

**Urban Extension  
at Church Fields  
Long Buckby Road  
Daventry**

**Transport  
Assessment  
Main Text  
Volume I**

**Stuart Michael Associates**  
Consulting Engineers

Coombe House  
Coombe Square  
Thatcham  
Berkshire  
RG19 4JF

T: 01635 867711  
F: 01635 861715  
E: [mail@stuartmichael.co.uk](mailto:mail@stuartmichael.co.uk)

**On behalf of  
Croudace Homes Ltd  
The House Trustees Ltd  
Lower Thrupp Ltd  
(the “Applicants”)**

Report Ref: R1.1075.TA

Author:: Stuart M Atkinson, Director  
B.Sc (Hons) C.Eng MICE MIHT MAPM

**December 2006**

## **COPYRIGHT**

*The contents of this document shall not be copied  
or reproduced in whole or in part without the written  
consent of Stuart Michael Associates Limited.*

*Report Ref: R1.1075.TA*

*Report Revision:7*

## **VOLUME I**

### **CONTENTS**

#### ***EXECUTIVE SUMMARY***

		<b>Page No.</b>
<b>1.0</b>	<b>Introduction</b>	<b>1</b>
<b>2.0</b>	<b>The Development Proposals</b>	<b>5</b>
<b>3.0</b>	<b>The Transport Assessment</b>	<b>20</b>
<b>4.0</b>	<b>Travel Demand Management Strategy</b>	<b>35</b>
<b>5.0</b>	<b>Transport Planning Obligations</b>	<b>52</b>
<b>6.0</b>	<b>Summary and Recommendations</b>	<b>63</b>

#### **VOLUME II (Separately)**

**FIGURES  
TABLES  
APPENDICES  
PLATES  
DRAWINGS  
REFERENCES**

**COMPUTATIONS PROVIDED on CD  
(Under separate cover)**

## 1.0 INTRODUCTION

### Background

- 1.1 Stuart Michael Associates (SMA) is advising the Applicants upon the transportation and general infrastructure requirements for the comprehensive mixed-use urban extension at Church Fields, Long Buckby Road, Daventry (“the Application Site”); **Figure SMA1 refers.**
- 1.2 SMA’s involvement in the appraisal of the Application site dates back to the research and evidence submitted to the Daventry District Local Plan Public Inquiry in May 1995 and to the submissions to the Examination in Public of the Northamptonshire Structure Plan in January/February 2000. Further studies and detailed assessments have been undertaken by SMA during the review of the Local Plan (2002/3), the examination of and adoption of the Milton Keynes and South Midlands (MKSM) Sub-Regional Strategy and subsequently during in the course of preparing the Planning Application.
- 1.3 The MKSM sub-regional strategy (March 2005) has identified Daventry as a sub regional centre with major growth potential. Daventry District Council (DDC) and Northamptonshire County Council (NCC) have commissioned various studies to examine, at the local area, the options for accommodating major urban extensions at Daventry. These studies have identified and have confirmed the suitability of the Application Site to accommodate a significant proportion of the housing requirements for the period up to 2021.
- 1.4 In the context of the Daventry District Local Development Framework (LDF), the draft Pre-Submission Core Strategy has identified the Application Site as a preferred option for accommodating up to 4000 new homes, 3 primary schools, a secondary school and other mixed uses (retail, health/employment//community)
- 1.5 SMA is part of the multi-disciplinary professional consultant team that is assisting the Applicants in terms of the various technical assessments/studies and the environmental impact assessment which support the Outline Planning Application.

1.6 SMA is advising the Applicants upon the following planning and design related considerations:

- Transport Assessment (Multi-Modal) and Travel Demand Management
- Sustainable Drainage Systems
- Flood Risk Assessment
- Utilities' Provisions
- Noise and Air Quality
- Master Plan

1.7 This report, the Transport Assessment (TA), deals with the transportation considerations and accompanies the Outline Planning Application. It reviews the strategic transport issues related to the proposed growth at Daventry and places into context the contribution that the Application Site would make in terms of delivering a sustainable community at Church Fields, Long Buckby Road, Daventry. A list of the key (not all) reference documents that the TA has had regard to is annexed to the Report.

#### Contents and Scope of the Report

1.8 Section 2.0 of the Report examines the development proposals (scheme quantum, trip generation, access and movement framework) and sets out the principal components of the scheme. Reference is made to the transport policy context and how the proposals will meet the national, regional and local transport objectives for maximising accessibility and providing sustainable travel choices.

1.9 Extensive consultations have taken place over a number of years with the various statutory bodies, key stakeholder groups, utility and service providers and the general public. The development of the scheme proposals and Master Plan reflects, where appropriate, the feedback from the Consultees.

1.10 Existing and emerging draft design guidance (e.g. Manual for Streets) has been taken into account in terms of promoting quality neighbourhoods and living areas

for residents and minimising the impact of transport. The key transport themes and their masterplanning requirements can be summarised as follows:

- To create a permeable development
- Ensure that the neighbourhoods are walkable and accessible
- To provide cyclist friendly infrastructure
- Make provision for attractive and accessible public transport
- Maintain essential access for motorised vehicles
- The assignment of traffic (access and non-access) to appropriate corridors
- Design for a low speed environment

1.11 Section 3.0 initially reports upon the independent and strategic modelling of the transport network that has been undertaken on behalf of the District and County Councils and its implications for the Application Site. The outputs have been taken forward by SMA to the site specific access appraisals and to inform the masterplanning exercise for the Application Site. The development of the access and movement strategy (for all modes) is explained. Operational capacity assessments are presented for the principal points of access. The transport assessments have informed the consideration and preparation of the proposed Travel Demand Management Strategy (TDMS).

1.12 Section 4.0 sets out the general approach taken to developing the TDMS and how this has been reconciled with the transport policy imperatives (Section 2.0). A review is undertaken of the range of factors that will influence trip making, the potential scale of trip generation at the Application Site and the measures that could be implemented to reduce the need to travel by private car. In terms of accommodating all of the travel demand likely to be generated at Daventry it is recognised that there are shared responsibilities (public and private sectors) in terms of controlling demand and implementing policy objectives.

- 1.13 Section 5.0 proposes a Residential Travel Plan and a package of integrated transport measures for consideration in terms of influencing travel behaviour, encouraging sustainable travel and providing commensurate mitigation against the potential impact of increased travel demand. These will be proposed provided they can be shown to satisfy the requirements and tests of Circular 05/2005.
- 1.14 Section 6.0 summarises the content and the principal findings of the transport assessment. Recommendations are made as to how specific matters should be addressed and taken forward for agreement with the local planning and highway authorities.

## 2.0 THE DEVELOPMENT PROPOSALS

- 2.1 The details contained in the Planning Application represent a comprehensive set of proposals that have had regard to the various assessments (landscape, ecology, archaeology, geotechnical, drainage, urban design and transport) undertaken by the Applicants' professional team. The proposals positively respond to and accord with the Local Development Framework draft Pre-submission Core Strategy (PSCS). The PSCS has indicated the District Council's intention to allocate land at Long Buckby Road, Daventry for a major urban extension comprising up to 4000 dwellings, schools (primary and secondary) and other Mixed Uses (retail/employment/health/community).
- 2.2 The Master Plan proposed by the Applicants illustrates how the comprehensive mixed-use urban extension at Church Fields, Long Buckby Road, Daventry could make provision for the following:

- Up to 4000 dwellings (mixed tenure and housing types)
- 8 FE Secondary School
- Three 2FE Primary Schools
- District Centre (including a supermarket)
- Two local centres (comprising a number of retail units)
- Open space and playing fields
- Extension of the Daventry Country Park
- Realignment of the B4036 (Higher standard route to/from A5)
- Principal Access Points
- Network of Footpaths and Cycleways
- Greenways and Bridleways
- Access for and the provision of Public Transport (buses)
- Sustainable Drainage Systems
- Undergrounding of the Overhead 132 kV Power Lines
- Protection and Maintenance of the existing Strategic Oil Pipelines

- 2.3 The Master Plan and the illustrative Access and Movement Framework plan accompanying the Outline Planning Application illustrate the comprehensive approach that has been taken and the design philosophy that has been used to ensure that all parts of the development will be accessible by foot and cycle. Appropriate corridors are to be provided for public transport. All parts of the development will be within 400 metres of a principal bus corridor. Linkages to off site networks, both existing and proposed, will extend and enhance access and integrate the development with the surrounding area.
- 2.4 The layout of the proposed development (roads and circulation) will retain sufficient flexibility in terms of phasing. It will ensure that public transport can be provided at an early stage and in a manner that will permit efficient routing, circulation and links back to the town centre. Bus priority measures and gateways, where appropriate, will be provided as development proceeds. Bus services to Long Buckby Railway Station would be improved and supported by the development (increased patronage). A Bus Interchange is proposed at the District Centre.
- 2.5 Principal movement corridors for essential access, for the even dispersal of traffic, public transport and service vehicles are to be provided. In accordance with emerging guidance (draft Manual for Streets) it is proposed that a flexible approach should be taken with regard to permitting direct access to property from the principal movement corridors.
- 2.6 A mix of major and minor streets are proposed to provide corridors for essential access within which speeds would be controlled to 20 mph or below. Direct access to property will be provided from the streets. Corridors would vary in width and include shared surfaces and “Home Zone Style” designs.

2.7 The B4036 Long Buckby Road is to be diverted and realigned along a new corridor in order to:

- i. reassign non-access – through-traffic (currently 4 500 vehicles per day) out of the development area and thereby remove its potential “severance effect” and environmental impacts (noise, air quality, amenity);
- ii. provide a standard of corridor, compliant with current day design guidance, that is capable of accommodating the predicted increase in traffic resulting from all of the planned growth at Daventry and to provide appropriate linkages to the town centre, the adjoining highways and the A5 trunk road;
- iii. provide an alternative and more attractive corridor for the non-access-through-traffic currently travelling through Norton Village to reach the A5; this would be complemented by speed control and traffic calming measures at Norton Village (deterrents to “rat runners”);
- iv. Provide a firm boundary to the major urban extension.

2.8 The “abandoned” section of the B4036 would be retained as a movement and access corridor within the development. It would provide a continuous cycle route through the development and can also be utilised as sections of the proposed public transport network.

2.9 Bus gateways are proposed at the junction of the abandoned B4036 with the new road (B4036 realignment). A connection and link road to Norton would be provided from the realigned B4036. Part of the Daventry Road, thus bypassed, would be downgraded to a “Greenway” and provide a quiet route for cyclists, pedestrians and equestrians.

**Urban Extension  
at Church Fields, Long Buckby Road, Daventry  
Transport Assessment**

2.10 The diversion of the B4036 and the associated changes to the Daventry Road (paras 2.7 and 2.8 above) would be undertaken under the procedures of Section 247 of the Town and Country Planning Act 1990 and Section 278 of the Highways Act.

2.11 The scheme design for the B4036 realignment (approximately 2.5 km) and the principal access points are shown on the following reference drawings:

2006.1075.50 (1:5000 scale)

2006.1075.51 (1:2500 scale)

2.12 A single 7.3 metre wide carriageway with 3.5 metre verges is proposed. Beyond this carriageway cross-section, land would be safeguarded so as not to compromise any further upgrading in the longer term (possible dualling or dedicated public transport lanes).

2.13 The design has been based upon the design parameters given in the DfT Design Manual for Roads and Bridges (TD 9/93). In keeping with the standards used elsewhere in Daventry (South Way, Eastern Way, Northern Way), the road would be kerbed and would be lit. All construction details and specifications would be provided under the discharge of Conditions requiring technical approvals by the local Highway Authority.

