



Pinewood Studios Ltd

PROJECT *PINEWOOD*

PROOF OF EVIDENCE OF DAVID ROBERT BIRD ON TRANSPORT ISSUES VOLUME 1 – MAIN TEXT

**Appeal Ref:
AAP/N410/A/10/2126663,
AAP/N410/A/10/2126665; AAP/N410/A/10/2126667;3**

25 February 2011



VOLUME 1 – MAIN TEXT

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CORE DOCUMENT LIST

Legislation - CDA/

CDA/2 The Traffic Management Act (2004)

Government Planning Policy Documents - CDB/

CDB/3 PPS3: Housing (2010)

CDB/10 PPG13: Transport (2001)

National Guidance Documents - CDD/

CDD/11 Manual for Streets (2007) and Manual for Streets 2 (2010)

CDD/12 Using the Planning Process to Secure Travel Plans (2002)

CDD/13 A guide on how to set up and run travel plan networks (2006)

CDD/14 Making Residential Travel Plans Work (2005)

CDD/15 The Essential Guide to Travel Planning (2008) DfT Building Sustainable Transport into New Developments: A Menu of Options for Growth Points and Eco-towns (2008)

CDD/25 Guidance on Transport Assessment, March 2007 (Department for Transport)

Local Planning Documents Guidance - CDE/

CDE/6 Buckinghamshire County Council Local Transport Plan 2006-2011 [not including the “Consultation Report”]

CDE/7 Buckinghamshire Travel Plan Guidelines for Developers (2008)

CDE/18 South Bucks Evaluation of Transport Impacts (2010)

CDE/23 South Bucks District Council - Core Strategy 2011 (Adopted February 2011)

CDE/24 Inspectors Report into the Core Strategy (2011)



- CDE/25 South Bucks District Council Local Plan (Adopted March 1999 Consolidated September 2007 & February 2011)
- CDE/26 Buckinghamshire County Council Local Transport Plan 3 (2011)[Consultation period December 2010 - February 2011][included Consultation Documents]
- CDE/27 South Bucks District Council Interim Interpretation Guidance on Residential Parking Standards
- CDE/28 Buckinghamshire County Council Structure Plan 1991-2011 Saved Policies

Application Documents - CDG/

CDG/1 Planning Application Forms, Certificates and Notices - 09/00706/OUT, 09/00707/FUL and 09/00708/FUL - 1.6.09

Document 3: Design and Access and Sustainability Statement (Arup)

Document 6: Environmental Statement (Arup)

Outline Planning Application Plans for Approval (Arup)

- P_006 Access and Circulation
- P_014 Draft Illustrative Masterplan

Detailed Planning Application Transport and Landscaping Drawings for Approval:

Five Points Roundabout

- FP-7000 General Arrangement
- FP-7900 Traffic Signal Junction Intervisibility
- FP-7901 & FP-7902 Traffic Signal Sight Stopping Visibility
- FP-7903 Corner Visibility
- FP-7950 Swept Path Analysis
- FP-7951 Swept Path Analysis



Seven Hills Road / A412 Denham Road Roundabout

- SRA-7000 General Arrangement
- SRA-7900 Visibility
- SRA-7901 Visibility
- FP-7950 Swept Path Analysis

CDG/10 Transport Statement of Common Ground (January 2011)

CDG/11 Highways application documents (February 2001): Seven Hills Road

- Transport Statement (Arup)

Transport Drawings for Approval:

- Drawing SHS-7920: Seven Hills Road/ A412 Denham Road Works Boundary
- Drawing SHS-7000: Seven Hills Road/ A412 Denham Road General Arrangement
- Drawing SHS-7001: Seven Hills Road/ A412 Denham Road General Arrangement
- Drawing SHS-7900: Seven Hills Road/ A412 Denham Road Junction Visibility
- Drawing SHS-7901: Seven Hills Road/ A412 Denham Road Junction Visibility (Cont.)
- Drawing SHS-7902: Seven Hills Road/ A412 Denham Road Junction Reprofiting/ Lowering
- Drawing SHS-7903: Seven Hills Road/ A412 Denham Road Indicative Highway Profile
- Drawing SHS-7950: Seven Hills Road/ A412 Denham Road Junction Swept Path Analysis
- Drawing SHS-7951: Seven Hills Road/ A412 Denham Road Junction Swept Path Analysis (Cont.)



