment of 44 individual sections of road shows that only one of these sections, located along University Road, is expected to realise a moderately significant impact. This location lies at the heart of the University Estate and over half a kilometre from the nearest sensitive receptor. At all other locations, including those in the vicinity of residential and other noise sensitive properties, traffic noise impacts are not expected to be of any significance.

Permanent plant employed by various facilities developed in support of the Masterplan would be selected in order to be appropriate with the ambient noise levels of their location. Where suitably quiet plant could not be achieved, local noise screening would be applied to control noise emissions and ensure that plant noise impacts would be of no significance.
In accordance with governmental planning policy guidance (Planning Policy Guidance 24: Planning and Noise), noise levels expected as a result of implementation of the Main Campus Masterplan would not be expected to compromise the noise environment of surrounding residential areas.

**Water Resources**

A desk-based study has been undertaken to gain an understanding of water resource characteristics in the vicinity of the Main Campus. Informed by this, the water environment has been assessed in terms of its sensitivity to change as a result of measures contained within the Main Campus Masterplan. In addition, a Flood Risk Assessment of the Main Campus has also been undertaken to understand the Main Campus’ vulnerability and potential influence on flooding.

The two main watercourses at the University's Main Campus are the Westwood Brook, which flows through the Central Campus, and the Canley Brook, which flows to the south of the University Playing fields. The Main Campus also contains a number of surface water features including the Tocil Lakes, Heronbank Lakes and a number of other landscaped and natural waterbodies and ponds.

With the implementation of appropriate site management controls, construction activities are not expected to contribute to water resource impacts. The proposals would not result in the loss of waterbodies or culverting of watercourses and provision of sustainable drainage features in support of development on currently agricultural land may enhance the range of aquatic habitats.

Operation of the developed Main Campus is not expected to introduce significant polluting activities to threaten the environmental quality of water resources. Retention of newly developed areas as predominantly residential and academic uses should ensure the risk of introducing new polluting sources that may threaten the water environment is minimised.

**Ground Conditions and Contamination**

An assessment of ground conditions at the Main Campus has been undertaken in order to determine the potential for impacts in terms of ground contamination and the potential for related impacts on human health, ecological systems, agricultural land and controlled waters.
The University of Warwick

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The majority of the Main Campus is constructed on land which, prior to its development, was agricultural and undeveloped. Only at the Westwood Site is there evidence of development prior to the current use, and the extent of redevelopment prior to establishing the buildings is considered minimal. Information drawn from previous site investigations has not provided evidence of current ground contamination and recent walkover surveys have revealed the area to be well maintained and without evidence of potentially contaminating sources.

Although contamination has not been identified, there remains the possibility that construction activities may either mobilise potentially unidentified and undisturbed contamination or introduce new sources of contamination. Particular risks may be introduced through construction and excavations disturbing unknown contamination which may affect human health through ingestion or inhalation, or may migrate to other areas, particularly surface or groundwater bodies.

Measures to be employed in order to minimise the risks of contaminated land rely on adherence to a Code of Construction Practice. Such a management plan, inclusive of measures required by Environment Agency Pollution Prevention Guidance notes and other best practice advice, would ensure that activities are undertaken with due care and minimise the potential for impacts to result from disturbance of unexpected contamination or accidental ground pollution. Further environmental sampling would also be required as part of pre-construction ground investigations in order to confirm the absence of ground pollution.

Provided all appropriate and necessary mitigation measures are successfully implemented, delivery of the Masterplan is not expected to represent a risk to ground conditions at the site.

Services

An assessment has been made of the capability of the Main Campus’ current services and utilities to accommodate development proposed by the Main Campus Masterplan. As a result of the forecast electricity demand, the Masterplan includes provision for a biomass Combined Heat and Power (CHP) plant, which is proposed in order to provide on-site electricity supply and therefore require no further increase on the current authorised supply. The current district heating network would continue to be developed in order to allow contribution of heat from the biomass CHP plant to the network. Additional energy would also be saved through increased efficiency of new facilities.

Water supply and foul water drainage have also been considered and increased demands would be accommodated in agreement with appropriate service providers. Surface water drainage has been considered as part of the Flood Risk Assessment, and would be managed through adoption of sustainable drainage features.
Archaeology and Cultural Heritage

Taken as a whole, the Main Campus and its setting contain a significant amount of archaeological resources dating from a range of historical periods. An assessment of archaeological and cultural heritage resources has been undertaken to provide an understanding of the built, environmental and cultural heritage resources at the Main Campus. Informed by this, the potential impacts of the structural and landscaping proposals contained within the Main Campus Masterplan have been assessed.

Findings of this study show that the Westwood Site of the Main Campus is located on the site of a previous Iron Age settlement, with another likely to be located in the vicinity of Tocil Wood. To the east of the Main Campus the Romans constructed a major road and the site of a Roman Villa is considered to be located within the setting of the Main Campus, possibly near the Cryfield Farmhouse. Further archaeological resources dating to medieval and post-medieval periods have also been identified.

In addition to the Main Campus’ historical and archaeological resources, built heritage features, such as Cryfield Farm, Gibbet Hill Farm, South Hurst Farms, and their associated landscapes have played a considerable role in forming the basis of the University of Warwick’s rural setting and are viewed as contextually important. Within the University Estate two early buildings have also been identified as architecturally significant, and it is recommended that effects to these buildings are mitigated to the same level as is proposed for the older heritage features.

It is expected that potential impacts to archaeological and cultural heritage resources are most likely to result from sub-surface disturbance during construction and landscaping activities and limited to the Westwood Site and selected areas of Central Campus West. As a result, mitigation would be required to record and, where appropriate, preserve resources discovered during site activities. On a site-by-site basis, remote surveys would indicate the need for the provision of an archaeological ‘watching brief’ and, where necessary, intrusive surveys in order to ensure activities were undertaken with due regard to preservation of archaeological resources.

Human Population

A socioeconomic impact assessment has been made of the expansion of the University of Warwick, as proposed by the Main Campus Masterplan.

Overall, the estimated economic impact of the proposed expansion of Warwick University is positive and significant at the local and regional levels with potential net additional employment of up to 2,121 jobs in the Warwick and Coventry area and up to 3,390 jobs in the West Midlands. Another 251 full-time jobs are estimated in the construction industry during the ten year development programme. At the local level, an increase of about 30% on the existing local employment impact of the University of Warwick and about 1.02% of the existing local economically active population. The regional impact represents an increase of about 20% on the existing regional employment impact and about 0.14% of the existing regional economically active population.
Mitigation measures identified to address the range of impacts of the proposed expansion of the Main Campus are both supportive in order to realise potential positive impact and also responsive to reduce or avoid negative impacts. Most of the mitigation measures would involve continued partnership action between the University of Warwick, Warwick District Council, Coventry City Council, the various public agencies at the county and regional levels and local companies and business organisations.

The University of Warwick would need to extend its various local education, enterprise, innovation, business tourism, inward investment and community development initiatives to help maximise the potential impact of the proposed University expansion. The local authorities, other public agencies and local business organisations would need to consider how their strategies, policies and programmes could support the mitigation measures identified and how best they could work with the University of Warwick to improve integration and accessibility between the campus, adjoining areas and other deprived areas elsewhere.