2.14 The principal access points to the site are shown in more detail (1:500 scale) on the following reference drawings:

2006.1075.53	Zone 1 Site Access
2006.1075.54	Zone 2 Site Access (and Norton Link)
2006.1075.55	Zone 3 Site Access
2006.1075.56	Zone 4 Site Access

- 2.15 The principles of access and the form of junctions proposed have been discussed with the local Highway Authority (LHA) and have its support. Following the technical scheme audits by the LHA, the agreed schemes would then be subjected to Stage 1 and 2 Road Safety Audits, as is the normal practice. The operational capacity of the junctions has been optimised using the LINSIG and TRANSYT computer programs (discussed in Section 3.0 later).
- 2.16 An off road cycleway can be provided beyond the realigned section of the B4036 to link to the A5. A potential route is illustrated on drawing 2006.1075.057.

### **Access and Movement – Design Philosophy**

- 2.17 “Places, Streets and Movement” the companion guide to Design Bulletin 32 (Residential roads and footpaths) advocates, inter alia, permeable scheme layouts, a flexible approach to highways design and a movement framework that ensures priority is given to travel by foot, bicycle and public transport.
- 2.18 The draft Manual for Streets embraces the above guidance and reinforces the approach that roads should no longer dominate developments. Design standards that are based upon road hierarchies are to be avoided. Streets should be multi-functional and should add to the quality of the neighbourhood. The previous use of local distributor roads with limited access are discouraged; direct access is encouraged. The width of street corridors should not solely be based upon the requirements of movement of traffic. Designs should create a sense of place in which people and places take precedence over vehicles.
- 2.19 The key themes taken from this guidance have informed the masterplanning of the Application Site. These are that the development areas should:
- be permeable with clear linkages between spaces and buildings
  - create walkable and accessible neighbourhoods
  - include cyclist friendly infrastructure
  - provide for attractive and accessible public transport
  - assign traffic to appropriate corridors yet ensure essential access for all

**Urban Extension  
at Church Fields, Long Buckby Road, Daventry  
Transport Assessment**

- create a sense of place in which roads and movement of vehicles play a less dominant role
- reduce the need to travel by car.

2.20 Accordingly the Master Plan illustrates how all modes of travel can be accommodated within the site and how the movements off-site can be evenly dispersed and assigned to the wider highway network. Non-access-through-traffic will be removed from the development. Corridors have been identified for public transport access.

2.21 Compact traffic signal controlled junctions are proposed for the principal access points to achieve:

- i. a more efficient use of road space and land
- ii. to provide safer crossing places at grade for pedestrians and cyclists
- iii. to facilitate priority of movement for buses
- iv. to control speeds and enhance road safety
- v. to maximise the throughput of movements at peak times
- vi. to provide traffic management options (cycle staging and phasing) to encourage traffic to use specific routes and deter it from using sensitive routes (e.g. Norton Village, Admirals Way).

2.22 In advance of more detail (density etc) on each of the proposed areas for development at Daventry, the parameters used in the strategic modelling undertaken for the County Council have had to be conservative and cautious. The approach taken, and acknowledged by the County Council's Consultant (Arup), therefore represents the "**worst case**" **trip generation** for the critical peak hour (morning period: 0800-0900 hours) for the Application Site as follows:

	<b>Attractions</b>	<b>Productions</b>
<b>External Trips:</b>	877	2005

2.23 These figures have been taken into account when determining the requirements for access and to size the junctions accordingly. This will ensure that for the “worst case” scenario (ignoring the potential reduction and modal shift to public transport and to walk/cycle) sufficient land would be safeguarded and that residual capacity can be provided (discussed further in Section 3.0 of the report). However, the approach proposed by SMA to manage the travel demand generated by the proposed development (Section 4.0 of the TA) will consider the potential for a lower trip generation supported by a number of measures to be taken to reduce the need to travel.

### Transport Policy Context

2.24 **PPG13 – Transport (March 2001)** sets out the government’s objectives for integrating planning and transport at the national, regional, strategic and local levels to:

- promote sustainable travel choices
- promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling, and
- reduce the need to travel, especially by car

2.25 Land use planning has a key role in delivering the PPG13 objectives. The PPG states (paragraph 3):

*“..... By shaping the pattern of development and influencing the location, scale, density, design and mix of land uses, planning can help to reduce the need to travel, reduce the length of journey and make it safer and easier for people to access jobs, shopping, leisure facilities and services by public transport, walking and cycling....”*

- 2.26 The PPG recognises (para.30) that mixed use development can provide very significant benefits in terms of promoting vitality and diversity and in promoting walking as a primary mode of travel. Walking (para.75) is considered to be the most important mode of travel at the local level and offers the greatest potential to replace shorter trips, particularly under 2 kilometres. Walking also forms part of longer journeys by public transport and car.
- 2.27 Cycling (para. 78 of the PPG) has the potential to substitute for short car trips, particularly those under 5 kilometres, and to form part of a longer journey by public transport. In determining planning applications, the PPG states that local authorities should identify opportunities to enhance cycle networks and examine potential options along roads, spaces along canals, rivers, within urban linear parks and as off-road cycleways.
- 2.28 The PPG recognises that the availability and use of public transport are very important ingredients to reduce the need for travel by car. Local authorities are encouraged to work in partnership with the public transport providers to improve public transport and to negotiate for improvements as part of any significant development proposals.
- 2.29 In July 2004 the **Government** published a new **White Paper “The Future of Transport : A network for 2030”** setting out its medium to longer term strategy to meet the challenges of a growing economy and the increasing demand for travel. The strategy is built around three central themes:
- sustained investment
  - improvements in transport management
  - planning ahead

2.30 For enhanced local travel, the White Paper proposes strategies founded upon:

- freer flowing local roads delivered through congestion charging
- more reliable bus services enjoying more road space
- demand responsive bus services
- generally improving accessibility and enabling people to have a real choice about when and how they travel
- promoting travel plans and personalised journey planning to encourage people to consider alternatives to using their cars
- creating a culture and improved local environment so that cycling and walking are seen as an attractive alternative to car travel for short journeys.

2.31 The objectives are supported by dual policy targets for protecting the environment from the impact of all forms of transport and minimising the impact of new and existing transport infrastructure. Investment in public transport to provide alternatives to the car is key to the strategy.

2.32 In terms of investment the Government wishes to involve the regions and local authorities in deciding where best to focus funds, to advise upon priorities and programmes. Various funding sources are to be provided to meet the growth agenda.

2.33 The Regional Spatial Strategy for the **East Midlands** which includes the **Regional Transport Strategy (RTS)** was published on 17 March 2005. The RTS sets out the agreed long term vision for the region up to 2021.

2.34 In accordance with Government policy, the core objectives of the RTS are based on:

- reducing the need to travel by car, controlling and reducing traffic growth and congestion
- promoting a step change in the level of public transport
- making better use of existing networks
- only developing additional highway capacity when all other measures have been exhausted.

2.35 In terms of the **sub-regional context** the **MKSM strategy for movement** is consistent with the RTS and seeks to encourage a modal shift, to take advantage of improved public transport, to influence travel behaviour by using demand management measures and to invest in strategic highway improvements. It acknowledges that additional work will be required at the local level to define the exact infrastructure requirements to support the growth agenda.

2.36 The County Council has a major role to play as one of the key delivery agencies for the transport infrastructure required to support future growth in the county. The County Council leads on the strategic transportation dimension of delivery of the MKSM growth agenda on behalf of various partner agencies. A joint protocol agreement has been set up, identifying how Local Transport Plans (LTPs) across the region will deliver the sub-regional strategy.

2.37 The **local context** is set out in the **Northamptonshire Local Transport Plan LTP2) 2006/7 to 2010/11** which was published in March 2006.

2.38 The LTP2 sets out the County Council vision and long term strategy for tackling existing projects and those related to growth. The LTP2 states that there will be a high degree of inter-relationship between the LTP2 and growth-funded projects.

- 2.39 The LTP2 refers to the “The Community Strategy 2004-2013” which has been developed by the County Council along with partners and the local community to act as an overall strategy for the communities in Northamptonshire. The community strategy includes a number of policies which the LTP2 can help to deliver; these are set out in Table 1.4 of the LTP2.
- 2.40 Similarly the LTP2 demonstrates how the transport policies contained in the County Structure Plan 1996-2016 (remains in force until 27 September 2007) have been taken into account and where appropriate developed further; Table 1.5 of the LTP2 illustrates the LTP2 is in general conformity with the Structure Plan.
- 2.41 Section 1.4.3 of LTP2 summarises the key elements of the transport vision and reaffirms the County Council’s commitment to developing sustainable communities and to reducing the predicted growth in traffic. A **Transport Framework for Growth** is being developed with consultants and partners. This will allow new proposals for transport infrastructure to be assessed against a policy framework outlining what is necessary for sustaining economic growth.
- 2.42 Extensive public and stakeholder consultations were undertaken by the County Council to determine a set of shared priorities for transport:
- improving accessibility and public transport
  - reducing the problems of congestion
  - reducing the problems of pollution
  - reducing the problems of safety
- 2.43 Section 3 of the LTP2 sets out the long-term (up to 2021) policies and plans that the County Council are adopting to achieve its objectives for managing growth. This is essentially based upon targeted improvements to create more sustainable transport.

2.44 The Congestion Strategy is founded upon four key principles:

- i. better management of the existing infrastructure (optimisation and utilisation of existing capacity)
- ii. provision of high quality alternatives to car travel
- iii. within the main settlements to manage demand for travel by private vehicles
- iv, to accommodate the residual traffic there will be high quality roads between and around major settlements

2.45 All of the above translates into a requirement for an Action Plan, by area, to provide the basis for growth and ensure that there is a viable multi-modal network.

### **The Daventry Perspective**

2.46 In terms of buses, the LTP2 recognises that Daventry has established town services and that these can be improved. Equally important are the links between Daventry and other towns; the LTP2 identifies scope for these to be improved. A key consideration will be the upgrading of the existing hourly X42 direct service to Northampton to half hourly frequency with new vehicles and quality infrastructure.

2.47 The County Council has been and, it is understood, will continue to seek funding approval from the Community Infrastructure Fund to improve facilities at Long Buckby Railway Station.

2.48 Common to all areas identified in the MKSMSRS the focus will similarly be upon improving the quality, reliability and frequency of bus services, providing essential road infrastructure (on-site and off-site) and managing travel demand. The County Council expects more road space to be re-allocated to buses. Encouraging changes to and influencing travel behaviour will, to a degree, rely upon more personalised travel planning and the introduction and extension of workplace travel plans, school travel plans and residential travel plans.

## Funding Sources

- 2.49 “Section 4.11 Growth” of the LTP2 recognises that the LTP funding route and other sources will be required to solve both existing problems and to meet the needs of growth.
- 2.50 The Sustainable Communities Delivery Grant, the Community Infrastructure Fund and the LTP Integrated Transport Block provide opportunities for the County Council to seek central funding contributions for the growth areas. The County Council expects that there will be further Government funding and increasingly the need for any essential infrastructure to be funded by developers. The County Council is exploring the possibility of Northamptonshire becoming a pilot area for a “roof tax”
- 2.51 For all the major development areas, the LTP2 advises that all sources of funding, albeit a substantial part coming from the private sector, will be key to ensuring:
- they are all well served by public transport routes
  - they have good links to walking and cycling networks
  - they have good road access; and any transport problems they cause will be mitigated
- 2.52 Transport studies commissioned by the County Council will enable it to determine a more detailed programme of transport infrastructure and service improvements and will inform the Local Development Frameworks across the County.
- 2.53 A strategic transport study for Daventry has, for example, been undertaken and this will form the basis for further discussions and negotiations between the Applicants and the planning and highway authorities regarding any transport planning obligations (dealt with later in Sections 3.0 and 5.0 of this report).

## **Church Fields, Daventry – The Applicants’ Response to the Transport Policy Framework**

- 2.54 The comprehensive mixed-use urban extension at Church Fields, Long Buckby Road, Daventry represents a direct and positive response to the key policies and objectives set out in the Regional Spatial Strategy (RSS), the Regional Transport Strategy (RTS), the Structure Plan (S/Plan) and the Local Transport Plan (LTP2).

### **Location**

An urban extension to the Sub-Regional Centre at Daventry (**RSS/RTS Policies 5,42**)

### **Promote Good Design and Improve Accessibility**

A mixed use development with direct and convenient links between homes, schools, shops, employment and services that will be accessible by foot, cycle and public transport (**PPG 13, RSS Policies 1, 42; S/Plan Policies: T1, T2, T6, T8; LTP2 Objectives and Congestion Strategy**)

### **Promote Opportunities for Modal Shift and Influence Travel Behaviour**

Provision of footpath and cycle networks and a commitment to funding the necessary infrastructure for public transport; provide priority measures for public transport; design for low speeds and safer routes to school. A commitment to preparing and implementing Travel Plans (**RSS Policies: 44, 45; S/Plan Policies: T1, T2, T3, T6, T8; Compliance with LTP2 Objectives**)

### **Travel Demand Management**

Maximisation of the use of existing and new transport infrastructure ensuring that all highway capacity is managed effectively to reduce congestion and improve safety; compact junctions and safe crossing places for pedestrians and cyclists; priority for buses; extensive networks for cyclists and pedestrians; easy access to public transport; provision of high quality roads and junctions; compliance with parking policies and standards (**PPG13; RSS Policies: 42, 44, 53; S/Plan Policies: T5, T6, T8, T9 and T10 and compliance with the LTP2 shared priority and objectives for Congestion**)

### **Mitigating against the Impacts of Increased Travel**

Provision of high quality access points to evenly disperse traffic; provision of high quality footpath and cycleway networks to encourage more short trips by foot and cycle; provision of infrastructure for public transport and financial support for services; a commitment to Travel Plans; the funding of measures to deter non-access- traffic from travelling through Norton Village; provision of a high standard corridor to and from the A5 (B4036 realignment); proportionate contributions towards transport improvements upon the wider highway network (capacity, road safety and network enhancement); **(PPG13; RSS Policies 42, 44,45,53; S/Plan Policies: T1, T3, T5, T6, T8; compliance with the LTP2 objective to secure proportionate funding/investment from developers).**

### 3.0 THE TRANSPORT ASSESSMENT

#### Background to the Studies

- 3.1 PPG-13 Transport (paragraph 23) advises that where developments will have significant implications, Transport Assessments (TAs) should be prepared and submitted alongside the relevant planning applications for development. The coverage and detail of the TA should reflect the scale of development and details should be provided of the proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts. Where appropriate, a Travel Plan should be included.
- 3.2 The PPG (paragraph 25) encourages prospective developers to hold early discussions with the local authority in order to clarify whether proposals are likely to be acceptable in transport terms and to “scope” the requirements of the TA. Where proposals are clearly in line with planning policy the PPG states that this should increase the likelihood of a planning permission being granted without undue delay.
- 3.3 In the context of accommodating the major growth proposed at Daventry in the MKSM sub-regional strategy, (MKSMSRS) the District Council commissioned studies to identify potential sites, and combinations of them, to deliver the required housing numbers (6,200 dwellings) and the land required for employment, schools, retail and community uses. Contemporaneously various landowners and developers were assembling professional consultant teams to undertake the necessary research and studies specific to their sites and aspirations.
- 3.4 To avoid unnecessary duplication by the respective developers’ transportation consultants and to ensure a consistent approach would be taken to the data collection and the technical parameters, methodology and validation/calibration exercises, the District and County Council decided to employ Arup (consultants) to build a strategic transport model (SATURN). This has enabled the authorities

to objectively assess the impacts of the proposed development areas and to identify and quantify what measures may be necessary to accommodate the predicted increase in travel demand.

- 3.5 In the spirit of co-operation, expediency and key party involvement a Stakeholder Group was formed. Representatives of all of the major promoters of development were invited to attend progress meetings and to participate in discussions over the scope, parameters and outputs of the strategic transport modelling. The Stakeholder Group has comprised the following companies/organisations:

Highways Agency (HA)  
Faber Maunsell (for the HA)  
Northamptonshire County Council (NCC)  
Daventry District Council (DDC)  
Arup Consultancy (for NCC and DDC)  
Croudace Homes Limited  
Stuart Michael Associates (for the Applicants)  
Danetree Consortium  
Peter Brett Associates (for Danetree)  
(Capel House) Monksmoor Project Team  
Denis Wilson & Partners (for Capel House)  
Drayton Fields (North)  
Barber Associates (for Drayton Site)

- 3.6 The inaugural meeting of the Stakeholder Group (SHG) took place on 9 December 2004. It was agreed that the substantial traffic surveys that had been undertaken to date by Croudace and the Danetree Consortium would be pooled and offered to NCC's consultant. Any further survey work considered necessary by NCC would be better focused and would avoid any duplication.

- 3.7 Subsequent meetings were held as full SHG meetings and separately as consultants' technical working group meetings. The scope of the strategic modelling and the parameters to be used were agreed. Progress meetings to discuss the interim observations and findings of the modelling exercise were held

on a monthly basis. Details of the SATURN model's calibration and validation were agreed. Working papers were prepared by Arup and circulated for comment and agreement. As regards the implications for the site specific TAs which would be submitted by the respective developers, it was agreed that:

- i. the SATURN Model would examine the cumulative effects of all sites and provide the basis for identifying a strategy for implementing improvements upon the broader highway network and,
- ii. the TAs to be produced for the various individual development sites would therefore focus principally upon the site access requirements and immediate linkages to the surrounding highway network; the TA's would be supported by a Residential Travel Plan and a package of measures to encourage trip making by foot, cycle and public transport.

3.8 In May 2005 Arup issued a draft paper on the modelling of the three initial options that DDC had selected for the potential dispersal of housing and employment over three key potential development areas.

3.9 These options considered a range of housing numbers (Option 1 : 3800; Option 2:4700; Option 3:2800) at Long Buckby Road (Croudace) with other mixed uses (education, employment, retail/community). The residual amounts of the projected 6,200 dwelling number requirement had been distributed to the other key sites in permutations.

3.10 The outputs from this modelling were reported in the consultant's report (August 2005): Daventry Transport Study – Highway Improvements Working Paper". This is discussed further in the following review of the baseline situation.

3.11 Further strategic modelling has since been undertaken by Arup for DDC/NCC to examine the LDF pre-submission Core Strategy preferred Option for Growth (Option 4). This allocates up to 4000 dwellings to the Long Buckby Road Site (the "Application Site"). The outputs from this modelling were reported in the

Consultant's Report (July 2006): "Daventry Transport Study – Highway Improvements Working Paper: Addendum Paper Option 4". This is a key core reference document for this TA (**Appendix 1**) and is discussed further in this chapter.

## **Baseline Conditions**

### Highway Network

- 3.12 The principal highway network (**Figure SMA2**) at Daventry has been built to a high standard and was done so in the expectation of further growth. Single carriageways forming parts of the Ring Road system have, for example, been located in wide corridors (Eastern Way (**Plate 1**), South Way, A45/Stefan Way) to enable future widening if necessary. Large roundabouts have been provided on the Ring Road with considerable reserve capacity.
- 3.13 A network of secondary roads provide essential access to the town centre, to residential areas and to employment zones. 20 mph zones have been introduced on roads in the town centre and on Admirals Way.
- 3.14 Pedestrian and cyclist underpasses have been incorporated into the Ring Road system at various locations (**Plates 2 and 3**). The cycle network at Daventry (**Figure SMA4**) comprises a combination of shared use cycleway/footways (**Plate 4**), on carriageway cycle lanes, advisory routes via quiet streets and along bridleways. The Application Site is well located to the existing footpath and cycle networks and can make appropriate linkages to them (discussed later).
- 3.15 The approach routes to Daventry are generally single carriageway rural roads of varying standards (width and alignment). To the east of Daventry, the B4036 Long Buckby Road provides a link to the A5 trunk road. From the A5 there is a secondary route to Long Buckby railway station (**Plates 5 and 6**) and to Long Buckby which connects to the B5385 and A428.
- 3.16 An alternative route to the A5 from Daventry is available beyond Eastern Way via Daventry Road which passes through the village of Norton.

3.17 To the south east, the A45 provides a link to the A5 at Weedon and to Junction 16 of the M1 motorway.

3.18 Connections from the Ring Road provide access to local villages (Welton) and to other arterial routes such as:

A361 (North) to Rugby, M1

A45 (North West) to Coventry

A425 to Leamington Spa

A361 (South) to Banbury, M40

3.19 An extensive traffic data collection exercise has been undertaken on behalf of the Applicants to enable the baseline model for 2004 to be constructed. This included several junction turning counts and automatic traffic counts within and on the approaches to Daventry. Additional surveys including roadside and household interview surveys were undertaken on behalf of the Danetree Consortium and County Council. All of this data has been pooled and used in the development of the strategic transport model (SATURN).

3.20 The SATURN model has been validated and calibrated using the DfT guidelines to give a robust baseline representation (modelled flows versus observed flows) for the Year 2004. For presentational purposes, the figures prepared by Arup have been rounded. Details of the modelled network **traffic flows** for the **Base Year (2004)** are shown on Figure 2.1 of the Arup report (**Appendix 1**).

3.21 The SATURN model has similarly considered further traffic growth on the network and other committed developments and infrastructure changes deemed to be in place by **Year 2021**. This is referred to as the **Comparator Case**. The corresponding traffic flows are shown on Figure 3.1 of the Arup Report (**Appendix 1**). The Comparator Case does not include for the developments associated with the proposed future growth at Daventry as required by the MKSMSRS.

- 3.22 The road and junction capacity assessments undertaken by the County Council's consultant (Arup) have indicated that the existing highways infrastructure is capable of accommodating the Comparator Case traffic flows without any significant improvements.

Norton Village

- 3.23 Surveys undertaken by SMA in January 2003 have investigated the extent to which non-access-through-traffic has been (and continues) using the route through Norton Village to and from the A5 (**Figure SMA 3**). During the two hour morning commuter period (07.30 – 09.30 hours) the survey revealed that out of the 679 two way movements recorded at the survey cordons, 500 had been associated with non-access-through-movements.

- 3.24 Cordons were set up to determine and quantify the amount of non-access-through-traffic travelling via Norton Village to and from the A5 along the following routes:

**2 Hour Totals\***

a)	Daventry Road to A5	451
b)	Daventry Road and "Lovers Lane" to A5	4
c)	Weedon Lane	45

\*Majority (438) travelling across the A5 via Whilton Locks

- 3.25 The Applicants, SMA and the local authorities recognise that measures will need to be considered to discourage and reassign non-access-through-traffic away from Norton Village (discussed further in Paragraph 4.67 and Appendix 2).

2001 Census Data – Travel to Work

- 3.26 Data contained in the 2001 Census (Key Statistics for Urban Areas in England and Wales: Table KS15) indicates the following patterns of travel to work for Daventry.

**Travel to Work**

	<b>%age</b>
<b>Work mainly from home</b>	6.74
<b>Public Transport</b>	2.73
<b>Walk</b>	14.15
<b>Cycle</b>	2.53
<b>Car/Van Driver</b>	63.51
<b>Passenger</b>	8.62
<b>Motor Cycle</b>	0.73
<b>Taxi</b>	0.65
<b>Other</b>	0.35

- 3.27 Compared to the corresponding figures for the County (reference: Table 2.6 of LTP2) the journeys undertaken by foot have been considerably higher (14.15% versus 9.5%), have been marginally higher for cycling (2.53% versus 2.3%) and have been less than half of that for public transport (2.73% versus 5.7%). Travel by car for both driver and passenger were similar (72.13% versus 71.80%).

- 3.28 The challenge for all, both on a countywide basis as well as at Daventry, will therefore be to substantially increase the modal share by cycle, by public transport (discussed later) and encourage more walking for all purposes of trip (discussed later).

Public Transport

- 3.29 **Figure SMA 5** illustrates the existing (September 2006) provision of bus services at Daventry (source: Northamptonshire County Council). All parts of the town are served by half hourly circular services that stop at the Bus Station in Daventry town centre. Other inter-urban services run from Daventry to Northampton, Banbury, Rugby, Birmingham and Long Buckby.
- 3.30 In the context of the Application Site, service 40 and 97 travel along Eastern Way and Admirals Way; the 97 is the half hourly town circular service and the hourly 40 service travels to Northampton. Service 96 is a rural service that travels to Long Buckby (stopping at Long Buckby Station). There is scope to extend and improve existing bus services and to provide new services for the Application Site (discussed later).
- 3.31 There is no railway station in Daventry. The nearest connection to the rail network is at Long Buckby approximately 4 kilometres from the centre of the Application Site.
- 3.32 During weekday commuter periods there are five trains to Northampton in the mornings (0640 – 0940 Hrs) and five from Northampton in the evenings (1600 – 1900 Hrs) and hourly services (each way) at off-peak times. There are six trains to Birmingham during the corresponding morning commuter period and four from Birmingham in the evening commuter period and hourly services at off-peak times.
- 3.33 There are hourly services on Saturdays and, with the exception of early evening, hourly services on a Sunday.
- 3.34 For longer distance journeys (to London) connections can be made at Northampton.

### Road Safety

- 3.35 **Figure SMA 6** plots and summarises the number of personal injury accidents that have been reported to Police during the five year period 1<sup>st</sup> June 2001 to 31<sup>st</sup> May 2006. There has been a reduction per annum in casualties since 2002.
- 3.36 The majority of road traffic accidents tend to happen at junctions. The details shown on Figure SMA6 therefore provide a focus upon the principal junctions in proximity to the proposed development area.
- 3.37 The information provided to SMA by the County Council is in summary form only and it is not possible to determine any pronounced trend or contributory factors. However experience and site observations indicate that large roundabouts can generate high speeds and crossroads can be intimidating for motorists and non-motorised users.
- 3.38 The District and County Council are proposing to reconstruct the Eastern Way/South Way roundabout and reduce it in size. The scheme could therefore potentially improve the road safety record at this location. With regard to the other junctions shown on Figure SMA6 this TA has proposed alterations to enhance accessibility, road safety and capacity at Admirals Way and for the B4036 corridor. The TA has also identified options for improving the A5 junctions (Long Buckby Wharf and Whilton Locks); discussed later.

### **The Future Situation**

- 3.39 The development proposals put forward by the Applicants generally conform to the scale of development proposed under Option 4 of the draft Pre-Submission Core Strategy by the District Council. However, to ensure that there will be some flexibility over time (period up to 2021) the strategic transport modelling undertaken by Arup for the Application Site, on behalf of Croudace and the Trustees, has included additional retail space (2500 sq m GFA).

- 3.40 To be consistent with the other strategic modelling undertaken by Arup for DDC and NCC, no adjustments have been made to the previously agreed parameters such as trip rates and distribution.
- 3.41 As stated previously, it has been agreed that the strategic modelling of the wider highway network beyond the respective development sites would form the basis for determining where improvements may be required.
- 3.42 The TA's for each development site, in terms of traffic impact, therefore need only to examine the requirements for access. Whilst improvements to the nearby A5 junctions will be a matter for the Highways Agency to address, the need and scope for improvements at these locations has, without prejudice, been considered in this TA (discussed later).
- 3.43 The loading points to the adjoining highway network from the Application Site are shown schematically upon **Figure SMA.TA1** (Zones 1 to 4 inclusive).
- 3.44 **Figure SMA.TA2** illustrates the traffic data output from the strategic model and shows a comparison of the potential assignments for the Base Year, Comparator Year and the development scenarios. Also shown, in addition to the above, are the adjusted flows for Norton Village and the A5 junctions assuming deterrent measures and improved access to the A5 (realigned B4036) will reduce non-access-through-movements at Norton. This adjustment is based upon the data collected from registration plate surveys and accounts for the potential reassignment of through traffic onto a less constrained and more direct route. An explanatory note is provided in **Appendix 2**.
- 3.45 **Figure SMA TA3A** represents the junction turning data for the proposed development accesses and A5 junctions for the morning peak hour (Year 2021). The data for Junction 5 and Junction 6 have been reconciled with the proposed reassignments and reductions in traffic at Norton Village.

3.46 **Figure SMA TA4A** represents the corresponding traffic movements for the evening peak hour (Year 2021). The evening peak hour is the less critical of the two peak periods tested and reflects the daily profile of movements reported by Arup for the baseline situation (the morning peak represents 14.6% of the daily trip generation whereas the evening peak represents only 8.3%).

Proposed Development Accesses – Operational Capacity

3.47 It is proposed that the Application Site will be principally accessed from four junctions to effectively serve four development zones and evenly disperse external movements onto the broader highway network. The internal road system will provide convenient access to the trip ends within the site and allow linked trips (home-school; home-shop; home-other) before leaving the site.

3.48 The loading points onto the network and corresponding turning movements are shown on Figures SMA.TA1 and TA3A/TA4A). Details of each access layout , for the purposes of the capacity assessments, are shown at 1:500 scale on the following drawings:

Zone 1	:	Site Access (Eastern Way) Drawing No. 2006.1075.053
Zone 2	:	Site Access (from B4036 Realigned) Drawing No. 2006.1075.054
Zone 3	:	Site Access (from B4036 Realigned) Drawing No. 2006.1075.055
Zone 4	:	Site Access (from B4036 Realigned) Drawing No. 2006.1075.056

Zone 1 – Site Access

3.49 The LINSIG analysis program has been used to compute the optimum solution and confirms sufficient capacity can be provided for the Year 2021.

- 3.50 The results of the analysis are shown on **Table 1**. The layout incorporates an additional lane on Admirals Way over and above what would otherwise be necessary if other travel demand management measures are successful (improvements to public transport, walking and cycling facilities) and if other network improvements have been implemented.
- 3.51 The County Council's consultant's report on Option 4 has identified a potential reassignment of 400 vehicles per hour away from Admirals Way if other highway improvements elsewhere on the network are implemented. The approach taken by SMA therefore represents a more cautious approach and enables some flexibility to be taken over the possible allocation of lanes for bus priority if ultimately they are not required for capacity reasons.
- 3.52 The layout nevertheless represents a more compact junction than would otherwise be required if a roundabout solution was pursued. It provides appropriate crossing opportunities for cyclists and pedestrians. Subject to monitoring future demand, the local highway authority could, at the outset choose to allocate some of the lanes for bus priority. This approach could influence travel behaviour by affording less capacity for cars.

#### Zone 2 – Site Access

- 3.53 The TRANSYT analysis program has been used to optimise the signal settings and minimise delays for the key movements.
- 3.54 The results are shown on **Table 2** (which is accompanied by the Link and Node diagram SK1).
- 3.55 The proposed layout is a staggered junction which takes into account the easements necessary to protect and maintain in situ the strategic oil pipelines. The layout provides appropriate safe crossing places for cyclists and pedestrians. The local Highway Authority will have the flexibility and discretion in future to designate some of the lanes for priority bus lanes should this be deemed to be appropriate.

3.56 It is considered that the operation of the junction (phasing and apportionment of traffic release times (green times)) will help deter non-essential traffic from travelling to and through Norton Village.

#### Zone 3 – Site Access

3.57 The LINSIG analysis program has been used to compute the optimum solution and to confirm that sufficient capacity can be provided for the year 2021.

3.58 The results of the analysis are given in **Table 3**.

3.59 Provision is made in the layout and operation of the junction for pedestrians and cyclists to safely cross at-grade to and from the development and recreational areas. The details represent a compact junction layout resulting in efficient use of land.

3.60 Given that the whole development would be phased over the LDF period it will be possible to monitor traffic conditions and reconsider operational capacity at the appropriate time. Should, for example, there be a requirement or desire to introduce an additional lane into the design (as illustratively shown on Drawing 2006.1075.058) then land would be available for these purposes.

3.61 Drawing 2006.1075.058 is therefore shown for illustrative purposes only and does not form part of the planning application.

#### Zone 4 – Site Access

3.62 The LINSIG analysis program has been used to compute the optimum solution and to confirm that sufficient capacity can be provided for the year 2021.

3.63 The results of the analysis are given in **Table 4**.

- 3.64 Provision is made in the layout and operation of the junction for pedestrians and cyclists to safely cross at-grade to and from the development and recreational areas and with regard to connecting the cycle routes within the site with that which is proposed along the B4036.

Cycle Route Link to the A5

- 3.65 Drawings 2006.1075.050, 051 and 057 illustrate how an off-road cycle lane link to the A5 could be provided alongside the B4036 over land in the control of the Applicants.
- 3.66 This proposal would complement the proposals that the County Council has sought CIF funding for between the A5 and Long Buckby Railway Station.

Off Site Junction Improvements

- 3.67 The strategic modelling (SATURN) undertaken for the County Council has identified several locations where capacity improvements may be required in future if the “worst case” traffic predictions are realised. It has been agreed by the Stakeholder Group that the off site improvements, where considered necessary, would be carried out by the highway authorities (NCC and Highways Agency) with financial contributions taken from all of the development areas.
- 3.68 It is also anticipated that the Highways Agency (or NCC should the A5 be de-trunked: reference LTP2 para. 3.2.4.3) would wish to examine the operational capacity and road safety requirements of the A5 junctions at:

- i) B4036/A5/Long Buckby Wharf
- ii) Norton Road/A5/Whilton Locks

- 3.69 The strategic modelling undertaken for the County Council predicts a significant increase in the number of movements to and from the A5 at its junction with the B4036 junction (Figure SMA.TA2 refers). In particular there will be a large draw to and from the A5 north (Figures SMA. TA3A and TA4A refer). The existing junction layout would not have sufficient capacity to safely accommodate the predicted traffic growth at this location.
- 3.70 Without prejudice to the views of the highway authorities, SMA drawing 2006.1075.046 illustrates what might be achieved at this junction in terms of a traffic signal controlled junction. This form of junction would have least impact upon land. The layout, inter alia, illustrates how cyclist facilities and crossing places could be incorporated into the junction improvement.
- 3.71 The Applicants control sufficient land at this location to enable a substantial improvement to be made to the junction (traffic signals or otherwise). Any improvement at this location would have wider benefits for existing road users as well as for the proposed new developments at Daventry. As stated earlier the costs of implementing an improvement should therefore be based upon pooled developer contributions and other funding sources (LTP, CIF etc).
- 3.72 Similarly it is anticipated that the Highways Agency (or NCC) would wish to examine the potential options for improving the Norton Road/A5/Whilton Locks junction (for example: traffic signals) and seek proportionate contributions towards any scheme costs from all new development areas.
- 3.73 In summary, it is considered that the foregoing assessments demonstrate that appropriate provisions can be made for access whilst allowing for other measures to be taken to influence travel behaviour and reduce the need for travel.
- 3.74 The proposed travel demand strategy is outlined in Section 4.0 of this report.

#### 4.0 TRAVEL DEMAND MANAGEMENT STRATEGY

4.1 The **Transport Policy objectives** outlined earlier in Section 2.0 of the report can be summarised as follows:

- i) shaping the pattern of development and influencing the location, scale, density, design and mix of land uses to reduce both the need to travel and the length of journey
- ii) promote accessibility to jobs, shopping, schools, leisure facilities and services by public transport, walking and cycling
- iii) generally improve accessibility and enable people to have a real choice about when and how they travel
- iv) ensure that all major developments are well served by public transport, have good links to walking and cycling networks and have good road access
- v) encourage more personalised travel planning and make extensive use of workplace, school and residential travel plans
- vi) better management of the existing infrastructure (optimisation and utilisation of existing capacity)
- vii) only developing additional highway capacity when all other measures have been exhausted.

4.2 The measures to be introduced to manage travel demand therefore, for consistency in approach, need to accord with the foregoing policy aims and imperatives. There is however a **shared responsibility** in delivering a strategy that can reduce the need to travel especially by private car. Car parking policy and enforcement, traffic regulation orders and management of the highway network are the responsibility of the public authorities. Provision of high quality

bus services depends upon the co-operation and commitment of the de-regulated public transport operators. The private sector and developers can also contribute and provide, or fund, necessary infrastructure. Businesses, health and education authorities can influence travel behaviour and commit to travel plans. Overall there has to be a step change in individual travel behaviour and encouragement given to personalised travel planning.

- 4.3 In terms of managing travel demand it is therefore important to initially consider the factors that influence trip making, the scale of the potential demand and then the range of measures that can be implemented to reduce the need to travel by private vehicle and maximise the modal share by foot, cycle and public transport.

#### **Factors That Influence Trip Making**

- 4.4 Trip generation, mode of transport, timing of journey and route choice are influenced by several factors, for example:

- a) site location and pattern of development**  
(proximity to and range of local facilities, employment, shopping, recreation, leisure, schools within and close to the development).
- b) availability of travel choices**  
(foot, cycle, public transport, car etc).
- c) purpose of trip and journey length**  
(commuting, school, type of shopping, leisure, other private business etc)
- d) availability of car parking at the trip end**  
(parking provision, parking controls, parking charges, workplace travel plans etc)

- e) **socio-economic factors**  
(age, actively employed, car ownership, car usage, household income, cost of travel etc)
- f) **prevailing conditions on the transport network**  
(convenience of routes, standard of roads, congestion, traffic regulations, roadworks, distance and value of time etc)
- g) **personal security**  
(attractive routes, surveillance)
- h) **personal mobility**  
(mobility impairments, health and fitness issues).

4.5 In terms of Daventry town, it is relevant to note that past travel to work trends as reported in the National Census 1991/2001 indicate that many trips related to work remain within the Daventry Wards and within the District boundary:

	<b>Trip Ends: Daventry Wards</b>	<b>Within District</b>	<b>Outside District</b>
<b><u>Origins:</u></b>			
<b><u>Daventry Wards</u> (1991 Census)</b>	60%	74%	26%
<b><u>Daventry Wards</u> (2001 Census)</b>	59%	70%	30%

4.6 The corresponding trips to Northampton were 7% and 9.2% respectively (1991/2001).

- 4.7 Both the previous and most recent National Census indicate that Daventry, as an employment centre has strong sustainability credentials. The range of facilities in Daventry are quite extensive and the District Council (Town Centre Vision) has proposals to improve the retail base and vitality of the town centre.
- 4.8 The Application Site will therefore, in locational terms, be well related (distance and accessibility) to existing facilities (education, shops, jobs) that will be within reasonable walking and cycling distance or short journeys by public transport or car. **(Figure SMA 7 refers).**
- 4.9 Within the Application Site the proposed mix of uses can potentially result in a substantial on-site capture and containment of trips (reference: Concept Master Plan).
- 4.10 3 Primary Schools would serve pupil catchment areas generally within 400 metres and no more than 600 metres. A Secondary School Site is proposed centrally to the development area adjacent to a District Centre; the DC would be less than 1.3km (radial) from the extremities of the development. Local Centres are proposed near to the Primary Schools, providing for basic retail and community needs.
- 4.11 Substantial areas for recreation and leisure pursuits are to be provided both in the context of formal playing fields and open areas and corridors. The Daventry Country Park is to be extended and a network of footpaths and cycleways will be provided. Safe crossing places are to be provided to facilitate movement by pedestrians and cyclists across the proposed realigned B4036 corridor.
- 4.12 The availability of travel choices will clearly be a key factor, as will purpose of trip and length of journey, in terms of influencing choice of mode of travel.
- 4.13 The transport policy framework and objectives are aimed at ensuring that all new developments are well served by public transport and that appropriate infrastructure is provided for pedestrians and cyclists to maximise the modal share of trips by means other than by car. This is the approach that the Applicants are advocating (discussed later).

- 4.14 The purpose of a trip will also have a bearing upon the timing and the mode of travel.
- 4.15 Worktrips will invariably occur during the normal commuter periods (0730 – 0930 hrs and 1600 – 1900 hrs) and be influenced by location, distance, terms of employment, parking space availability and conditions on the network (congestion, roadworks). Some worktrips associated with part-time and shift work will occur outside of peak commuter periods. This is likely to be the case for leisure, private and recreational trips. Weekly bulk shopping trips are likely to be made by car but generally outside of peak periods. Sunday trading and the Internet have offered greater flexibility to shoppers.
- 4.16 School trips generally coincide with the morning peak periods but primarily occur ahead of the evening peak period. They are not necessarily single purpose trips and very often form part of a trip chain (home-school-work/other).
- 4.17 In terms of distance travelled by purpose of trip, the annual **National Travel Survey (NTS)**, provides a useful indication of trends. The results are used extensively by consultants, transport professionals and appear in many Government statistical publications. The most recent published statistics (2005) reveal a ten year trend of a reduction in the average number of trips per person per year but an increase in the distances travelled; car travel accounts for four fifths of the total distance travelled.
- 4.18 In 2005 commuting accounted for 15% of all trips; shopping 20%, leisure (visiting friends, sport and entertainment, eating out, day trips, go for a walk) 31% and Education (including Escort Education) 11%. Business trips accounted for around 3.5% and Personal Business (includes trips to bank, services, doctor, library etc) for 10%.

**Urban Extension  
at Church Fields, Long Buckby Road, Daventry  
Transport Assessment**

4.19 Table 4.2 of the NTS illustrates the average trip length in 2005 by purpose of trip; for example:

Commuting	8.7 miles (14.00 km)
Escort Education	2.0 miles (3.22 km)
Shopping	4.3 miles (6.92 km)
Sport (participate)	6.0 miles (9.65 km)

4.20 Table 3.2 of the NTS illustrates the average trip length in 2005 by main mode; for example:

Walk	0.7miles (1.13 km)
Cycle	2.4 miles (3.86 km)
Car/Van Driver	8.5 miles (13.68 km)
Local Bus	4.6 miles (7.40 km)
Surface Rail	32.3 miles (51.97 km)

4.21 In terms of peak period travel, in particular the morning peak hour (0800 – 0900 hrs), the majority of trips are associated with commuting, business and education.

4.22 The NTS records that at peak times (0850am) 20 per cent of car trips by residents in urban areas were associated with the “school run”. The average length of trip to school for children aged 5 – 10 years was 1.5 miles (2.41 km) and for pupils 11 – 16 years 3.0 miles (4.83 km).

4.23 The introduction of School Travel Plans and Workplace Travel Plans can therefore play a considerable role in terms of reducing the need to travel by car. The proposed juxtaposition of schools at the Application Site will also result in considerably shorter distances for pupils to travel when compared to the national averages (NTS).

4.24 Availability of car parking at the trip end will be a material factor in influencing travel behaviour. The relative costs of travel by public transport versus the combined costs of travel by car and car parking charges will be material

- considerations. Workplace travel plans can encourage car share, public transport and walk, cycle choices. Planning policies (DPP's) can restrict the number of car spaces available in new developments.
- 4.25 Demand for travel will vary according to socio-economic factors. These cannot be predicted in any precise way. The number of trips made per household, the timing of the trips and their purpose can vary considerably. Not all residents will be economically active at any one time; some may work from home, some may be retired or in part time employment; some will be working away from home, be on leave or be unemployed. Household income, household/family make-up and car ownership will also influence trip generation.
- 4.26 Some residents will prefer to walk or cycle for health and/or recreational reasons. Some residents will have less fears about personal security than others. It is proposed that the new pedestrian and cyclist facilities would be located along routes that would have appropriate levels of natural surveillance, be open and where necessary, be illuminated. Crossing places would take into account the requirements for the mobility impaired.
- 4.27 Travel patterns will also be influenced by available route choices, journey times, the degree of congestion and the extent to which traffic management measures are in force at any one time. The provision of bus priority measures can reduce journey times by bus and potentially attract more users. Traffic Regulation orders can be effective in terms of maximising the effective use of existing highways and controlling the use of corridors at peak times and by various forms of vehicle (PSV, HGV's). The capacity of the urban network will be principally controlled by the capacity of the key junctions.

#### **Potential Demand for Travel**

- 4.28 The strategic modelling (SATURN) undertaken for the District and County Councils has been based upon existing travel patterns without any significant adjustment for improvements to public transport and with regard to the potential provision of high quality footpath and cycleway networks. This was not an unreasonable starting position to adopt in order to safeguard against undue

**Urban Extension  
at Church Fields, Long Buckby Road, Daventry  
Transport Assessment**

optimism but nevertheless it does represent a conservative approach and “worst case” assessment. This has been acknowledged by the Councils’ consultant (Arup).

4.29 The morning peak hour trip rates agreed by the Stakeholder Group were based upon a range generally reflecting information contained in the TRICS database and used elsewhere by the County Council to assess similarly large developments.

4.30 A range of vehicle trip rates for the residential areas were set out by Arup in the background working papers to the modelling.

<b>Dwelling Type</b>	<b>Dwelling/Ha</b>	<b>Trip Rates (2 way)</b>
High Density	45 - 70	0.30
Med Density	30 - 40	0.60
Low Density	0 - 25	0.78

4.31 Similarly trip rates were determined for Local Shopping Centres; B1, B2, B8 Employment and for Schools (Primary and Secondary).

4.32 In advance of more site specific information that would progressively come forward during the LDF period, Arup has had to assume, for the housing areas, a medium density trip rate. Whilst for comparative purposes when testing various options for development this would be an appropriate approach, it is likely that higher densities will be built out in order to accord with PPG/PPS regional targets. Higher densities would therefore result in considerably lower trip rates.

4.33 The travel demand management strategy and priorities for investment should be consistent with the aim to reduce trip rates. The emphasis should therefore be upon lower cost sustainable transport schemes rather than targeting and enhancing operational capacity.

- 4.34 Based upon using the mid-range densities for **housing**, Arup has provided SMA with the following **external to site** vehicular trip generation forecasts. These are presented as morning peak hour estimates in the form of “Attractions” (arrivals) and “Productions” (departures):

<b>Housing (4000 Units)</b>	<b>Attractions</b>	<b>Productions</b>
AM Peak Hour	521	1881

- 4.35 The corresponding figures for the other mixed uses were calculated on the basis of other agreed trip rates with some allowance for on-site capture (e.g. Home to School).

<b>Schools, Employment, Retail, Local &amp; District Centres, Health/Community</b>	<b>Attractions</b>	<b>Productions</b>
AM Peak Hour	356	124

- 4.36 In total the computed morning peak hour external vehicular trip generation for the year 2021 could therefore be as follows:

<b>Church Fields Long Buckby Road Daventry</b>	<b>Attractions</b>	<b>Productions</b>
AM Peak Hour	877	2005

- 4.37 **Figures SMA.TA3A and TA4A** illustrate how the traffic generation has been apportioned to the four principal access points to the wider highway network. The proposed junctions (as reported previously) have been tested using these “worst case” trip generation forecasts and have been sized accordingly.