CDG/12 Highways application documents (February 2011): Five Points roundabout

- Planning Application Form, certificates and notices, reference 11/00281/FUL;
- Planning Supporting Statement (DTZ)
- Design and Access Statement (DTZ)
- Transport Statement (Arup)
- Landscape Statement (Arup)
- Vissim Files

Drawings for Approval:

- A068065-35-18-07 Site Location Plan
- A068065-35-18-03B Extent of Works Plan
- A068065-35-18-02A Preliminary Design

1 INTRODUCTION

- 1.1 My name is David Robert Bird. I am a Chartered Engineer and a member of the Institution of Civil Engineers. I am a founding Director of Savell Bird & Axon (SBA), a firm of transport consultants specialising in the assessment of all forms of development. I have over 20 years experience specialising in the transport effects of development on behalf of both private sector clients and local authorities. I undertake work for a range of major companies in the transport, housing, retail and commercial sectors, and have extensive experience of presenting evidence at public inquiries.
- 1.2 SBA has particular expertise and experience of dealing with development sites and currently acts for a broad range of clients including Hammerson, Stanhope, ING, Prologis, Land Securities, Persimmon, J Sainsbury, National Grid Property, Prudential Investment Managers Ltd, and the Department for Transport, as well as local planning authorities.
- 1.3 I have wide experience of assessing mixed use developments and am currently acting on a number of major schemes including those at Rugby Radio Station, North Harlow, Beckton Waterside, Halling Cement Works and Stanton Iron Works.
- 1.4 I have been retained by Pinewood Studios Ltd (PSL) to provide transport advice related to the proposed development (which comprises both the Project *Pinewood* Main Site and two off-site highway improvements) and in particular to present evidence on the transport elements of the proposals at this public inquiry.
- 1.5 The Transport Assessment Report in support of the planning applications was prepared by Arup Transportation. I have worked closely with Arup since my appointment and have reviewed the technical work undertaken by them.
- 1.6 During preparation for this inquiry we have liaised closely with Buckinghamshire County Council (BCC) and their consultants, Jacobs. This has led to the production of a Transport Statement of Common Ground (SOCG). Following completion of this statement I have continued to work with the authorities to reach agreement where possible.
- 1.7 In this evidence I set out the transport proposals that form an integral part of the proposed development. I also address the transport Reasons for Refusal raised by South Bucks District Council (SBDC).

1.8

My evidence is divided into the following sections:

- In Section 2 I give a brief summary of the area context;
- In Section 3 I describe the scheme proposals from a transport perspective;
- In Section 4 I set out the Sustainable Transport Strategy that will support the proposals;
- In Section 5 I assess the residual effects of the development;
- In Section 6 I consider how the scheme performs against relevant transport policies;
- In Section 7 I consider the Reasons for Refusal;
- In Section 8 I conclude my evidence;

2 EXISTING TRANSPORT CONTEXT

- 2.1 In this section I give a brief commentary on the area around the Project *Pinewood* site and how transport infrastructure performs at the moment. I have not provided a detailed description of the area since this is contained within the Transport Assessment (TA) and the Transport Statement of Common Ground (TSOCG).
- 2.2 The site is located between the settlements of Uxbridge and Slough as shown at **Figure 1**. This has the advantage that jobs are available within close proximity for those who will live at Project *Pinewood* and also the towns will act as a source of employees for the jobs that will be created on the site.
- 2.3 For those who will travel further afield, the site is located close to the A40/M40 junction with the A412 and therefore has excellent access to the strategic road network giving access towards central London and the M25. This means that people travelling to and from the site do not need to pass through sensitive or congested areas to access the strategic road network.
- 2.4 The site is located adjacent to Iver Heath which gives opportunities for shared use of facilities. It is also located adjacent to Pinewood Studios giving people the opportunity to live on the Project *Pinewood* site and work at the studios. I will return to both these points later in this proof.
- 2.5 The site is not currently accessible by public bus services with the closest service (the No 58) passing the Thornbridge Road/A412 junction, some 1200m from the site (**see Figure 2**). However there is an existing free shuttle bus service run by PSL that runs between Pinewood Studios, Slough and Uxbridge stations. This is available to staff and those with a written invitation to Pinewood Studios. It is well used and the level of service has recently been enhanced to operate at intervals of between 10 – 15 minutes from 7am to 7pm.
- 2.6 There are a number of rail and underground stations that are within reasonable proximity of the Project *Pinewood* site as show at **Figure 2**. Services are currently as shown in **Table 3.1** below:

Table 3.1: Summary of Rail and London Underground Services

Train Operating Company	Station	Destination	AM Peak Frequency (0700-0900)	PM Peak Frequency (1700-1800)	Average Journey Time to Destination (mins)
Chiltern Trains	Gerrards Cross	London Marylebone	11	10	25-35
		High Wycombe	6	7	11-16
		Banbury	1	0	62
		Princes Risborough	4	5	24-34
		Bicester North	3	3	40-52
	Denham	London Marylebone	4	5	26-32
		High Wycombe	5	4	17-36
		Princes Risborough	2	3	29-32
Bicester North		1	1	45	
First Great Western	Slough	London Paddington	12	13	17-36
		Reading	9	10	14-21
		Windsor & Eton Central	6	7	6
		Oxford	7	4	43-72
	Langley	London Paddington	7	5	28-32
		Reading	4	7	24-27
		Oxford	4	2	70-90
	Iver	London Paddington	5	4	25-28
		Reading	4	6	27-30
		Oxford	4	2	76-81
LUL	Uxbridge Underground Station	Metropolitan Line	16	14	50-55*
		Piccadilly Line	9	8	50-55**

* to Baker Street

** to Green Park

2.13 As can be seen, