

LINDHURST  
MANSFIELD

**VOLUME 2 - TRAVEL PLAN**

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## Section 1 Introduction

### 1.1 Background

This report has been prepared in response to a request by The Planning Authority at Mansfield for a Travel Plan with respect to development of land at Firs Farm, Lindhurst, within the District. The report will also form part of the documentation required for the continued development of the site.

The Travel Plan developed by a consortium headed-up by Westerman Homes Limited (The Developers) is based on sustainable transport principles which are aimed at reducing dependency on private car use. The Plan promotes public transport, cycling, walking and car sharing as the main initiatives to reduce traffic congestion resulting from the site. At this stage, The Plan is presented in outline and a series of sustainable transport proposals are provided in principal. The decisions on which should be implemented and to what levels The Planning and Highways Authorities will require their support are left for further discussion at this stage. It is in any event considered that the implementation of sustainable travel proposals will include a process of monitoring on an annual basis to establish The Plans' overall effectiveness and to ensure that targets established are realistic and are being met.

Until a Planning Consent has been issued on the site, potential occupiers and commercial end-users are always reluctant to enter into specific and time consuming discussions on Travel Plan issues. This is particularly true where a commercial occupier has one or more alternative site options under consideration. In terms of delivering a comprehensive site-wide Travel Plan therefore, it is envisaged that this will be done and agreed with the Highways Authorities post-planning, but prior to the occupation of the first building on the site. Since construction of the commercial units themselves will not commence until at least one occupier has been tenanted, this will allow the specific information regarding end-users to be obtained, that information collated with other potential occupiers and a comprehensive Plan formulated. Occupier Specific Travel Plans will then follow, with each commercial occupier being required to submit and agree his individual Travel Plan prior occupying his own building. By this means, each Travel Plan can be submitted and agreed on a bespoke basis, under the auspices of both this framework and the full Travel Plan for the site as a whole.

### 1.2 Nature of the Development

The Developers wish to develop 1,700 houses and a series of bespoke commercial and light industrial units on the Firs Farm site. The buildings so constructed will employ approximately 6,100 staff, in the following areas:-

		<u>Proposed</u>
Commercial Units	-	4,000
Light Industry (B1C Units)	-	2,000
	-	100
<b>Total</b>		<b>6,100</b>

The commercial development as a whole is likely to comprise a mix of Business Park uses but for the purposes of traffic assessment, office uses have been assumed.

With respect to sustainable travel, it is proposed that the number of car parking spaces related to the employment buildings will be 2,500 (see **Appendix D**). Housing will be limited to one car parking space per dwelling as a general rule. As a consequence, the circumstances will exist in the future for the promotion of sustainable transport initiatives and the delivery of a less car dependant mode of operation within this part of the Mansfield Urban Area.

### **1.3 Sustainable Development**

The parking policy and sustainable travel initiatives pursued by The Planning Authority are founded in the political desire to reduce car traffic and congestion and to minimise harmful emissions associated with traffic pollution. Perhaps more importantly at Lindhurst, the effects of congestion along the A38 to the east of the site create a potential bottle-neck for traffic movements through the area during peak periods of the day, making the movement of employees and residents by private car problematic. Accordingly, the emphasis in transport policy has moved towards a new focus on improving accessibility and reducing the need to travel, rather than one based solely on highway improvements.

This environmental motivation is matched by the need to address the rapid growth in congestion on the local road network, particularly along the A38 corridor. The emphasis is, therefore, on managing the system rather than expanding it, using a variety of techniques that are highlighted in later sections of this travel plan.

### **1.4 The Travel Plan Proposals**

The main reason for introducing a Travel Plan arises from the planning priorities for the site and the parking and travel demands emanating from it. The Plan therefore necessitates the identification of a range of alternative transport means to the site and also other ways of reducing car usage in overall terms. Proposals thus include:

- Measures to provide more travel choice;
- An implementation strategy for the proposals;
- Suggested targets for travel by various modes;
- A series of pledges on the part of The Developers;
- Proposals for monitoring The Plan.

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## **Section 2      Transport Policy Context**

### **2.1      Current Policy Initiatives**

A number of policy initiatives have been adopted over the past few years at National and European level to implement a new approach to transport policy. Many of the initiatives relate to emission standards, the development of new technologies and traffic management. At a local level, the most significant influences applicable to the development are:

- Recent revisions to PPG 13, which emphasise the relationship between transport and land use and car parking;
- The Environment Act 1995, which provides the legal framework for national air quality procedures;
- The Road Traffic Reduction Act 1997, which encourages Local Authorities to use traffic reduction targets as a tool for reducing pollution;
- Local Agenda 21, which provides the framework for Local Authorities to contribute towards commitments agreed by the government at the Rio Earth Summit in 1992;
- Local Transport Plans and initiatives prepared by Mansfield District Council and Nottinghamshire County Council.

### **2.2      Future Policy Initiatives**

Despite the passage of the Road Traffic Reduction Act, the pressure remains to further minimise the impact of road traffic. Some of the issues being promoted include:

- Further equalisation of the cost between road and other forms of transport;
- Road pricing;
- Vehicle taxation and increased fuel duties;
- Limitations on non-residential car parking;
- Reform of the company car taxation system;
- Tax concessions for sustainable commuter initiatives;
- Public transport tax incentives;
- Improvements to public transport by bus regulation;
- The promotion of Travel Plans.

Some of these initiatives are already being tested and implemented along with further measures, including company based strategies such as 'Company Travelwise' based in and around the Birmingham/Solihull area. The adoption of a Travel Plan by The Developers is therefore less of a matter of desirability and more a matter of good strategic planning, which The Developers support. The specific measures outlined in subsequent sections of this report are therefore based both on the developing transport strategies and the aspiration locally to limit traffic growth on the A38 corridor.

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## **Section 3      Travel Plans**

### **3.1      Introduction**

Transport Plans, Commuter Plans and Company Travel Plans are some of the key instruments designed to meet the demands of transport policy. Essentially they are all means by which organisations and individuals can manage the transport needs of themselves and their staff in a more environmentally sensitive way. These plans identify a package of measures encompassing all alternative modes of transport. They allow travellers to progressively choose non-car based forms of transport or to favour those who require use of their car, such as the disabled.

In support of the Firs Farm Travel Plan, both the prospective commercial occupiers and The Developers have carried out work in relation to the implementation and operation of sustainable forms of transport. Whilst there is a need to co-ordinate these where appropriate, the defined targets and modal share predictions contained within this report are based on known levels of housing and employment and can be implemented knowing that sufficient resources and traveller numbers exist to make such proposals work.

### **3.2      Benefits**

As indicated above, the benefits of an integrated Travel Plan need to be captured in commercial as well as environmental terms. The Firs Farm Travel Plan will therefore provide:

- Reductions in the typical levels of car usage associated with the development type proposed;
- Improved quality of residents and employee journeys to and from work;
- A demonstration of the environmental credentials of the participating organisations;
- Reduced congestion along the A38 corridor;
- An incentive to recruiting and retaining staff;
- Increased quality and prestige associated with the location;
- Improved accessibility for the residents and occupiers;
- Reduced infrastructure costs associated with car parking;
- An improved compliance within the local authority planning context.

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## Section 4 Overall Development Transport Policy

### 4.1 Point of Contact

This Travel Plan and the transport policies contained within it have been developed by The Developers in association with their Transport Consultants, Lawrence Walker Limited (LWL). They are intended for implementation as part of the development proposals for the Firs Farm site. All responsibilities for the Travel Plan, its policies and its ultimate implementation rest with The Developers, who's nominated point of contact is:-

Mr. Steven Johnstone  
Lawrence Walker Ltd.  
Church Farm  
Leamington Hastings  
Warwickshire CV23 8DZ

### 4.2 Travel Patterns

This part of the Mansfield conurbation area is currently un-occupied and no uniform travel patterns therefore exist to establish a definitive set of measures to form the basis of the proposed Travel Plan. However, as prospective commercial occupiers and residents alike will in part be relocating from other existing locations, records do exist of they currently travel to work, which have been established over a long period of time. Some data is also available for adjacent parts of the town from Central Government via the ONS. This includes home postcode data, which can be employed within the limits of the *Data Protection Act* to help identify travel demand patterns. These patterns will, for a time after relocation, be in a state of flux as travellers adjust their journeys to work to suit the new requirements. The details established in the early years of the site will therefore need to be sensitive to such changes.

Due to the location of the site on the urban fringe adjacent to good highways links, there will be a desire for travellers to access the development by car. Indeed traffic surveys carried out for several prospective commercial occupiers indicate that at present, around 66% of all employees travel to and from the existing facilities by private car. To help to resolve the potential problems that this would create if repeated on the new development, the establishment of travel patterns through traveller surveys (undertaken within the first month after occupation) will be the first measure included within the Travel Plan. By this means, measures provided by the Developers as part of the Travel Plan can be targeted against known requirements, thereby maximising the potential take-up. An example of a previous survey produced and used by Lawrence Walker Ltd. on a similar site is appended as **Appendix B**.

Since travel surveys are accurate for only a relatively short period of time following their instigation, it is The Developers' intention that the survey process be repeated on initially a six-monthly and then annual basis for the first four years, to ensure that the information held is up-to-date. The results of each survey will then be used to review progress against targeted modal splits and also as a means of testing the effectiveness of new measures as required.



### 4.3 Targets

The setting of national road traffic reduction targets has been a contentious issue. The case for local traffic reduction targets however is a matter of political consensus that has been reinforced by the passage of the Road Traffic Reduction Act. The setting of road traffic reduction targets for Firs Farm has already partly been achieved through the parking restrictions included within the planning application. These limit residential car usage and (assuming the density of occupation in the various commercial units will be no less than that which occurs in similar buildings elsewhere) also result in only just over 45% of employees being able to park on the site following development at any one time (see **Appendix D**). Whilst it is true that the density of occupation (as opposed to the number of employees) will be such that the ratio of car parking spaces to employees present on the site will initially be higher, it is still envisaged that this level of car parking provision will require some form of demand management in order for it to succeed within later years.

The target led approach will give a focus to the Travel Plan. It will provide inherent incentives and objectives and is essential to the credibility of The Plan as far as 'external audiences' are concerned.

When targets are first set, they are at their least certain and their achievability will need to be reviewed in the light of experience. With this in mind, the targets outlined below have been established by The Developers (based on the parking supply and the average number of employees likely to be present on the site) and result in at least a 55% mode-share for non-car based transport modes to the site. As there will also be a requirement for individual business to set targets within their own Travel Plans as the site progresses, this figure should increase with time.

- 2010 - 45% drive, 10% Car Share, 30% public transport, 15% walk/cycle.

Further targets could be set which improve the walk/cycle mode share following implementation of the overall transport strategy for the site, but at present, these targets cannot be established until such proposals have reached a greater level of maturity.

Current modes aside, there is potential to further increase non-car staff travel to work via public transport and additional long term targets are therefore proposed to reflect this possibility. At the expense of car travel, the following is proposed:-

- 2012 - 43% drive, 10% Car Share, 32% public transport, 15% walk/cycle.
- 2016 - 41% drive, 10% Car Share, 34% public transport, 15% walk/cycle.
- 2020 - 40% drive, 10% Car Share, 35% public transport, 15% walk/cycle.