- 4.38 It is important to note that the traffic flows that have been modelled (SATURN) and distributed across the highway network include the traffic generation associated with the other development sites at Monksmoor (Area 1), Danetree

(Area 3) and Drayton Fields (Area 4); all as detailed in the Arup report Addendum Paper – Option 4 (the Core Strategy Pre-Submission Preferred Option).

- 4.39 The Arup report indicates that the cumulative effect of all the proposed development and background growth at Daventry could result in significant increases in traffic flows on the Ring Road and along the radial routes where most of the developments are to be located. The report also states that the analysis indicates that demand for car parking space in the town centre could significantly exceed capacity (approximately 2800 space demand versus 2000 space capacity).
- 4.40 With regard to impacts upon the Trunk Road Network, the Consultant reports that there will be significant impacts upon the A5 to the north and south of Daventry. Overall in terms of traffic volumes the Consultant concludes that the impacts upon the M1 would be small.
- 4.41 The junction analysis indicates that potentially eleven existing junctions may require upgrading at some time during the LDF period up to 2021. Similarly the Consultant's report identifies that certain roads may require widening (Eastern Way, B4036, A45). However these are not recommended as firm proposals as yet and Arup states:

*“...Again, like the junction improvement requirements outlined in Section 3, further analysis will be required before these proposals are taken forward, in terms of the environmental, economic and social impacts.”*

- 4.42 There will be variables and some uncertainty regarding the trip generation forecasts and the extent to which other measures targeted at increasing the modal share of trips by foot, cycle and public transport will be successful. However from the Transport Policy framework perspective, it is clear that all major development areas will need to provide for high quality footpath and cycleway networks and contribute towards new bus services.

- 4.43 Similarly the policies and objectives of the Regional Spatial Strategy and Local Transport Plan seek to maximise the use of existing highway infrastructure. To resolve, at this stage, to commit to widescale highway widening and significant capacity enhancements at junctions would therefore run contrary to the key policy objectives.
- 4.44 Notwithstanding the above, Planning Policy Guidance 13 – Transport (paragraph 5) also acknowledges that the car will continue to have an important part to play and, for some journeys, will remain the only real option for travel. A distinction therefore needs to be made between car ownership and car use in terms of implementing strategies to control travel demand. For reasons of social inclusion, security, convenience and accessibility for the mobility impaired, suitable provisions should therefore be made for car parking at the trip origin.
- 4.45 Conversely, decisions and policies will need to be taken and put in place regarding the control of parking, parking standards and parking charges at the trip end. These could have a significant impact upon influencing travel behaviour. The Arup study shows that demand for car spaces in the town centre could otherwise substantially exceed capacity.
- 4.46 The trip rates used in the SATURN Model can be regarded as “worst case” parameters and do not make any allowance for improvements to public transport and enhanced facilities for pedestrian and cyclists. Consequently if these improvements are to be successful it would be on the basis that travel by non-car modes is more attractive and more cost effective.
- 4.47 Taking all of the foregoing into account, it is considered that the future management of travel demand should be focused and prioritised upon promoting sustainable travel whilst allowing sufficient flexibility to monitor and respond to future conditions.
- 4.48 It is therefore proposed that the strategy should be based upon providing high standard accesses that provide for essential access, effective use of roadspace and safe movement for all users. Opportunities should be taken to incorporate

infrastructure that can be flexibly used (allocation of roadspace to public transport and cyclists) and respond to prevailing travel demand in the most sustainable way.

- 4.49 Preference at the outset should therefore be given to cost effective investment in public transport and providing incentives for trips to be made by this mode, by foot and by cycle. At the same time, it is also considered appropriate that land should be safeguarded so as not to compromise the option for capacity enhancements should future traffic conditions or changes in policy dictate.

#### **Demand Management – Shared Responsibilities**

- 4.50 As stated earlier there will be a **shared responsibility** in terms of the measures, controls and investment that will be necessary to ensure that the future growth at Daventry can be managed in a sustainable way.

- 4.51 These responsibilities will fall upon both the public and private sectors.

- 4.52 **Public Sector:**
- Daventry District Council (DCC)
  - West Northamptonshire Development Corporation (WNDC)
  - Highways Agency (HA)

- 4.53 **Responsible for:**

setting up the appropriate Policy Framework; implementing Policy (development control) ; setting transport policy objectives, priorities and programmes; securing funding of strategic infrastructure; performing the statutory role and duties of Local Delivery Vehicles; managing the transport network; using statutory powers to regulate the movement of traffic; using statutory powers to facilitate the implementation of essential infrastructure; co-ordinating the pooling of funds from developers; co-ordination and monitoring of Travel Plans; negotiating and setting up public transport contracts and services.

- 4.54 **Private Sector:** Developers  
Major Businesses  
Retailers  
Public Transport Providers
- 4.55 **Responsible for:** provision of access and on-site infrastructure; facilitating access and efficient circulation for public transport; provision and operation of high quality public transport; commensurate and proportionate contributions towards securing improvements to off-site infrastructure to encourage sustainable travel and provide mitigation; setting up and operation of Workplace and Residential Travel Plans; entering into Section 106 Agreements (with appropriate end dates: typically 5 years) to deliver transport infrastructure and travel demand management measures.
- 4.56 In summary the collective shared responsibility requires that the appropriate policy framework and controls are put in place and that the necessary infrastructure and incentives can be provided to encourage people to travel in a more sustainable way. Contingencies should be provided for increasing capacity on the network should future demand and policy changes require so. Accordingly the following travel demand management strategy is proposed for the Application Site.

#### **Church Fields – The Proposed Strategy**

- 4.57 The following components of the strategy reflect a pro-active “design and action” led approach by the Applicants to the implementation of infrastructure and towards ongoing travel demand management.

Providing the Appropriate Infrastructure to Encourage Sustainable Travel

4.58 The Master Plan and access proposals (Section 2.0 earlier) demonstrate the Applicants' commitment to an access and movement framework that will deliver:

- high quality footpath and cycleway networks on-site and with linkages off-site
- permeable and walkable neighbourhoods to maximise ease of access and circulation by foot and cycle with direct and convenient linkages between homes, schools, shops, jobs and recreational areas
- design of low speed roads and streets
- recreational routes for cyclists, pedestrians and equestrians
- provision of cycle parking at neighbourhood centres, schools, places of assembly, communal and sports/recreational areas
- movement corridors and facilities for public transport to ensure all parts of the development are accessible to public transport
- high standard connections to the broader highway network with signal controlled junctions providing safe at-grade crossing places for pedestrians and cyclists and options for bus lanes and bus priority
- realignment and diversion of the B4036 to remove non-access-through-traffic from the development to create a better environment for residents, cyclists and pedestrians

Commitments to Measures to Influence Travel Behaviour

4.59 In accordance with best practices and with the national and local transport policy objectives, the Applicants will commit to:

- funding and implementing appropriate on-site infrastructure for buses, (suitable roads, bus priority measures, bus stops, interchanges, real time information)
- design streets for low speeds and enhance amenity and road safety of neighbourhoods and remove psychological barriers to movement by foot
- provide appropriate infrastructure for the mobility impaired
- provide safer routes to schools and encourage more journeys to school by foot and cycle
- raise awareness of residents to travel choices, promote personalised travel planning and provide incentives to each first occupier to travel by cycle and public transport (travel information packs, subsidised public transport travel and discounted cycle purchase vouchers)
- setting up and operating a Residential Travel Plan (with an appropriate roll forward programme for subsequent phases)

### Demand Management and Mitigation

- 4.60 Paragraph 3.2.3 of LTP2 sets out the County Council's approach to reducing the demand for travel by car. It states:

*“...This will be achieved by improving the attractiveness of alternatives such as public transport, walking and cycling, and by limiting the availability of parking for those who still choose to use their cars.*

*Employers and other key destinations for car users will be encouraged to provide travel plans and other strategies to encourage the use of alternatives to the car. These will include marketing and promotions, as well as other incentives. It will be necessary to complement those demand management activities with infrastructure works, e.g. bus priority for key services, in order to obtain maximum benefit”.*

- 4.61 Clearly there will be a need for co-ordinated response by developers and the local authorities to achieve a reduction in demand. The Applicants will commit to providing high quality infrastructure for buses, pedestrians and cyclists. Bus priority measures can be provided at the principal junctions and within the development areas. Commensurate with and proportionately to other development areas the Applicants would commit to supporting the extension of existing bus services and, as development proceeds, to securing dedicated new services (discussed further in Section 5.0).
- 4.62 The local planning and highway authorities would be expected to adopt and apply appropriate parking policies and standards (SPD's) and to control the availability of parking at trip destinations.

- 4.63 The Applicants would expect the local authorities to require new schools to set up and operate travel plans and that commercial developments would be required to provide workplace travel plans.
- 4.64 In terms of highways infrastructure and traffic management, the Applicants propose to provide the land for, proportionately contribute towards the cost and construct the B4036 realigned carriageway to a 7.3m single carriageway standard. The Applicants would safeguard land alongside it for future widening or other demand management measures (dedicated public transport corridor/lane). The four principal access points to Church Fields would be traffic signal controlled with sufficient lanes to accommodate future traffic growth and/or bus priority measures.
- 4.65 Off-site the Applicants would expect the County Council and Highways Agency to consider what improvements may be necessary to the wider highway network but again anticipating that the approach taken would accord with the RSS and key objective to make best use of existing networks and only developing additional highway capacity when all other measures have been exhausted (paragraph 2.34 earlier refers).
- 4.66 The local planning and highway authorities would be expected to pursue all funding sources, including pooled contributions from developers, to provide the necessary off-site transport infrastructure to support the growth agenda for Daventry.
- 4.67 At Norton Village mitigation measures are proposed to deter non-essential access and remove through traffic to the realigned B4036. The principles of traffic calming and speed control measures have been the subject of earlier consultations with the Parish Council and local authorities. It would be anticipated that full scheme details would be worked up and overseen by the County Council with further public consultation. The Applicants would commit to proportionately contributing towards the implementation of these measures.

## 5.0 TRANSPORT PLANNING OBLIGATIONS

5.1 Based upon the foregoing assessments, the proposed travel demand management strategy (TDMS) and the shared responsibilities (public/private sector) for controlling and managing future travel demand, the following framework is proposed for seeking agreement upon the transport planning obligations with the local planning and highway authorities.

### **Obligations on the part of the Applicants**

5.2 These fall principally into two areas:

- a) Provision of Enabling Infrastructure
- b) Addressing the Broader Transport Requirements

### Enabling Infrastructure

5.3 The Applicants are aware that the County Council has previously sought funding support (CIF bid) for improvements to the B4036 corridor to support new housing development, (reference : LPT2, Table 4.22). The Applicants would expect the County Council to continue to seek public sector funding allocations and proportionate contributions from other developments towards the cost of improving the B4036 corridor. The predicted increase in movements along the B4036 would not result from the Application Site alone.

5.4 The Applicants would commit to facilitating and proportionately funding the diversion and realignment of the B4036 to adoptable standards as generally shown on drawing numbers:

2006.1075.50 (1:5000 scale)

2006.1075.51 (1:2500 scale)

- 5.5 The Applicants would commit to safeguarding land for potential future capacity enhancements along the B4036 corridor (as realigned) up to the A5.
- 5.6 The Applicants would commit to providing high standard accesses as shown on drawing numbers:
- 2006.1075.53 Zone 1 Site Access
  - 2006.1075.54 Zone 2 Site Access
  - 2006.1075.55 Zone 3 Site Access
  - 2006.1075.56 Zone 4 Site Access
- 5.7 The Applicants would commit to providing the on-site highways infrastructure and footpath/cycleway networks as generally demonstrated on the Master Plan.
- 5.8 The Applicants would make provisions, within the Application Site, so as to facilitate and not compromise the possibility of pedestrian and cyclist links between Monksmoor and the Application Site.
- 5.9 The Applicants control the land within which a segregated cycle lane could be located adjacent to the B4036 from the Application Site to the junction with the A5; as shown illustratively on drawing number 2006.1075.057.

#### Broader Transport Requirements

- 5.10 For major development areas the LTP2 advises that all sources of funding, albeit a substantial part coming from the private sector, will be key to ensuring they are well served by public transport, have good links to walking and cycling networks, have good road access and provide adequate mitigation against any transport problems (paragraphs 2.49-2.51 earlier refer).
- 5.11 Accordingly the Applicants anticipate that the broader transport requirements will be financed from various fund sources together with pooled contributions (or “roof tax”) from developers.

5.12 Subject to the policy tests and guidelines given in Circular 05/2005 – Planning Obligations, the Applicants are anticipating seeking agreement with the local planning and highway authorities with regard to commensurate and proportionate contributions towards extending bus services to the Application Site, towards off-site junction and highway improvements, towards specific mitigation schemes (Norton Village) and generally towards encouraging sustainable travel. The Applicants propose setting up and operating a Residential Travel Plan (discussed later).

### **Public Transport**

5.13 In September 2004 the District Council adopted an Interim Supplementary Planning Document within which an indication was given of the approach to be taken to securing developer contributions towards enhancing public transport. This effectively introduced a requirement for a specific level of bus service relative to the size or phase of development under consideration. The provision and frequency of services would reflect the potential population and patronage levels.

5.14 Subsequently and as part of the Daventry Transport Study (DTS), the County Council's consultant Arup has prepared an outline strategy for the development of public transport networks to serve the proposed development areas at Daventry. The report entitled: Daventry Transport and Non Motorised Modes – Strategy Working Paper was released to SMA on 18 August 2006 (**enclosed as Appendix 3**).

5.15 The Consultant has examined to what extent the existing services could be extended to serve the new development areas, to what extent new services would be required and to what extent other measures would be appropriate to complement the improved services.

- 5.16 By cross reference to **Figure SMA5**, the Consultant's report has suggested that Services: 40/41, 96 and 97 could be extended to serve the Application Site. The interleaving of these services could, it was advised, result in potentially a 10 minute frequency during morning peak periods. It is also noted that the LTP2 has a key objective for upgrading the existing hourly X42 service to Northampton to half hourly frequency.
- 5.17 Whereas the precise routing and level of services will be for further determination and agreement, the Master Plan and Access and Movement Framework for Church Fields will ensure that any future options for linking and co-ordinating services between major development areas and the town centre are not compromised.
- 5.18 The Consultant's report has recommended that all new services (and modified services) should include the following features:
- operate between 0700-1900 hrs
  - operate Monday to Saturday; and
  - operate on a clock face timetable (services operating at the same time every hour)
- 5.19 The Consultant has proposed these as the basis for a more detailed appraisal with the relevant bus operators. When developing the outline strategy in more detail, the Consultant has recommended that other complementary measures be taken into account, for example:
- a) ensure where possible all services originate and terminate in the town centre
  - b) consider introducing cross-ticketing arrangements
  - c) arranging the radial services to minimise the number of changes in the town centre
  - d) ensure off-peak services are included (evenings and weekends)

- e) provide low floor buses to remove barriers for the mobility impaired
  - f) improve marketing of public transport service information
  - g) provide high quality waiting and interchange facilities
  - h) provide bus timetabling and real time information at key bus stops
  - i) develop the town centre bus station
- 5.20 The consultant identified various sources for potential funding and grants. Preliminary costs for implementing the improved services to accommodate all of the proposed growth at Daventry were indicated to be in the range of £3m to £5m. The costs to be apportioned to the Church Fields development will need to be confirmed following more detailed analysis by the County Council and local bus operators.
- 5.21 Daventry District Council is pursuing feasibility studies and assessments both with regard to conventional bus services and personal rapid transit (PRT). It is understood that DDC has secured funding approval for a feasibility study into a “pilot” PRT scheme for existing areas of Daventry.
- 5.22 Given the uncertainties at the moment over the feasibility, potential patronage and public acceptance (fears over security) of PRT, it is understood that the County Council would seek to secure conventional bus services for the Application Site.
- 5.23 The Applicants are willing to seek agreement with the local planning and highway authorities upon the funding arrangements for enhancing existing bus services and phasing in new bus services as the development proceeds. They are content that the outline strategy proposed by Arup can form the basis of those further discussions and agreements.

- 5.24 The Master Plan for the Application Site demonstrates how the internal road pattern and principal movement corridors will ensure that all parts of the site would be accessible to public transport. The road layout enables efficient phasing of development and bus service provision to take place in a cost effective manner.
- 5.25 It is anticipated that the Application Site would be served by extending the existing services 97 and 40 into the site at an early stage. Enhanced services to Long Buckby railway station could be routed through the Application Site from the realigned B4036 on a limited stop basis. Other rural services such as the 96 service could be improved (frequency) to bring benefits to the Application Site and to the villages at Norton, Long Buckby and Welton.

#### **Residential Travel Plan (RTP)**

- 5.26 In September 2005 the Department for Transport published guidelines for the preparation of travel plans for residential developments:

*“Making residential travel plans work: Good Practice guidelines for new developments*

*September 2005”*

- 5.27 The document states that it builds upon the earlier generic guidance produced by the DfT and ODPM and focuses on the particular issues which are unique to residential travel plans. It is however acknowledged (Foreword to the document) that emerging good practice is at an embryonic stage. It recognises that each site is unique and that the travel plan should relate to the specific issues and needs of the site under consideration. The DfT states that residential travel plans are likely to achieve the greatest impacts in relation to larger residential developments (i.e. over 100 dwellings).

5.28 The RTP constitutes an important element of the proposed travel demand management strategy. The RTP would provide a package of measures aimed at reducing the number and length of car trips generated by the residential development whilst supporting more sustainable forms of travel. The provisions of the RTP would need to accord with the guidance given in Circular 05/2005.

#### Preamble

5.29 The following draft components of the RTP are provided, without prejudice, for the basis of discussions with the County Council and local planning authority with regard to any Section 106 Transport Obligations. It is intended that the RTP would be a stand alone document which would be agreed with the authorities within a stipulated period concurrent with the engrossment of a Section 106 Agreement.

5.30 The Applicants would proportionately contribute towards the costs of the local planning authority employing a Travel Plan Co-ordinator to administer the approved RTP and liaise with all developers with regard to the implementation, monitoring and subsequent review of their respective RTPs.

5.31 The RTP shall set out a timetable for the implementation, monitoring and review of all stages of the travel plan. The end date for the RTP would normally be stipulated (typically 5 years). The timetable shall take into account the phasing of development and associated infrastructure.

5.32 It would be normal practice that the triggers for any financial contributions or for any specific elements of infrastructure shall be agreed and set out in the RTP.

5.33 Targets shall be agreed for the performance of the Travel Plan and set out in the RTP. It shall include provisions for amelioration should the targets not be met. The respective responsibilities of the developer and the local planning authority with regard to the monitoring and review of the RTP shall be set out in the RTP.

- 5.34 The emphasis shall be upon providing measures and incentives for maximising the modal share of trips by foot, cycle and public transport in preference to enhancing capacity on the broader highway network. Contingency provisions for junction capacity or highway improvements could, for example, become the agreed amelioration measures should the travel plan targets not be met. It is considered that the costs to be apportioned to any one developer would need to reflect the guidance given in Circular 05/2005 and be based upon a “pooled contribution” or a “roof tax” approach.

#### Transport Assessment

- 5.35 Agreement upon the contents and recommendations of the TA and any off-site measures would form the basis for the preparation of the RTP. Once outline planning permission has been granted, the RTP would provide the ongoing management tool for implementing any necessary transport measures for the Application Site.

#### Site Specific Considerations

- 5.36 The Master Plan and the Design and Access Statement for the Application Site shall set out the principles in terms of access and the proposed provision of principal movement corridors by foot, cycle, public transport and car. The subsequent Reserved Matters Applications shall adhere to the guidelines given in the Master Plan, unless otherwise agreed with the local planning authority, and shall provide full details of the on-site transport infrastructure and its phasing.

#### **Components of the Residential Travel Plan (RTP)**

- 5.37 It is proposed that during the preparation of the RTP, consideration shall be given to some, or all, of the following measures.

Site Design

- 5.38 The proposals shall include good quality, safe and comfortable walking and cycling routes within a layout that is “permeable” for the benefit of those on foot and bicycle.
- 5.39 The accommodation of existing rights of way (public footpaths and bridleways) within the Site along corridors that are attractive, commodious and safe.
- 5.40 Pedestrian and cyclist links to the off-site networks and neighbouring developments shall be provided.
- 5.41 The creation of 20mph zones with sensitive and flexible use of highway standards and carriageway/pavement finishes shall accord with current best practices. Consideration shall be given to emerging guidelines (DfT/TRL) on “psychological” design approaches to speed control.
- 5.42 Consideration shall be given to design measures to reduce the impact of car parking upon the visual appearance of the street scene.
- 5.43 Consideration shall be given to cycle parking facilities within the Application Site at play areas, assembly points, workplaces, schools, shops and at the District and Local centres. Where it is practicable cycle parking will be incorporated in the design of houses/garages.

Complementary Measures

- 5.44 It would be anticipated that the Developer would provide each first occupier/home owner with a “Welcome Travel Information Pack”. This shall provide information upon the available options for travel to local facilities by bus, foot and cycle.

5.45 Each household's "Welcome Travel Information Pack" might include for example:

- discounted use of public transport to encourage sustainable travel at the outset of occupation (e.g. a voucher to provide free bus travel on a local service for a stipulated period (typically 3 to 6 months) for up to 2 persons per household)
- discounted bicycle procurement (e.g. a voucher to purchase a new bicycle; 1 per household)
- The provision of walking and cycling maps showing local routes to local facilities such as schools, sports centres, cinemas, health centres, shops and recreational countryside paths
- information about the Residential Travel Plan and any other services that the residents should be ideally made aware of and use: personalised travel planning (for example: DfT Transport Direct Website), home shopping delivery, local taxi services etc.
- an induction meeting for all new residents arranged by and run by the Travel Plan Co-ordinator (TPC). This would provide the opportunity for the TPC to explain the benefits of sustainable travel and to discuss the contents of the "Welcome Travel Information Pack"
- information on "Car Share" opportunities (any relevant Website Information)

#### Targets, Monitoring and Contingencies

5.46 Travel Plans (residential, workplace or school) need to have measurable targets and contingencies in the event of the targets not being realised.

5.47 It is important that the RTP is monitored and if necessary given a further period to achieve targets.

- 5.48 In the context of Daventry and with regard to all of the potential development areas that have been assessed in the strategic transport model (SATURN), the starting position would be to attempt to improve upon the conservative trip rates used in the Strategic Transport Model.
- 5.49 The trip rates used in the Strategic Transport Model represent “worst case” assumptions and have not taken into account the potential modal shift associated with improved public transport, high quality cycle and footpath networks and the incentives outlined in the RTP.
- 5.50 Consequently if the future travel demand (to Year 2021), generated by all of the major development areas in Daventry, matches or exceeds that which has been modelled by the County Council’s Consultant then a number of highway and junction improvements may become necessary.
- 5.51 However and as stated earlier, it would run contrary to the policy objectives of the RSS and LTP2 to provide additional highway capacity before other sustainable travel measures and initiatives have been given the opportunity to influence travel behaviour.
- 5.52 The setting of targets for the RTP will need to be reconciled with the policy objectives. These should, inter alia, take into account specific periods of monitoring to corresponding thresholds of development to ensure the measurable outcomes are assessed over a reasonable period and are representative.
- 5.53 In the event that any significant increase in future external vehicular trip generation becomes a material concern, the local planning and highway authorities would have the option to use part of the finance secured from the Section 106 “pooled contribution” or “roof tax” planning obligation fund. This could, for example, enable the local highway authority to introduce traffic management measures, procure further improvements to public transport infrastructure or consider highway capacity enhancements.