In addition to the above numerical targets for the various travel modes considered, it is also The Developers' intention to implement a number of key initiatives as the development progresses to assist in their delivery. These 'action' type targets (as they are sometimes called) will take the form of specific commitments that can be conditioned by the relevant Authorities to ensure their delivery. They will include:

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- The installation of 500 cycle stands (1000 spaces) throughout the development. Stands will be covered and located in visible, well lit and secure locations.
  - The provision of changing facilities and showers within each commercial building constructed on the site for use by cyclists upon opening;
  - The provision of up-to-date cycle and walking maps and associated health advice within every dwelling and commercial building by late 2010, together with new signage, a cycle renting and insurance initiative and Government funding strategy
  - The provision of pool cycles for use by employees and residents;
  - The setting-up of a care-share scheme in combination with a pool car strategy, a company car policy, a multiple car-occupancy and a non-car user business mileage rate initiative, again by the time any building becomes operational in 2010. The initiative will be linked to priority car parking spaces, with a hierarchy favouring car-share users, key employees, other users and visitors in turn;
  - The appointment of a Travel Co-ordinator for the site by mid 2010.
  - The setting-up of induction seminars for new residents to discuss travel options.
  - The instigation of a Travel Reduction Policy to encourage flexi-time, home working and compressed working weeks by the end of 2010;
  - The provision of the proposed new bus services prior to first occupation;
  - The procurement of a *Rail & Bus* travel information system for the site by the end of 2010, linked to the local networks as available, but also including conventional timetable information where appropriate.
  - Provision of a fully operational travel web-site for the development by the end of 2010 (i.e. prior to the completion of construction) as a key priority of the Travel Co-ordinator.
  - Agreement for and implementation of an off-site car parking enforcement strategy by the end of 2010 (in conjunction with the Councils). The scheme would be strictly enforced by the Travel Co-ordinator and would include a charging strategy to help discourage abuse;
  - Implementation of an HGV and delivery routing agreement by first occupation of any building or dwelling;
  - Agreement for and implementation of a traveller survey pro-forma and Travel Plan Monitoring and Review Report with the Councils by the end of 2010, together with a timetable for full implementation of all Travel Plan measures.

#### 4.4 Objectives

The transportation policy objectives which apply to the development will be as follows:

- To incorporate within the development pedestrian and cycle access ways which are convenient and safe and which connect to the local community and transport centres;
- To provide *state-of-the-art* public transport;
- To promote Car Share initiatives as a means of reducing use of the private car;
- To incorporate facilities for the disabled;
- To integrate the commercial occupier's business requirements with the needs of other local businesses and the community alike to ensure that a coherent framework is developed;
- To promote the development of employee led commuter plans which are compatible with the overall strategy to reduce car dependency;
- To prevent road congestion by reducing demand for peak hour journeys and;
- To provide benefits in terms of reduced traffic flows for the area as a whole;
- To provide on-site facilities for pedestrians and cyclists;
- To minimise the impact of occupier related activities on the local road network, community and environment.

#### 4.5 Management Support

Travel Plans can fail to operate properly if there is inadequate consultation between the participants or if The Plan fails to enjoy management support. A number of measures will therefore be included by The Developers and will be given continuing support as follows:

- Active management of the car parking supply;
- Provision of security for walkways to and from the site and between the main buildings and highways, including CCTV monitoring;
- Maintenance of cycling and walking facilities, lighting and CCTV installations.

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Additional consideration will also be given to the following issues, particularly in collaboration with the Highways and Planning Authorities;

- Support for a Travel Co-ordinator. This will include direct management of the Co-ordinator by The Developers (the former being an employee with previous experience on this field). This will allow transgressions and under-performance to be monitored easily and corrected as appropriate, since the Co-ordinator will have re-dress through Deeds and the Lease Agreements signed by each occupier. The Travel Co-ordinator will be charged with liaising with the County and District Councils as part of his/her duties.
- Support for personalised travel planning with employees and residents. This will take the form of seminars and workshops to allow relevant issues to be discussed and the reasoning behind various measures or shortcomings within the Travel Plan to be understood on an individual level.
- A commitment to require the production of individual Travel Plans by each new business on-site, as part of their *Condition for Lease*. Each Travel Plan so produced will be subject to approval by the Highways Authority and will be expected to meet their required standards, as well as complying with the general obligations of this document. Each new business will be required by the Developers to appoint a Travel Co-ordinator to implement its Plan.
- The establishment of and support for a working group of Travel Plan Co-ordinators with on-site businesses to advance Travel Plan initiatives and ensure that individual occupiers are not overlooked or left out of the Travel Plan process. This will be run and overseen by the Developers' Travel Plan Co-ordinator and will also function as a forum for individual user-groups such as cyclists or motorcyclists.
- A commitment to actively pursue, support and promote a car-sharing scheme in terms of database management and underwriting the 'guaranteed ride home'. The scheme will be managed by the Travel co-ordinator and will be funded by the Developers and occupiers.
- A commitment to seek to encourage all business occupiers on the site to adopt a local recruitment policy upon occupation, to reduce their employees need to travel.

A signed letter of support for the objectives and targets given in this Plan on behalf of The Developers is included as **Appendix C** to this report.

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## Section 5 Specific Travel Plan Proposals

### 5.1 Principles

The targets for modal share for all trips have been established for the opening year, although they would be in part subject to influence by each commercial occupier during that period. The main principle will nevertheless be to ensure that the parking provided is managed correctly. This will require forward planning and knowledge of the future workforce's travel patterns.

A successful Travel Plan will involve changing established or desired travel modes. The concept of senior staff leading by example, extensive consultation and staff involvement are therefore important. In addition, the Travel Plan will require continual promotion and frequent monitoring if it is to be successful in meeting targets and providing long term benefits.

### 5.2 Mechanisms

#### 5.2.1 Traveller Surveys

Traveller surveys to identify travel patterns and mode split will already be in existence from the ONS and from other commercial occupiers based nearby. These need to be tailored and updated after occupancy of any new building or dwelling to determine the reasons for car dependency and the possibilities for reducing it in favour of more sustainable transport modes. The potential for opportunities can then be determined so that sufficient services are provided and car usage is minimised. Therefore:

- Traveller surveys will be carried out by The Developers within one month of occupying any part of the site, again after occupation of each subsequent phase and within three months after occupation of each new commercial building, to determine the best means of reducing car dependency. Surveys will include both residential and commercial development and also any nearby off-site comparable users. They will be repeated at initially six monthly and then annual intervals on the same date as inception until four years after completion of the development, when they will cease. An example travel survey is included as **Appendix B** which is intended to comply with current Highways Authority standards.

#### 5.2.2 Travel Co-ordination

The Plan will need to be monitored to ensure that it meets targets. This would be carried out by a Travel Co-ordinator who will have between two and three days per week dedicated to the initiation and publicising of various Travel Plan initiatives.

The Developers intend to appoint and directly fund such a Travel Co-ordinator for the site on a unilateral basis once *Outline Planning Consent* on it has been secured, but by mid 2010 in any event. This will ensure that a co-ordinated function can be provided for the site as a whole as development progresses.

The Travel Co-ordinator will initially be based in The Developers Nottingham office, but will be re-located to the site for up to two days per week at least two months prior to the occupation of the first phase of development. Once more phase open, the length of stay will increase as necessary to ensure that all commitments are being met. The post will remain fully funded and supported directly by The Developers. for a minimum period of five years following its establishment, but will continue for at least two years after the occupation of the last phase on the site irrespective of overall duration. After that time, responsibility for travel matters will revert to the Management Company for the estate as a whole.

The primary duties of the Travel Co-ordinator will need to be agreed with the Councils prior to occupation of the development, but will primarily be:

- To develop and oversee the implementation of initiatives outlined in The Plan;
- To monitor progress of The Plan, develop systems for measuring change against targets and report to the participating organisation (s);
- To liaise with equivalent Co-ordinators in participating organisations and possibly to represent The Developers at relevant forums;
- To oversee the promotion and marketing of the Travel Plan and;
- To participate in a Travel Plan implementation group to be composed of nominated individuals within participating companies and residential phases.

### 5.2.3 Bus Services

The development is situated towards the southern side of Mansfield and generally outside of the suburban commuter belt. As a result, few bus services operate through the area on a frequent basis. New bespoke *state-of-the-art* bus services will therefore be provided to serve the development, operating high quality and frequent services between the site and the Town Centre, via local employment and business areas. The services are described in more detail in the Transport Assessment and are summarised in **Appendix A** of this Travel Plan.

As a consequence, bus initiatives within the Travel Plan will comprise the following support measures to maximise take-up:

- Working with the Public Transport Authorities (PTA's) and Bus Operators through the Section 106 Agreement for the site to ensure the new services are delivered and maintained to the expected high standard.
- The provision of timetable information for all visitors to and from the site, from the initial occupation of any dwelling or commercial building;
- The provision of an information system regarding bus travel within each new dwelling or building on the site, linked directly to the operator's network;

#### 5.2.4 Rail Services

The nearest Railway Station to the site is Mansfield, which is approximately 2 miles from the site by road and is thus within 10 minutes cycle time of the development. The Station is served by frequent services to and from Nottingham, together with a direct trains to Worksop; representing a service of approximately 1 every 15 minute frequency. It is therefore both desirable and accessible from a commuting point of view. The new Firs Farm bus services are intended to provide a direct link to the Station from the site at peak times.

There are, however, a number of other ways by which the transport links between the main Railway Station and the site could be improved to further encourage usage. These include:

- By the guaranteed provision of timetable information for all travellers and visitors to the site, from the initial occupation of any building or dwelling;
- By the provision of a web-based information system regarding rail travel;
- By the provision of a disabled taxi service to the Station, funded jointly by private and employer contributions;
- By the inclusion of (and improvement to) cycle links to the Station and changing facilities within the site to ensure that maximum use of cycles is made.

It is intended that the Travel Co-ordinator will progress each of the four options, with a view to securing the best, most cost effective means of transferring passengers between the site and the Station over and above the new bus services.

#### 5.2.5 Passenger Information

For rail and bus travel, the provision of passenger information is important to ensure that employees will view public transport as a viable alternative to the car. A major task of the Travel Co-ordinator will thus be to disseminate information effectively and provide a 'bulletin board' within the site complex. This will be made available both physically and electronically to all travellers, with the information displays provided for public transport additionally being used to display train times. Therefore:-

- Travel notice boards, Real-time Travel Information (RTI) and Welcome Packs will be provided throughout the development and within each dwelling upon occupation, to ensure that information relating to travel options is available in both a quick and convenient manner. Information provided via each mode will be up-dated by the Travel Co-ordinator on a regular basis but is likely to include public transport timetables, maps showing footways and cycleways and details of the car sharing scheme (see below).
- The Travel Co-ordinator will, as a matter of priority, establish a Firs Farm Website, which will provide information on travel and the use of non-car modes via the on-site computer network on an RTI basis.

## 5.2.6 Car Parking

In line with the current planning submission for the site, a total of 2,500 car parking spaces will be made available for general employee use, together with 1 additional space per dwelling as a general rule (**Appendix D**).

As a result of this low provision, a car park management plan will need to be drawn up for the site to take account of the fact that there will be restricted car parking available. Careful planning of the phasing of the development and the spaces provided will therefore be required.

The Travel Co-ordinator will be responsible for managing car parking allocation and ensuring that travellers with a defined need (e.g. the disabled) are given priority. Priority will also be given to Car Share vehicles (those involved in the on-site car-share scheme) pool cars and travellers for whom other travel modes are not an option. Allocation of community spaces will be by rotation.

Whilst car parking within the site will be restricted and managed by the Travel Co-ordinator, there are a number of areas that will need to be addressed in order to prevent any over-spill causing problems on the surrounding roads. To this end, it is The Developers intention to instigate a tow-away system on all (private) roads within the development for all illegally parked vehicles, together with the funding of a network of parking regulated areas off-site in conjunction with the Highways Authority if required.

The Travel Co-ordinator will therefore, on The Developers behalf, undertake to:

- Ensure that employees of tenants who have over spill car parking problems do not park on other tenants car parks;
- Have all illegally parked vehicles on the site removed;
- Seek to notify the Highways Authority of vehicles parked illegally and in contravention of any TRO's on the adjacent highways;
- Seek to direct available car parking spaces within the development away from travellers who live or work less than 2km from the site.

Public transport usage can be linked to parking permits to encourage reduced car usage. For example, if car commuters travel by train one day a week as opposed to the private car, then the car driver could be issued with a community parking permit for the remainder of the week as a 'perk'. By this means, car usage can be reduced by 20% over a normal working week. The system would be supported by the issuing of five different permit types (i.e. representing each day of the week) to allow flexibility.

- The Developers will undertake to manage this system and encourage the use of rail or bus transport on this basis for car users who would otherwise not choose public transport as their first option.



Whilst ultimately car parking charges maybe implemented as part of a Government wide national strategy, they do not form part of this travel plan. This is because without sufficient survey information to support the case, car-parking charges could unfairly penalise those who have no public transport options.

### 5.2.7 Car Sharing

Car Sharing can be an effective means of reducing the number of cars driven between home and the work place and is particularly useful in doing so amongst neighbours and friends, whom otherwise know each other. For this reason, it forms an important component of the Firs Farm Plan.

In order to maximise this potential, the Travel Co-ordinator will take overall responsible for all Car Sharing initiatives on the site. Starting with the establishing of a database of potential car users (gathered both internally via staff travel surveys and more generally in relation to residential occupiers) the Travel Co-ordinator will specifically target potential Car Sharers by co-ordinating travellers with similar travel patterns. By this means, travellers with the potential to share lifts can be linked, producing the best environment for car sharing to flourish.

If car sharing is to be successful however, then the concept of a 'guaranteed ride home' is of fundamental importance. Passengers who travel to work with drivers who subsequently have to leave during the day in an emergency or for other reasons may, for example, require a free taxi ride home. There are other situations when this free ride home may also be required and clear guidance is a necessary pre-requisite for the introduction of car sharing. With this in mind, the following proposals for Car Sharing are included as part of the overall Travel Plan:-

- The establishment of a Car-Share database by the Travel Co-ordinator upon occupation of the site. This will be funded by The Developers and will be managed and maintained by the Travel Co-ordinator for the duration of his appointment. All commercial occupiers will be required to provide information as necessary to enable their employees to be retained on the system;
- Once operational, the Travel Co-ordinator will be responsible for maximising Car-Share take-up amongst employees. To achieve this, he will be required to contact individual employees on a regular basis to maximise the numbers sharing journeys on a daily basis. To help in this goal, he will be provided with funding by The Developers to enable a safety net to be made available to all employees, thereby guaranteeing lifts home in the event of emergencies or other problems. He will also have the authority to allocate priority car parking spaces across the site to high occupancy cars, or those forming part of the Car-Sharing scheme. By this means, rewards in the form of easier parking and shorter transfer distances can be made available to those joining the system;
- Upon taking-up his appointment, the Travel Co-ordinator will join the [www.nottinghamshare.com](http://www.nottinghamshare.com) car-share database. In addition, each individual commercial site user (as a condition of their lease) will also be required to join this scheme and maintain membership for the duration of their lease.

### 5.2.8 Pool Cars

Staff employed on the site or residents working away from the development itself may currently be required to have their cars available for work purposes. Some staff may therefore be contributing to peak time congestion simply to ensure that they have a vehicle available during the working day. The availability of pool cars for both employees of the site and residents could remove this need and provide an effective alternative for staff needing to use cars in this way.

- The Developers will investigate with each commercial occupier and local businesses in the Nottingham area the options for pool cars and conduct surveys to demonstrate their advantages or otherwise. Should the need be demonstrated, then pool cars will be provided by on-site occupiers or through the Developers, possibly in conjunction with adjacent tenants. In so doing, The Developers will seek to ensure the use of only fuel efficient and low emission vehicles.

### 5.2.9 Financial Instruments

The present tax rules mean that an employee does not pay tax on subsidiaries provided by employers relating to sustainable travel, such as interest free loans for season tickets or employer negotiated reductions on bulk ticket purchases.

As a result, interest free loans for season tickets with provision for regular pay back deducted through salaries tend to be popular with employees. These and other incentives, such as bicycle and travel discounts, are often included as part of a sustainable travel initiative.

- It is The Developers intention to introduce a free loan scheme and similar financial instruments to serve and control the development prior to the occupation of any commercial unit or dwelling on the site.

### 5.2.10 Company Cars and Business Mileage

The provision of company cars (or loans to purchase cars) offered to staff as part of their remuneration package plays a significant role in the making of travel decisions. Employers within any particular site who offer perks do so generally without considering whether other forms of transport should be offered instead.

Cars essential for work should be the only ones which are provided and business mileage rates and policies should be reviewed to minimise the financial gain to staff if they choose to travel by car instead of by train or bus to their normal place of work.

- Irrespective of any statutory action that may be taken by the Government to restrict the extent of the provision of company cars, The Developers will undertake as part of their Travel Plan to require all company car usage to be justified prior to occupation.

### 5.2.11 Cycling and Walking

The layout of the development and highway network in general has been designed to include cycleway and footway connections to all parts of the development from the local road and footpath network. This will be secured through the *Reserved Matters* process for individual phases, but is specifically identified within this report at this stage to avoid ambiguity.

Information about safe cycle routes and the encouragement of travellers to use bicycles will be promoted by the Travel Co-ordinator as part of the overall Travel Plan. Due to the size of the development overall however, each commercial occupier will be required to supply their own individual parking and shower facilities for cyclist, supported by off-site improvements funded directly by the Developers through the S106. Training, however, will be offered centrally. As a consequence:

- The Developers will ensure the provision (as a minimum) of at least 500 covered cycle parking stands (1000 spaces) across the site, with associated locker facilities, changing areas and showers located within easy walking distance of them;
- The Developers will provide off-site cycleway improvements as part of the Section 106 Agreement for the site. This will enable cyclists travelling to and from the site to do so safely.
- The Developers will provide cycle training for all new residents and employees through the RideWise service, which already operates within the Greater Nottingham area.

Cycling can be encouraged through bicycle loans offered by the various occupiers to their employees, although a more effective way may be to implement a bicycle rent scheme for the development as a whole. Such a scheme was implemented at Stepping Hill hospital in Stockport, where a bicycle can be rented together with safety equipment and insurance for as little as 50p a week. A £20,000 grant from the Government Cycling Challenge scheme paid for 85 bicycles, which were booked out within a month. Staff who give up their parking permits can use any of the bikes free.

- As part of the Travel Plan for the Firs Farm site, The Developers will promote cycling as a means of travelling to work. In addition to the provision of parking and showering facilities, they will, in conjunction with the Highways Authority, seek to implement a Stepping Hill type of scheme for both commercial users and residents alike. In this context, it would be their intention to seek Government support for the provision of cycles; the availability of which will be co-ordinated with other occupiers via the Travel Co-ordinator.

An important aspect of cycle facilities is security and maintenance. This is particularly true of lighting, which should be provided and repaired immediately in order to ensure that cycle routes enjoy the maximum patronage. One of the roles of the Travel Co-ordinator will therefore be to ensure that cycleways both in and around the site are maintained and the vulnerability of those using them is minimised.

Walking to the site is to be encouraged and there are currently numerous routes linking the surrounding residential areas to it by both recreational and more direct means. To maximise the potential of such routes, The Developers Developments will:

- Provide a new pedestrian/cycle links to the site to enable maximum take-up of the existing network to be realised;
- Provide all travellers with a map indicating safe walking routes throughout the area, including distances and times to popular locations, such as local shopping centres and the main Railway Station;
- Provide new pedestrian signing from the site to the main destinations;
- Raise awareness of the health benefits of walking for all;
- Encourage walking (and cycling) by preventing car parking spaces from being allocated to able-bodied employees who live or work within 2km of the site.

#### 5.2.12 Timescales

Specific timescales attached to the major transport initiatives contained within this Plan are identified in **Section 4.3** as part of the ‘action’ target strategy. In addition however (and to ensure early take-up of the Travel Plan and development of the specific initiatives centred within it) it will also be necessary to make each traveller aware of its existence and the need for co-operation. To achieve this, The Developers proposes to implement the following programme at the start of development:-

Appoint a nominee (Travel Co-ordinator)	1 month
Agree and undertake baseline travel survey	1 month
Provide information packs for both travellers and visitors	3 months
Provide travel information board and website linked to the MDC, NCC and other existing transport sites	3 months
Provide bus timetable information	3 months
Consider applications for loans to allow the purchase of bus and/or train season tickets	3 months
Commission the new bus services to serve the site	6 months
Provide pool cycles	6 months
Consider and introduce a Car Share scheme and priority car parking proposals	6 months
Undertake first “snapshot” traveller survey	6 months
Follow up and publish first annual statement	12 months

By the above means, it is considered that optimum take-up of the available non-car options for the site can be achieved, before car-usage becomes established.

### 5.2.13 Monitoring and Review

Monitoring of The Plan will be the responsibility of the Travel Co-ordinator, who will hold regular meetings with all interested parties in the pursuance of this responsibility. Apart from receiving regular updates from occupiers on the site and liaising with the Council on transport related matters, the main monitoring process will involve traveller surveys.

Since traveller surveys are accurate for only a relatively short period of time following their instigation, it is The Developers intention that the survey process be repeated on initially a six-monthly and then annual basis for four years to ensure that the information held by the Travel Co-ordinator is up-to-date. The results of each survey will then be used to review progress against targeted modal splits and also as a means of testing the effectiveness of new measures as required. To do this, the Travel Co-ordinator will be required to calculate the percentage share of all travel modes to the site, based on all available information. This will then be presented on a rolling annual basis to the Councils and The Developers for review. Where targets are not met, remedial actions will be proposed and then monitored for effect. The figures calculated will additionally take account of known parameters (such as car movements) which are calculable independently, to ensure the robustness of the information provided.

- The Developers undertakes to provide an annual Monitoring and Review Report for the site to the Councils, based on primarily annual traveller surveys. The report will include a comparison of achievements against targets and remedial proposals for improvement where required.
- The format of the reporting will be based on the TfL “iTrace” Travel Plan monitoring database; the details of which can be found on the North London Travel Plans website.

### 5.2.14 Heavy Goods Vehicles (HGV's)

Whilst not a specific sustainable travel issue, the site will, by its very nature, generate some HGV movements. These are best routed along the A617 and A38, where their impact can be minimised and where the provisions of the existing road network best suit their particular requirements. The need to minimise impact on local residential roads is also best achieved by this means. As a consequence:-

- The Developers undertake to secure a Routing Agreement via the Section 106 process with the Councils to prohibit use of undesirable routes by HGV's. The Agreement will be managed and policed by CCTV cameras equipped with ANPR technology to the north of the site to ensure that all HGV's leave and enter only via the A617.
- In addition, The Developers will seek to promote a policy of fuel efficiency, the minimisation of dead mileage and development of ‘good neighbour’ and ‘safe driver’ initiatives with each commercial occupier as the development progresses, to minimise HGV impact.

### 5.2.15 Reducing Travel Demand

Because the development proposals include a number of employees for which shift and out-of-hours working will be the norm, the site will enjoy a reduction in peak-hour travel demand from its inception. However, to further encourage reductions in travel demand overall and in particular, amongst the office staff and residents on the site, a number of additional measures will be promoted. These include incentives to work from home on an occasional basis via video links, the introduction of flexi-time and compressed working weeks.

- The Developers will seek to minimise the need to travel to and from the development by discussing options with all travellers for instigating measures such as flexi-time, home working and compressed working weeks. These will be primarily aimed at normal office staff, where attendance within a particular shift hierarchy is not a condition of employment.

### 5.2.16 Marketing

LWL's track record in promoting travel options for sites with which they are involved is good and as a consequence, take-up of non-car modes within them is generally high. This experience stems from their work on the Blythe Valley site in Solihull, where car usage amongst office staff is just 56%.

The key to marketing travel options as Blythe Valley is the sites' web-site, which covers all transport issues and can be accessed from any standard computer with an Internet connection on [www.blythevalleypark.com](http://www.blythevalleypark.com). Several years in the development, the web-site covers all aspects of travel and offers advice to all in an easy to follow manner. Its existence is itself promoted by fliers, news bulletins and the park circular; all of which are made freely available to employees on the site on a regular basis. There is also a small travel centre within the management suite on the site, which further promotes use of both the web-site and its encompassing transport initiatives.

- The Developers will develop and maintain a working travel web-site for the development, which will be operational prior to the occupation of any building or dwelling on the site. The web-site will serve as the main marketing tool for the Travel Plan and will provide detailed travel information free of charge to all users. Its existence will be made known by a series of fliers on a regular basis and by one-off 'travel packs' for each resident, employee and delivery driver upon taking-up their residence, employment or entering the site for the first time.
- In addition to the main Travel Plan web-site, travel planning issues will be promoted and displayed on all sales web-sites and in showrooms and show-houses. Traditional marketing (in the form of newsletters, meetings and community events) will also be undertaken to ensure that those who do not have regular access to a computer do not miss out on sustainable travel initiatives. This will include advice on how to get services on-site and details of shopping and healthcare provisions within the community.

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## Section 6 Summary and Recommendations

### 6.1 Summary

The Travel Plan for Firs Farm aims to promote sustainable transport through a number of initiatives. It is the framework by which each traveller will actively commit himself, both in the short term and long term, to meeting the objectives of a more sustainable transport policy. The Plan sets out targets for realising a tangible modal shift from car to other more sustainable modes, including public transport, cycling, walking and car sharing. It also defines the means by which the targets can be met and establishes a response to various factors including:-

- Recognition of the fact that a partnership approach between users, transport operators and the Local Authorities to transport issues is important and;
- The need to take a pro-active approach to the development and implementation of a sustainable travel strategy for the management of travel demand in line with Government policies.

### 6.2 Recommendations

The future involvement of all travellers is regarded as an important component to the overall success of The Plan. Nevertheless, The Developers target the reduction of car-born traffic to no more than 45% of all travel modes upon full opening of the development as the principal objective of their sustainable travel strategy. Essential to the formulation and successful implementation of this plan is a thorough understanding of the travel patterns of all travellers. This knowledge (which has already partially been derived from ONS data and a comprehensive survey of existing movements in the area) will allow The Plan to be formulated and reviewed to achieve the optimum results. The achievement of the traffic reduction target will then depend on the following measures, which The Developers undertake to implement in conjunction with the occupiers and Local Authorities;

- The creation of new *state-of-the-art* bus services to serve the site;
- The promotion of existing rail services, including the provision of timetable information and display technology;
- Maximisation of the potential for bus travel and rail by the dissemination of timetable information and the inclusion of timetable display technology within the development;
- The creation of new secure cycle and pedestrian facilities, together with the provision of covered on-site cycle parking, shower and changing facilities and training via the RideWise scheme;
- Implementation of a cycling and walking strategy, including the provision of local maps, health advice, signage and CCTV monitoring;

- 
- Implementation of a cycle renting and insurance scheme and the provision of pool cycles for use by all travellers;
  - The provision of off-site pedestrian and cycle links for the site via the Section 106 Agreement;
  - Implementation of a Car Sharing initiative linked to priority car parking, including joining the [www.nottinghamshare.com](http://www.nottinghamshare.com) scheme;
  - Implementation of a financial incentive scheme to encourage non-car based transport options, including the introduction of business mileage rates for cycle and motorcycle users;
  - Co-ordination of an across the site pool car strategy, linked with parking and other restrictions;
  - Implementation of a restrictive car parking policy for all travellers, that favours disabled and high car occupancy use and directs the available parking spaces to those with the greatest need;
  - The appointment of a Travel Co-ordinator (who will be a direct employee) to oversee all travel policies, the creation of a site specific web-site linked to existing MDC, NCC and other local transport sites for the dissemination of all travel information to employees, the instigation of traveller surveys and the subsequent monitoring of the success of The Plan and its associated measures. The Travel Co-ordinator will have authority over the occupiers and residents (in matters of sustainable travel) through the individual Deeds and *Agreements to Lease*, will be fully supported by The Developers and will be responsible for liaising with the District and County Councils;
  - Enforcement through the *Agreements to Lease* requiring all occupying businesses to provide their own individual Travel Plans in accordance with, and to the approval of, the Highways Authority's standards and requirements;
  - Enforcement of a policy for travellers living within 2km of the site that seeks to direct available car parking spaces only towards those with a proven need;
  - A review of occupier company car policies, with individual occupying companies being required to demonstrate need before occupation;
  - Enforcement of a penalty scheme via the District and County Councils for staff abusing off-site parking rules, in conjunction with a tow-away policy on all private on-site roads;
  - An investigation into public funding for any additional measures, such as the provision of new bicycles;



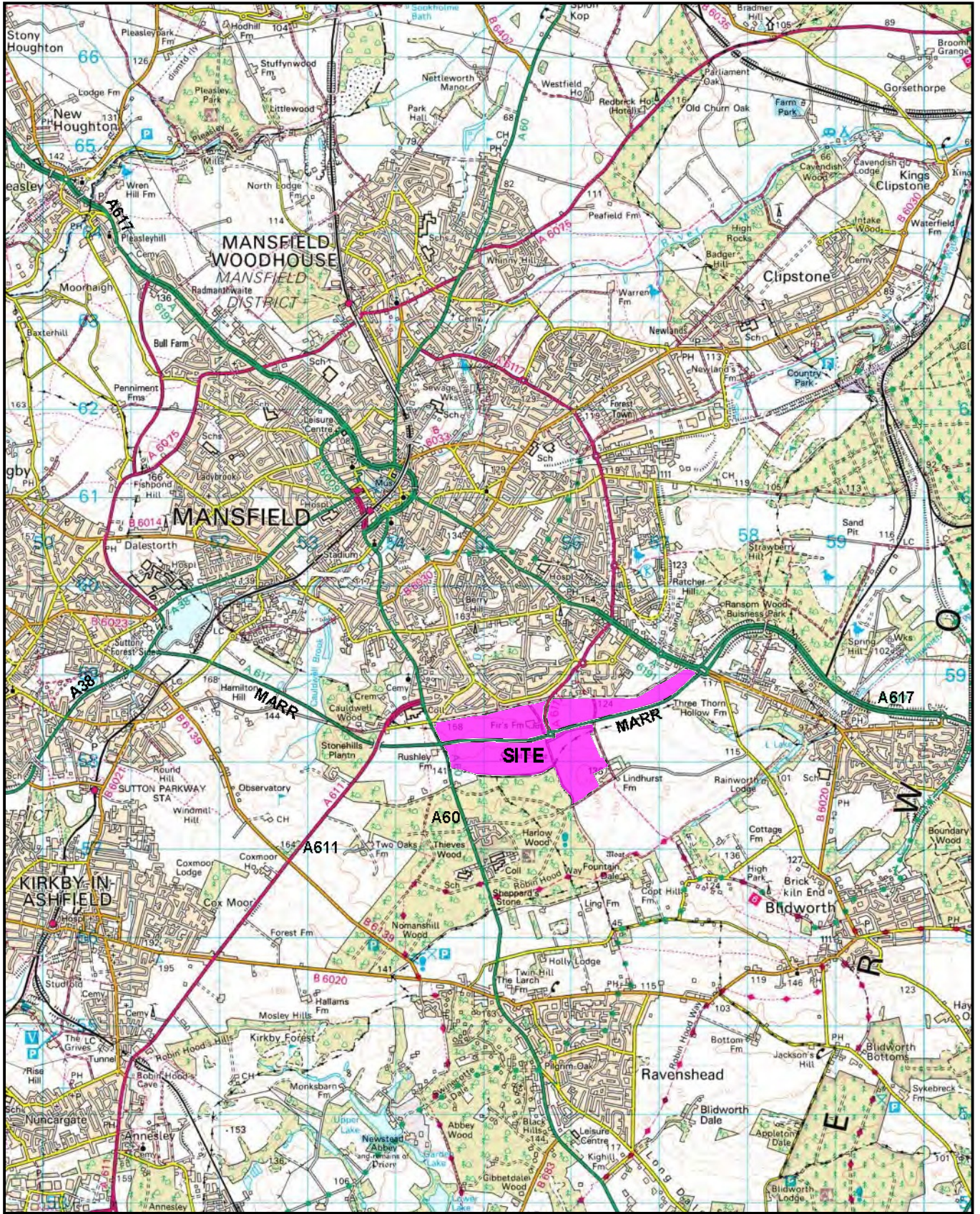
- 
- The promotion of and adherence to a defined timetable for the implementation of the sustainable travel proposals;
  - Implementation of an agreed routing strategy for HGV's to and from the site, policed by CCTV cameras equipped with ANPR technology;
  - Investigation with occupiers, options for reducing the need to travel, including a local employment policy.

To stimulate the use of public transport and other sustainable modes at the outset, The Developers will strengthen the linkage between the site and the Town Centre by providing the connecting bus services from day one of occupation. This will ensure that maximum advantage is given to non-car users wishing to access the site.

The above forms the basis of the Travel Plan proposed for the development; the details of which remain to be agreed with the officers of the District and County Councils. Nevertheless, The Developers believe that the proposals fall well within Government guidelines and should help to secure a significant shift away from the use of private cars by all travellers.