## 6.0 SUMMARY AND CONCLUSIONS

- 6.1 The MKSM sub-regional strategy has identified Daventry as a sub regional centre for major growth. Daventry District Council (DDC) and Northamptonshire County Council (NCC) have commissioned various studies to examine the options for accommodating major urban extensions at Daventry. These studies have identified and have confirmed the suitability of the Application Site to accommodate a significant proportion of the housing requirements for the period up to 2021.
- 6.2 In the context of the Daventry District Local Development Framework (LDF), the Pre-Submission Core Strategy has identified the Application Site as the preferred option for accommodating up to 4000 new homes, 3 primary schools, a secondary school and other mixed uses (retail, health/employment/community)
- 6.3 The details contained in the Outline Planning Application represent a comprehensive set of proposals that have had regard to the various assessments (landscape, ecology, archaeology, geotechnical, drainage, urban design and transport) undertaken by the Applicants' professional team. The proposals positively respond to and accord with the Local Development Framework Pre-submission Core Strategy (PSCS).
- 6.4 The Master Plan and the Access and Movement Framework plan accompanying the Outline Planning Application illustrate the comprehensive approach that has been taken and the design philosophy that has been used to ensure that all parts of the development will be accessible by foot and cycle. Appropriate corridors are to be provided for public transport. All parts of the development will be within 400 metres of a principal bus corridor.
- 6.5 The layout of the proposed development (roads and circulation) retains sufficient flexibility in terms of phasing. It will ensure that public transport can be provided at an early stage and in a manner that will permit efficient routing, circulation and links back to the town centre.

6.6 Principal movement corridors for the even dispersal of traffic, public transport and service vehicles are to be provided. A mix of major and minor streets are proposed to provide corridors for essential access within which speeds would be controlled to 20 mph or below. Direct access to property will be provided from the streets.

### **Key Highways and Access Components**

6.7 The B4036 Long Buckby Road is to be diverted and realigned along a new corridor in order to:

- i. reassign non-access – through-traffic (currently 4 500 vehicles per day) out of the development area
- ii. provide a standard of corridor compliant with current day design standards
- iii. provide an alternative and more attractive corridor for the non-access-through-traffic currently travelling through Norton Village to reach the A5
- iv. provide a firm boundary to the major urban extension.

6.8 The “abandoned” section of the B4036 would be retained as a movement and access corridor within the development. It would provide a continuous cycle route through the development and can also be utilised as sections of the proposed public transport network.

6.9 The diversion of the B4036 and the associated changes to the Daventry Road would be undertaken under the procedures of Section 247 of the Town and Country Planning Act 1990 and Section 278 of the Highways Act.

6.10 The scheme design for the B4036 realignment (approximately 2.5 km) and the principal access points are shown on the following reference drawings:

2006.1075.50 (1:5000 scale)

2006.1075.51 (1:2500 scale)

6.11 The design has been based upon the design parameters given in the DfT Design Manual for Roads and Bridges (TD 9/93).

6.12 The principal access points are shown in more detail (1:500 scale) on the following reference drawings:

2006.1075.57            Zone 1 Site Access

2006.1075.58            Zone 2 Site Access (and Norton Link)

2006.1075.59            Zone 3 Site Access

2006.1075.60            Zone 4 Site Access

6.13 The principles of access and the form of junctions proposed have been discussed with the local Highway Authority and the proposals have its support. The operational capacity of the junctions has been optimised using the LINSIG and TRANSYT computer programs (discussed in Section 3.0 later).

6.14 An off road cycleway can be provided beyond the realigned section of the B4036 to link to the A5. A potential route is illustrated on drawing 2006.1075.057.

### **Strategic Transport Model (SATURN)**

6.15 The District and County Councils commissioned Arup (consultants) to build a strategic transport model (SATURN). This has enabled the authorities to objectively assess the impacts of the proposed development areas and to identify and quantify what measures may be necessary to accommodate the predicted increase in travel demand.

- 6.16 In the spirit of co-operation, expediency and key party involvement a Stakeholder Group was formed. Representatives of all of the major promoters of development were invited to attend progress meetings and to participate in discussions over the scope, parameters and outputs of the strategic transport modelling.
- 6.17 The scope of the strategic modelling and the parameters to be used were agreed. Progress meetings to discuss the interim observations and findings of the modelling exercise were held on a monthly basis. Details of the SATURN model's calibration and validation were agreed.
- 6.18 As regards the implications for the site specific TAs which would be submitted by the respective developers, it was agreed that:
- i. the SATURN Model would examine the cumulative effects of all sites and provide the basis for identifying a strategy for implementing improvements upon the broader highway network and,
  - ii. the TAs to be produced for the various individual development sites would therefore focus principally upon the site access requirements and immediate linkages to the surrounding highway network; the TA's would be supported by a Residential Travel Plan and a package of measures to encourage trip making by foot, cycle and public transport.
- 6.19 The SATURN model has been validated and calibrated using the DfT guidelines to give a robust baseline representation (modelled flows versus observed flows) for the Year 2004. The SATURN model has considered further traffic growth on the network and other committed developments and infrastructure changes deemed to be in place by Year 2021. This is referred to as the Comparator Case.

- 6.20 The road and junction capacity assessments undertaken by the County Council's Consultant (Arup) have indicated that the existing highways infrastructure is capable of accommodating the Base and Comparator Case traffic flows without any significant improvements.
- 6.21 Further strategic modelling has been undertaken to examine the LDF pre-submission Core Strategy preferred Option for Growth (Option 4). This allocates up to 4000 dwellings to the Long Buckby Road Site (the "Application Site"). The outputs from this modelling were reported in the Consultant's Report (July 2006): "Daventry Transport Study – Highway Improvements Working Paper : Addendum Paper Option 4". These indicate that with unrestrained growth and without improvements to public transport and to footpaths and cycleway networks, certain junctions and highway corridors will need improving.
- 6.22 There will be variables and some uncertainty regarding the trip generation forecasts and the extent to which other measures targeted at increasing the modal share of trips by foot, cycle and public transport will be successful. However from the Transport Policy framework perspective, it is clear that all major development areas will need to provide for high quality footpath and cycleway networks and contribute towards new bus services.
- 6.23 Similarly the policies and objectives of the Regional Spatial Strategy and Local Transport Plan seek to maximise the use of existing highway infrastructure. To resolve, at this stage, to commit to widescale highway widening and significant capacity enhancements at junctions would therefore run contrary to the key policy objectives.
- 6.24 Notwithstanding the above, Planning Policy Guidance 13 – Transport (paragraph 5) also acknowledges that the car will continue to have an important part to play and, for some journeys, will remain the only real option for travel. A distinction therefore needs to be made between car ownership and car use in terms of implementing strategies to control travel demand. For reasons of social inclusion, security, convenience and accessibility for the mobility impaired, suitable provisions should therefore be made for car parking at the trip origin.

6.25 Conversely, decisions and policies will need to be taken and put in place regarding the control of parking, parking standards and parking charges at the trip end. These could have a significant impact upon influencing travel behaviour. The Arup study shows that demand for car spaces in the town centre could otherwise substantially exceed capacity.

### **Travel Demand Management Strategy**

6.26 Taking all of the foregoing into account, it is considered that the future management of travel demand should be focused upon and prioritised towards promoting sustainable travel whilst allowing sufficient flexibility for monitoring and responding to future conditions.

6.27 Preference at the outset should therefore be given to cost effective investment in public transport and providing incentives for trips to be made by this mode, by foot and by cycle. At the same time, it is also considered appropriate that land should be safeguarded so as not to compromise the option for capacity enhancements should future traffic conditions or changes in policy dictate.

6.28 There will be a shared responsibility in terms of the measures, controls and investment that will be necessary to ensure that the future growth at Daventry can be managed in a sustainable way. This responsibility will fall upon both the public and private sectors.

6.29 In Section 4.0 of this Report (paragraph 4.57 and forward) the proposed strategy for the Application Site is set out and demonstrates how the Applicants would commit to implementing infrastructure and other measures to control travel demand and influence travel behaviour.

- 6.30 The Applicants will commit to providing high quality infrastructure for buses, pedestrians and cyclists. Bus priority measures can be provided at the principal junctions and within the development areas. Commensurate with and proportionately to other development areas the Applicants would commit to supporting the extension of existing bus services and, as development proceeds, to securing dedicated new services (discussed further in Section 5.0).
- 6.31 In terms of highways infrastructure and traffic management, the Applicants propose to provide the land for, proportionately contribute towards the cost and construct the B4036 realigned carriageway to a 7.3m single carriageway standard. The Applicants would safeguard land alongside it for future widening or other demand management measures (dedicated public transport corridor/lane). The four principal access points to Church Fields would be traffic signal controlled with sufficient lanes to accommodate future traffic growth and/or bus priority measures.
- 6.32 The Applicants would commit to providing the on-site highways infrastructure and footpath/cycleway networks as generally illustrated on the Master Plan.
- 6.33 The Applicants control the land within which a segregated cycle lane could be located adjacent to the B4036 from the Application Site to the junction with the A5; as shown illustratively on drawing number 2006.1075.057.
- 6.34 Off-site the Applicants would expect the County Council and Highways Agency to consider what improvements may be necessary to the wider highway network but again anticipating that the approach taken would accord with the RSS and key objective to make best use of existing networks and only developing additional highway capacity when all other measures have been exhausted (paragraph 2.34 earlier refers).
- 6.35 The local planning and highway authorities would be expected to adopt and apply appropriate parking policies and standards (SPD's) and to control the availability of parking at trip destinations.

- 6.36 The Applicants would commit to setting up and operating a Residential Travel Plan (the draft components of this are set out in Section 5.0 of the Report). The Applicants would expect the local authorities to require new schools to set up and operate travel plans and that commercial developments would be required to provide workplace travel plans.
- 6.37 At Norton Village mitigation measures can be provided to deter non-essential access and remove through traffic to the realigned B4036. The principles of traffic calming and speed control measures have been the subject of earlier consultations with the Parish Council and local authorities. It would be anticipated that full scheme details would be worked up and overseen by the County Council with further public consultation. The Applicants would commit to proportionately contributing towards the implementation of these measures.

### **Conclusions**

- 6.38 The various studies undertaken on behalf of the District and County Councils have identified and confirmed the suitability of the Application Site to accommodate a significant proportion of the housing requirements for the period up to 2021.
- 6.39 The strategic transport modelling has identified what transport infrastructure improvements may become necessary to accommodate the proposed growth at Daventry. Whilst it has not taken into account the potential reduction in travel demand resulting from improvements in public transport and from other measures, it has nevertheless provided a “datum” against which the success of the proposed travel demand management strategy can be measured over time.
- 6.40 This Transport Assessment has examined the specific transport requirements for the Application Site in terms of access and circulation and the contribution that the development proposals can make in terms of delivering sustainable travel patterns.

6.41 It is concluded that the proposed travel demand management strategy for the Application Site provides a balanced and appropriate response to the transport policy objectives outlined in Section 4.0 earlier. These embrace design, accessibility, travel choice, better management of existing networks and avoid reliance upon developing additional highway capacity until all other measures have been exhausted.

### **The Way Forward**

6.42 It is considered that the TA in conjunction with the broader strategic modelling and transport policy framework should form the basis for the Applicants to seek agreement with the local planning and highway authorities regarding any transport planning obligations.

6.43 Stuart Michael Associates, on behalf of the Applicants, will be pleased to hold further discussions, as necessary, with the local planning and highway authorities prior to the determination of the planning application.