## Figures





**Lawrence Walker Ltd**  
**Church Farm House**  
**Leamington Hastings**  
**Warks**  
**CV23 8DZ**

**Lindhurst, Mansfield:**  
**Transport Assessment**

**Figure 1:**  
**Location Plan**

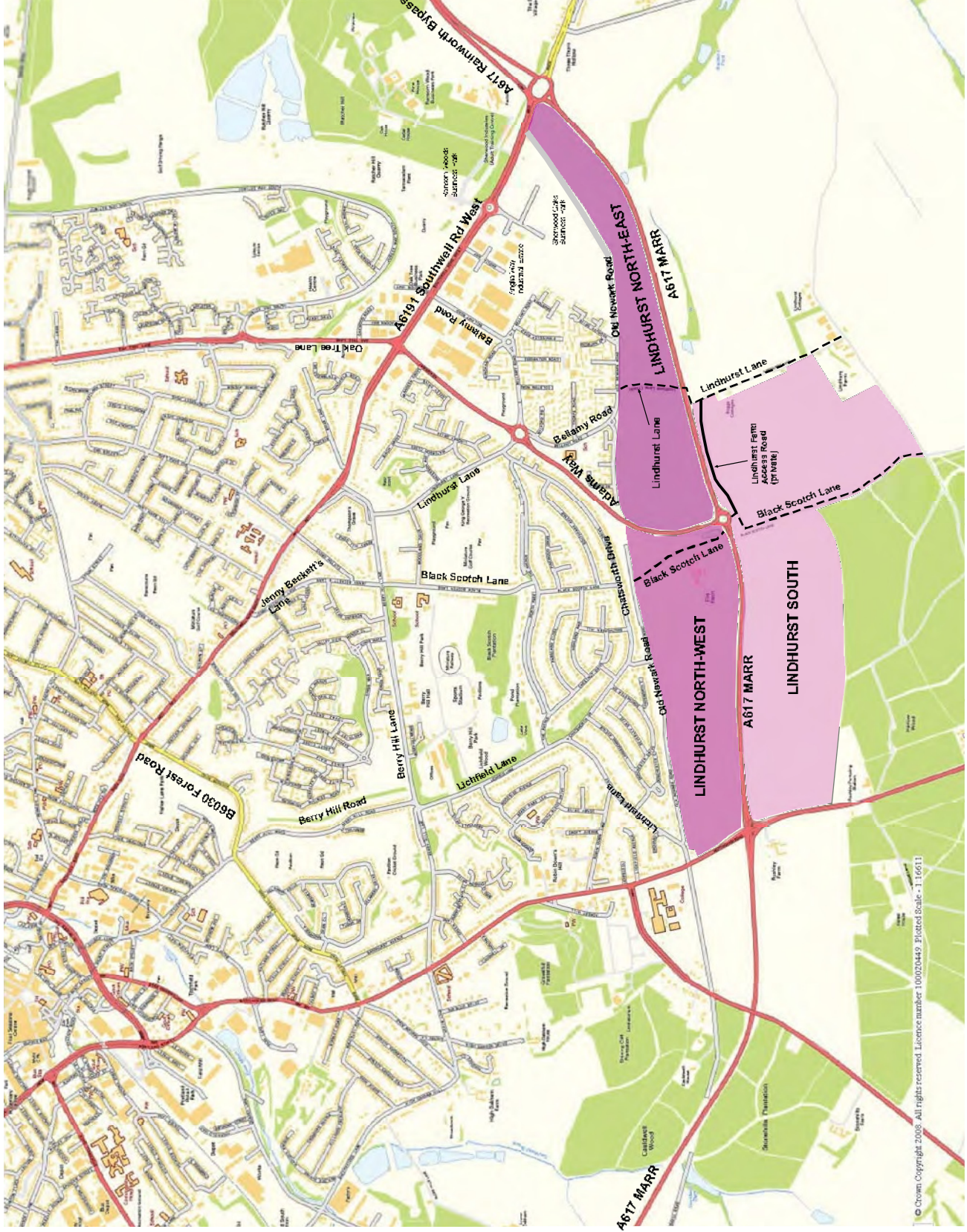


Lawrence Walker Ltd  
Church Farm House  
Leamington Hastings  
Works  
CV23 8DZ

Lindhurst, Mansfield:  
Transport Assessment

Figure 2:  
Development Areas and  
Local Highway Network

Not to Scale



A60 Nottingham  
Road

A611 Derby  
Road



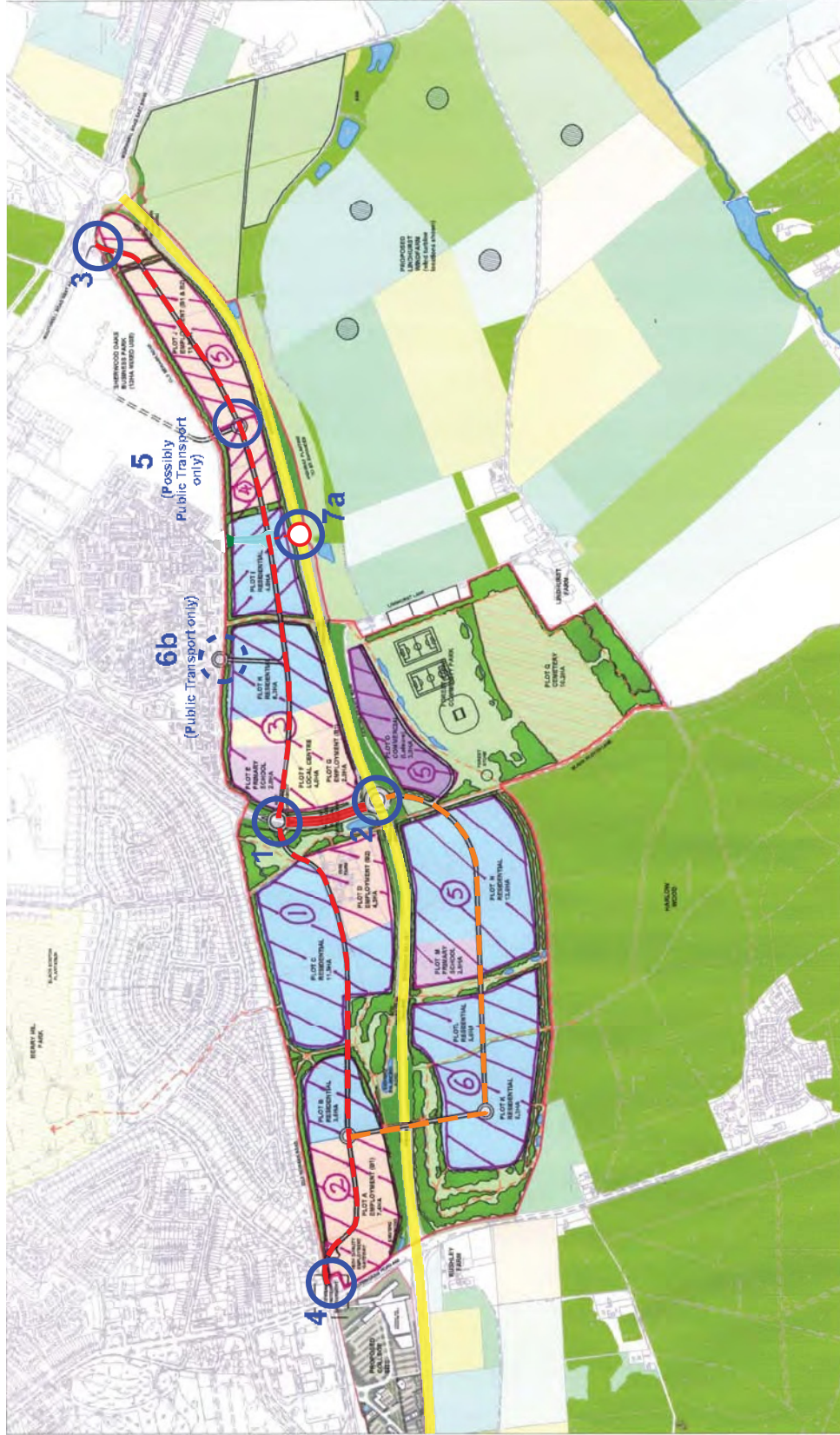
- MAAR
- Existing Link Upgraded
- Northern Spine Road
- Southern Spine Road

Lawrence Walker Ltd  
 Church Farm House  
 Leamington Hastings  
 Works  
 CV23 8DZ

Lindhurst, Mansfield:  
 Transport Assessment

Figure 3:  
 Preferred Access Strategy

Not to Scale



## **Appendix A**

### **Transport Links**

**KEY**

- Location of nearest bus stops to the site
- 18
- "Pronto"
- 27/27A
- 28A
- 28
- 29/29A

Not shown:

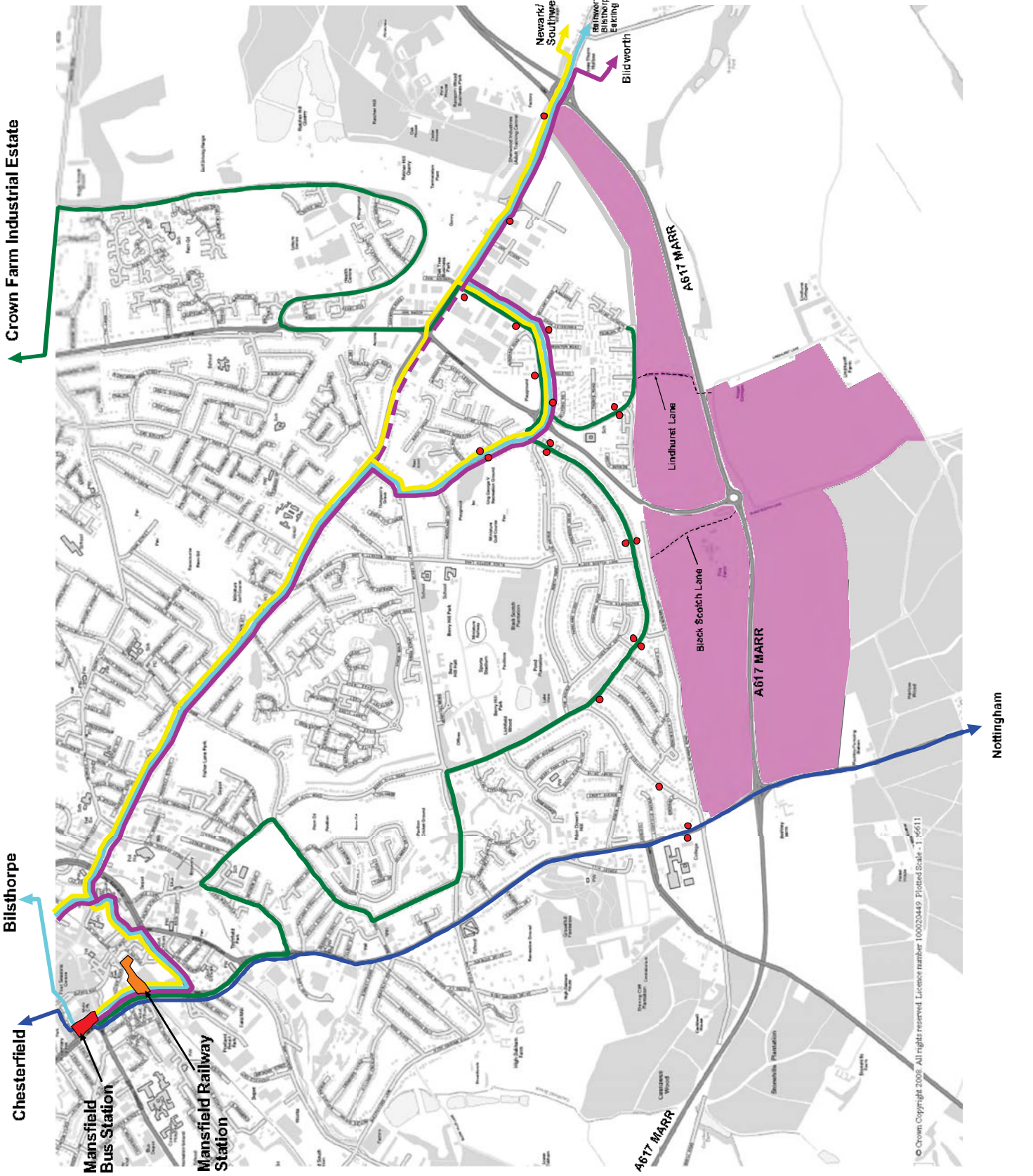
141 and N28 - A6181 corridor from site to Mansfield Bus Station.

Lawrence Walker Ltd  
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 Leamington Hastings  
 Works  
 CV23 8DZ






Lindhurst, Mansfield:  
 Transport Assessment

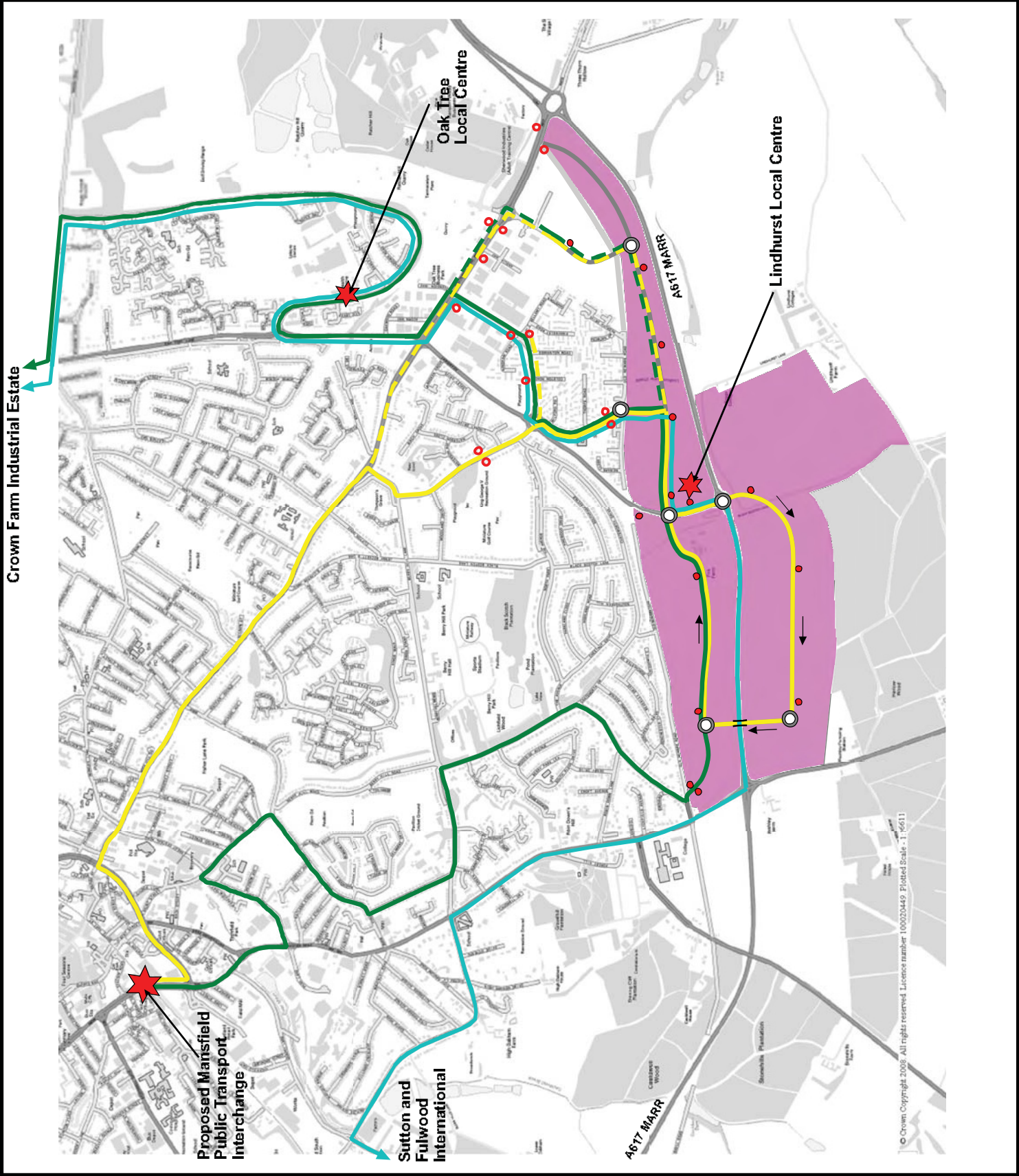
Existing Local Bus Services

Not to Scale





<p><b>KEY</b></p> <p>Service 18 (Enhanced). </p> <p>A6191 Route (New). </p> <p>Orbital Route (New). </p>	<p><b>Bus Stops</b></p> <p> Proposed new stop</p> <p> Existing stop to be upgraded</p>	<p>Lawrence Walker Ltd Church Farm House Leamington Hastings Works CV23 8DZ</p>	<p>Lindhurst, Mansfield: Transport Assessment</p>	<p>Proposed Bus Access Strategy</p>	<p>Not to Scale</p>
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**HIGHWAYS WITH ADJACENT FOOT-CYCLEWAY PROVISION**

- BARRADONS WAY
- Northern Spine Road
- Southern Spine Road

**OTHER PEDESTRIAN/CYCLIST ROUTES**

- Shared routes with segregated pedestrian and cyclist provision
- New or Upgraded Routes for Pedestrians and Cyclists Only
- Existing Highway Corridor with Shared Facilities
- Existing Crossing
- Proposed Crossing

**ISDC ZONES**

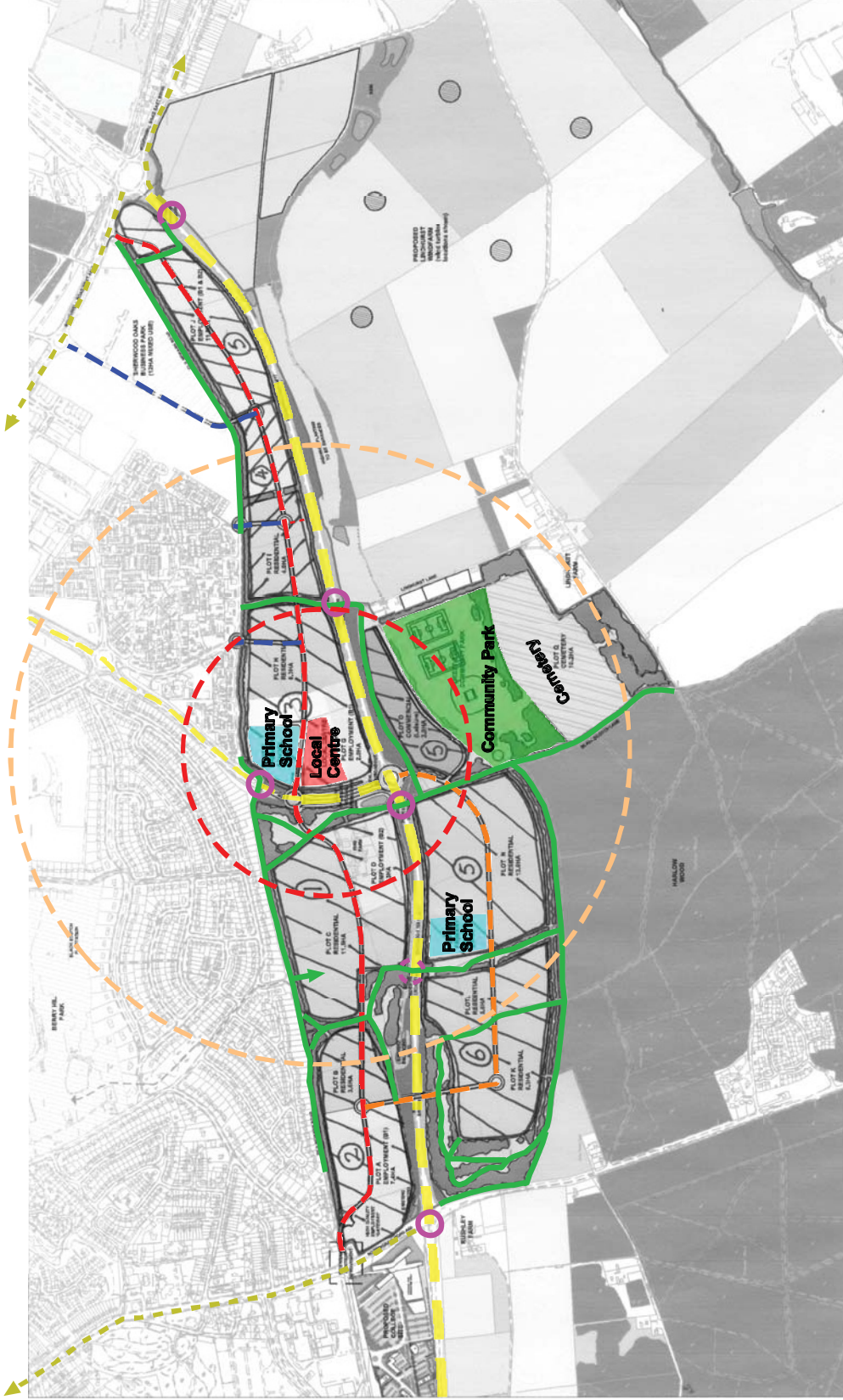


**Lawrence Walker Ltd  
Church Farm House  
Leamington Hastings  
Works  
CV23 8DZ**

**Lindhurst, Mansfield:  
Transport Assessment**

**Pedestrian and Cyclist  
Access Strategy**

Not to Scale



**Appendix B**  
**Model Staff Travel Survey**

LAND AT FIRS FARM - MANSFIELD

STAFF TRAVEL SURVEY

(Confidential)

Please TICK relevant boxes

1 Title of your job .....

2 How many hours a week do you normally work? .....

3 What hours do you normally work?

..... am/pm till ..... am/pm

4 How do you mostly travel to work? Tick one of the following:

- |  |                                    |   |
|--|------------------------------------|---|
| <input type="checkbox"/> bus                   | <input type="checkbox"/> rail      | <input type="checkbox"/> cycle            |
| <input type="checkbox"/> walk                  | <input type="checkbox"/> motorbike | <input type="checkbox"/> car, on your own |
| <input type="checkbox"/> car, with other(s)    |                                    |   |
| <input type="checkbox"/> other (specify) ..... |                                    |   |

5 Which one of the following do you occasionally use instead of your usual form of transport?

- |   |                                    |   |
|---|------------------------------------|---|
| <input type="checkbox"/> bus                      | <input type="checkbox"/> rail      | <input type="checkbox"/> cycle            |
| <input type="checkbox"/> walk                     | <input type="checkbox"/> motorbike | <input type="checkbox"/> car, on your own |
| <input type="checkbox"/> car, with other(s)       |                                    |   |
| <input type="checkbox"/> other (specify) .....    |                                    |   |
| <input type="checkbox"/> don't use an alternative |                                    |   |

6 Do you have a disability that affects your travel?

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

7 How far do you travel to work?

- |                                       |  |  |
|---------------------------------------|--|--|
| <input type="checkbox"/> up to 1 mile | <input type="checkbox"/> 1 – 2 miles   | <input type="checkbox"/> 2 – 4 miles   |
| <input type="checkbox"/> 4 - 10 miles | <input type="checkbox"/> 10 - 20 miles | <input type="checkbox"/> over 20 miles |

8 How long does it usually take you to travel to work?

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> up to 15 minutes | <input type="checkbox"/> 16 – 30 minutes | <input type="checkbox"/> 31 – 60 minutes |
| <input type="checkbox"/> 61 – 90 minutes  | <input type="checkbox"/> over 90 minutes |  |

**9 If you do not cycle now, which of the following changes would encourage you to cycle to work? Please tick no more than three.**

- improved cycle paths on the journey to work
- general improvements in road safety (e.g. more traffic calming)
- improved cycle parking at work
- showers and changing facilities (should you need to change clothes)
- lockers for clobber (e.g. helmet, clothes)
- cycle training to improve confidence when cycling to work
- arrangements to buy a bike at a discount
- free taxi home in emergencies
- other (please specify) .....

**10 If you already cycle, what improvements would you most like to see?**

.....

.....

.....

**11 Which of the following changes would encourage you to use public transport for your journey to work? (If you already use public transport which would you most like to see). Please tick no more than four.**

- more direct bus routes
- more frequent bus service
- more frequent train service
- earlier/later buses/trains to fit in with my shift hours
- better lighting at bus stops
- provision of bus shelters
- provision of seating at bus stops
- new bus link from station (which? .....
- provision of better public transport information at work
- interest-free season ticket/travelcard loan
- discount fares
- free bus travel at lunchtimes for shopping
- other (please specify) .....

**12 Which of the following changes would encourage you to walk to work? (If you already walk, which would you most like to see?). Please tick no more than two.**

- better maintained pavements
- safer road crossings
- more street lighting
- free taxi home in emergencies
- other (please specify) .....

**13 Do you qualify for a company car?**

- Yes  No

14 If yes, do you use it to get to work?

- Yes  No

15 Could you work from home occasionally if you had the necessary IT equipment?

- all the time  most of the time  occasionally  never

16 How interested would you be in exploring home-working?

- very interested  fairly interested  not interested

PLEASE COMPLETE QUESTIONS 17 – 20 IF YOU OWN AND INTEND TO USE A CAR TO WORK

17 What are your main reasons for using a car to work?

- need to use it during the day on business  
 need to use it during lunchtimes for shopping  
 drop/collect children  
 you get or give a lift  
 for personal security  
 lack of an alternative  
 other, please specify .....

If you ticked the first box, how many days a week on average do you need it for business?

.....

and, how many hours are you normally away from the office at a time? .....

18 Where do you usually park?

- on site, SITE NAME / CAR PARK NAME  
 OTHER NAMED LOCATION RELEVANT TO YOU  
 free parking in nearby streets  
 other, please specify .....

19 Would you be prepared to car share?

- yes  no  I already car share

20 Which of the following would most encourage you to car share? (If you already car share which would you most like to see?). Please tick no more than two.

- help in finding car share partners with similar work patterns  
 free taxi home if let down by car driver or in an emergency  
 reserved parking, closest to entrance for car sharers  
 other, please specify .....
- none of these



## **Appendix C**

### **Letter of Support from Westerman Homes Limited**

## *Proposed Development of Land at Firs Farm*

### *Lindhurst - Mansfield*

I confirm that this Travel Plan has been prepared on behalf of, and in conjunction with, the Consortium headed-up by Westerman Homes Limited (The Developers) and that they fully support the proposals, targets and methodology contained within in.

In so doing, The Developers remain committed to the principles of sustainable travel and specifically, undertake to provided support to The Plan in the following key areas:-

- Provision of the new bus services to support the development;
- Active management of the car parking supply and the instigation of a car parking priority and hierarchy scheme
- Provision of CCTV security for walkways to and from the site and between the main areas and the highway;
- Maintenance of cycling and walking facilities, particularly in terms of CCTV and lighting.
- Support for a Travel Co-ordinator;
- Support and promotion of a car-sharing scheme;

Additionally, The Developers agree to provide and fund the following initiatives as part of the overall re-development of the site:-

- The creation of the new bus services to serve the development;
- The promotion of existing rail services, including the provision of timetable information and display technology;
- Maximisation of the potential for bus travel and rail by the dissemination of timetable information and the inclusion of timetable display technology within the development;
- The creation of new secure cycle and pedestrian facilities, together with the provision of covered on-site cycle parking, shower and changing facilities and training via the RideWise scheme;
- Implementation of a cycling and walking strategy, including the provision of local maps, health advice, signage and CCTV monitoring;
- Implementation of a cycle renting and insurance scheme and the provision of pool cycles for use by all travellers;



- The provision of off-site pedestrian and cycle links for the site via the Section 106 Agreement;
- Implementation of a Car Sharing initiative linked to priority car parking, including joining the [www.nottinghamshare.com](http://www.nottinghamshare.com) scheme;
- Implementation of a financial incentive scheme to encourage non-car based transport options, including the introduction of business mileage rates for cycle and motorcycle users;
- Co-ordination of an across the site pool car strategy, linked with parking and other restrictions;
- Implementation of a restrictive car parking policy for all travellers, that favours disabled and high car occupancy use and directs the available parking spaces to those with the greatest need;
- The appointment of a Travel Co-ordinator to oversee all travel policies. The Travel Co-ordinator will have authority over the occupiers and residents (in matters of sustainable travel) and will be responsible for liaising with the Districts and County Councils;
- Enforcement through the *Agreements to Lease* requiring all occupying businesses to provide their own individual Travel Plans in accordance with, and to the approval of, the Highways Authority's standards and requirements;
- Enforcement of a ban on on-street parking for travellers living within 2km of the site, enforced by the Travel Co-ordinator through a charging strategy;
- A review of occupier company car policies, with individual occupying companies being required to demonstrate need before occupation;
- Enforcement of a policy for travellers living within 2km of the site that seeks to direct available car parking spaces only towards those with a proven need;
- An investigation into public funding for any additional measures, such as the provision of new bicycles;
- The promotion of and adherence to a defined timetable for the implementation of the sustainable travel proposals;
- Implementation of an agreed routing strategy for HGV's to and from the site, policed by CCTV cameras equipped with ANPR technology;
- Investigation with occupiers, options for reducing the need to travel, including a local employment policy.

## **Appendix D**

### **Car Parking Profile**

## LAND AT FIRS FARM - MANSFIELD

### EMPLOYEE TRAFFIC GENERATION

#### FIRST PRINCIPLES

#### SHIFT TIMES AND TRAVEL DEMAND

EMPLOYMENT GROUP	TOTAL STAFF
B1C Employees	2000
Business Park Employees	4000
Local Centre	100
<b>TOTAL EDWALTON STAFF</b>	<b>6100</b>

Of the B1C shift-working employees, data for the Qinetiq site in Farnborough provides a suitable breakdown. B'ss Park staff assumed to work standard hours. Local Centre Staff assumed to comprise some shift staff @ 50%

B1C Staff	Shift times	Qinetiq	B1C %	B1C
Office and other non-shift staff:	09:00 to 17:00	60	15%	300
Warehouse and other staff AM shift	06:00 to 14:00	125	31%	625
Warehouse and other staff PM shift	14:00 to 22:00	125	31%	625
Warehouse and other staff late shift	22:00 to 06:00	90	23%	450
<i>Total Warehouse and Other Shift Staff</i>		<b>340</b>	<b>85%</b>	<b>1700</b>
<b>TOTAL STAFF</b>		<b>400</b>	<b>100%</b>	

#### TOTAL TRAVEL DEMAND

Gross figures are before adjustment to account for part-time working, peak spreading, sickness and holidays. Net figures are subject to the following discounts:

Discounts	Applies to	%
Part-time staff not travelling every day	All staff	8%
Staff on leave or sick	All staff	8%
Staff choosing flexi/off-peak times of travel	Remaining non-shift staff	10%

ELEMENT	TIME	GROSS		Net of P.T, leave and sick		Net of staff travelling off-peak	
		DEP	ARR	DEP	ARR	DEP	ARR
<b>B1C Light Industrial</b>	Pre-AM peak	450	625	378	525	378	525
	AM peak	0	300	0	252	0	252
	PM shift change	625	625	525	525	525	525
	PM peak	300	0	252	0	252	0
	Post PM peak	625	450	525	378	525	378
<b>Business Park</b>	Pre-AM peak	0	0	0	0	0	0
	AM peak	0	4000	0	3360	0	3024
	PM shift change	0	0	0	0	0	0
	PM peak	4000	0	3360	0	3024	0
	Post PM peak	0	0	0	0	0	0
<b>Local Centre Staff</b>	Pre-AM peak	17	17	14	14	14	14
	AM peak	0	50	0	42	0	42
	PM shift change	17	17	14	14	14	14
	PM peak	50	0	42	0	42	0
	Post PM peak	17	17	14	14	14	14
<b>TOTAL GROSS TRAVEL DEMAND</b>	<i>Pre-AM peak</i>	<b>467</b>	<b>642</b>	<b>392</b>	<b>539</b>	<b>392</b>	<b>539</b>
	<i>AM peak</i>	<b>0</b>	<b>4350</b>	<b>0</b>	<b>3654</b>	<b>0</b>	<b>3318</b>
	<i>PM shift change</i>	<b>642</b>	<b>642</b>	<b>539</b>	<b>539</b>	<b>539</b>	<b>539</b>
	<i>PM peak</i>	<b>4350</b>	<b>0</b>	<b>3654</b>	<b>0</b>	<b>3318</b>	<b>0</b>
	<i>Post PM peak</i>	<b>642</b>	<b>467</b>	<b>539</b>	<b>392</b>	<b>539</b>	<b>392</b>

Total 4788 4788

Total Two-Way Staff Movements per Day to Work = 9576

Total Two-Way Staff Movements per Day during Day = 3668

\* Visitor Movements per Day = 1881

All Movements = 15125

Maximum Two-Way Movements per Day = **16,000**

#### CAR DRIVER MODAL SHARE

Baseline %	Target %
66%	45%

Baseline figures are derived from ONS. Target figure is in accordance with the Draft Travel Plan.

\* Based on Car Parking Allocation (see adjacent Spreadsheet)

## LAND AT FIRS FARM - MANSFIELD

### CAR PARKING DEMAND

#### FIRST PRINCIPLES

#### SHIFT TIMES - DISTRIBUTION OPERATIONS

SHIFT	START	END
Early Shift	06:00	14:00
Afternoon Shift	14:00	22:00
Late Shift	22:00	06:00

#### CAR TRAVEL DEMANDS

Figures obtained from traffic generation calcs.

GROSS TRAVEL DEMAND		ALL TRIPS = 100%				
ELEMENT	PERIOD	TIME	DEP	ARR	ACC	PEAK
<b>B1C LIGHT INDUSTRIAL</b>	Pre-AM peak	05:30-06:30	378	525	525	903
	AM peak	08:00-09:00	0	252	777	777
	PM shift change	13:30-14:30	525	525	777	1302
	PM peak	17:00-18:00	252	0	525	525
	Post PM peak	21:30-22:30	525	378	378	903
<b>BUSINESS PARK</b>	Pre-AM peak	05:30-06:30	0	0	0	0
	AM peak	08:00-09:00	0	3024	3024	3024
	PM shift change	13:30-14:30	0	0	3024	3024
	PM peak	17:00-18:00	3024	0	0	0
	Post PM peak	21:30-22:30	0	0	0	0
<b>LOCAL CENTRE STAFF</b>	Pre-AM peak	05:30-06:30	14	14	14	28
	AM peak	08:00-09:00	0	42	56	56
	PM shift change	13:30-14:30	14	14	56	70
	PM peak	17:00-18:00	42	0	14	14
	Post PM peak	21:30-22:30	14	14	14	28

CAR TRAVEL DEMAND (NO TP)		CAR DRIVER = 66%				
ELEMENT	PERIOD	TIME	DEP	ARR	ACC	PEAK
<b>B1C LIGHT INDUSTRIAL</b>	Pre-AM peak	05:30-06:30	249	347	347	596
	AM peak	08:00-09:00	0	166	513	513
	PM shift change	13:30-14:30	347	347	513	859
	PM peak	17:00-18:00	166	0	347	347
	Post PM peak	21:30-22:30	347	249	249	596
<b>BUSINESS PARK</b>	Pre-AM peak	05:30-06:30	0	0	0	0
	AM peak	08:00-09:00	0	1996	1996	1996
	PM shift change	13:30-14:30	0	0	1996	1996
	PM peak	17:00-18:00	1996	0	0	0
	Post PM peak	21:30-22:30	0	0	0	0
<b>LOCAL CENTRE STAFF</b>	Pre-AM peak	05:30-06:30	9	9	9	18
	AM peak	08:00-09:00	0	28	37	37
	PM shift change	13:30-14:30	9	9	37	46
	PM peak	17:00-18:00	28	0	9	9
	Post PM peak	21:30-22:30	9	9	9	18

CAR TRAVEL DEMAND (WITH TP)		CAR DRIVER = 45%				
ELEMENT	PERIOD	TIME	DEP	ARR	ACC	PEAK
<b>B1C LIGHT INDUSTRIAL</b>	Pre-AM peak	05:30-06:30	170	236	236	406
	AM peak	08:00-09:00	0	113	350	350
	PM shift change	13:30-14:30	236	236	350	586
	PM peak	17:00-18:00	113	0	236	236
	Post PM peak	21:30-22:30	236	170	170	406
<b>BUSINESS PARK</b>	Pre-AM peak	05:30-06:30	0	0	0	0
	AM peak	08:00-09:00	0	1361	1361	1361
	PM shift change	13:30-14:30	0	0	1361	1361
	PM peak	17:00-18:00	1361	0	0	0
	Post PM peak	21:30-22:30	0	0	0	0
<b>LOCAL CENTRE STAFF</b>	Pre-AM peak	05:30-06:30	6	6	6	13
	AM peak	08:00-09:00	0	19	25	25
	PM shift change	13:30-14:30	6	6	25	32
	PM peak	17:00-18:00	19	0	6	6
	Post PM peak	21:30-22:30	6	6	6	13

**CAR PARKING DEMAND**

Max no. cars on site	B1C	B'ness Park	Other	TOTAL
No Travel Plan	859	3024	46	3930
With Travel Plan	586	1361	32	1978

For Industrial, car parking demand needs to be assessed on the basis of the 3 shift system, with each shift being allocated a separate car park to ensure maximum efficiency at shift change-over time.

ELEMENT	PERIOD	TIME	ARR	CAR PARKING AREA		
				1	2	3
<b>B1C LIGHT INDUSTRIAL (With Travel Plan)</b>	Pre-AM peak	05:30-06:30	236	236		
	AM peak	08:00-09:00	113		113	
	PM shift change	13:30-14:30	236			236
	PM peak	17:00-18:00	-113		-113	
	Post PM peak	21:30-22:30	170		170	
<b>TOTAL NUMBER OF SPACES REQUIRED IN EACH PARKING AREA</b>				<b>236</b>	<b>170</b>	<b>236</b>

<b>TOTAL NUMBER OF SPACES REQUIRED FOR INDUSTRIAL OPERATIONS</b>	<b>643</b>
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**ALLOWANCE FOR SPACE SEARCHING AND DYNAMIC CAPACITY REQUIREMENTS**

Additional allowances need to be applied to identified staff demands to ensure that spare capacity exists within each car park to allow for dynamic capacity and space-searching requirements.

*Note that this requirement is reduced for the Industrial staff car parks where allocation of spaces by shift and permit should ensure that arrival and departure times do not coincide, and that employees are able to find allocated spaces rapidly. This should ensure efficient filling and emptying of each parking area.*

ELEMENT	Demand	Allowance	Required	
B1C Light Industrial	643	2.5%	659	Nominal allowance for emergency use.
Business Park	1361	11.1%	1512	Desirable demand to capacity ratio of 0.9, therefore $1 / 0.9 = 1.11$
Local Centre Staff	32	11.1%	35	Desirable demand to capacity ratio of 0.9, therefore $1 / 0.9 = 1.11$
<b>TOTAL</b>	<b>2035</b>	<b>-</b>	<b>2206</b>	

**ALLOWANCE FOR VISITOR AND OTHER OPERATIONAL PARKING**

ELEMENT	Requirement	Allowance	Visitors	
B1C Light Industrial	659	11.1%	73	Industry practice is to provide visitor spaces at a rate of 10% of total provision.
Business Park	1512	11.1%	168	Industry practice is to provide visitor spaces at a rate of 10% of total provision.
Local Centre Staff	35	-	50	Estimated
<b>TOTAL</b>	<b>2206</b>	<b>-</b>	<b>291</b>	

**CAR PARKING PROVISION**

Proposals based on identified demand with TP in place, and assuming that TP meets its targets.  
 Visitor and other "operational" parking provided at a rate of approximately 10% of total provision.

With Travel Plan	Staff	Visitors/other	Total
B1C Light Industrial	650	75	725
Business Park	1500	175	1675
Local Centre Staff	50	50	100
<b>Total</b>	<b>2200</b>	<b>300</b>	<b>2500</b>

Industrial staff parking divided thus:

- Area 1 = 239
- Area 2 = 172
- Area 3 = 239

Visitor Movements

- 75 x B1C spaces @ 3 occupations per day
- 175 x Business Park spaces @ 4 occupations per day
- 50 x Local Centre Staff spaces @ 1 occupation per day

# LAND AT FIRS FARM - MANSFIELD

## CAR PARKING ACCUMULATION

### B1C USES (LIGHT VEHICLE TRIPS)

HOUR COMMENCING	Traffic Flow		Accumulation				
	ARR	DEP	TOTAL	AREA 1	AREA 2	AREA 3	Areas 1-3
00:00	0	0	170	0	170	0	170
01:00	0	0	170	0	170	0	170
02:00	0	0	170	0	170	0	170
03:00	0	0	170	0	170	0	170
04:00	0	0	170	0	170	0	170
05:00	236	0	406	236	170	0	406
06:00	0	170	236	236	0	0	236
07:00	0	0	236	236	0	0	236
08:00	113	0	350	236	113	0	350
09:00	0	0	350	236	113	0	350
10:00	0	0	350	236	113	0	350
11:00	0	0	350	236	113	0	350
12:00	0	0	350	236	113	0	350
13:00	236	0	586	236	113	236	586
14:00	0	236	350	0	113	236	350
15:00	0	0	350	0	113	236	350
16:00	0	0	350	0	113	236	350
17:00	0	113	236	0	0	236	236
18:00	0	0	236	0	0	236	236
19:00	0	0	236	0	0	236	236
20:00	0	0	236	0	0	236	236
21:00	170	0	406	0	170	236	406
22:00	0	236	170	0	170	0	170
23:00	0	0	170	0	170	0	170
<b>TOTAL</b>	<b>756</b>	<b>756</b>					
<b>MAXIMUM ACCUMULATION</b>			<b>586</b>	<b>236</b>	<b>170</b>	<b>236</b>	<b>586</b>

	Early Shift
	Afternoon Shift
	Late shift
	Non-Shift

Vehicles on site at midnight: 170

# LAND AT FIRS FARM - MANSFIELD

## CAR PARKING ACCUMULATION

### BUSINESS PARK USES

HOUR COMMENCING	Traffic Flow		
	ARR	DEP	ACC
00:00	0	0	0
01:00	0	0	0
02:00	0	0	0
03:00	0	0	0
04:00	0	0	0
05:00	0	0	0
06:00	0	0	0
07:00	0	0	0
08:00	1361	0	1361
09:00	0	0	1361
10:00	0	0	1361
11:00	0	0	1361
12:00	0	0	1361
13:00	0	0	1361
14:00	0	0	1361
15:00	0	0	1361
16:00	0	0	1361
17:00	0	1361	0
18:00	0	0	0
19:00	0	0	0
20:00	0	0	0
21:00	0	0	0
22:00	0	0	0
23:00	0	0	0
<b>TOTAL</b>	<b>1361</b>	<b>1361</b>	
<b>MAXIMUM ACCUMULATION</b>			<b>1361</b>

Vehicles on site at midnight: 0



# LAND AT FIRS FARM - MANSFIELD

## CAR PARKING ACCUMULATION

### LOCAL CENTRE STAFF

HOUR COMMENCING	Traffic Flow		
	ARR	DEP	ACC
00:00	0	0	6
01:00	0	0	6
02:00	0	0	6
03:00	0	0	6
04:00	0	0	6
05:00	6	0	12
06:00	0	6	6
07:00	0	0	6
08:00	19	0	25
09:00	0	0	25
10:00	0	0	25
11:00	0	0	25
12:00	0	0	25
13:00	6	0	31
14:00	0	6	25
15:00	0	0	25
16:00	0	0	25
17:00	0	19	6
18:00	0	0	6
19:00	0	0	6
20:00	0	0	6
21:00	6	0	12
22:00	0	6	6
23:00	0	0	6
<b>TOTAL</b>	<b>38</b>	<b>38</b>	
<b>MAXIMUM ACCUMULATION</b>			<b>31</b>

	Early Shift
	Afternoon Shift
	Late shift
	Non-Shift

Vehicles on site at midnight: 6

# LAND AT FIRS FARM - MANSFIELD

## CAR PARKING ACCUMULATION

### ALL USES

HOUR COMMENCING	Traffic Flow		
	ARR	DEP	ACC
00:00	0	0	176
01:00	0	0	176
02:00	0	0	176
03:00	0	0	176
04:00	0	0	176
05:00	243	0	419
06:00	0	176	242
07:00	0	0	242
08:00	1493	0	1736
09:00	0	0	1736
10:00	0	0	1736
11:00	0	0	1736
12:00	0	0	1736
13:00	243	0	1978
14:00	0	243	1736
15:00	0	0	1736
16:00	0	0	1736
17:00	0	1493	242
18:00	0	0	242
19:00	0	0	242
20:00	0	0	242
21:00	176	0	419
22:00	0	243	176
23:00	0	0	176
<b>TOTAL</b>	<b>2155</b>	<b>2155</b>	
<b>MAXIMUM ACCUMULATION</b>			<b>1978</b>

Vehicles on site at midnight: 176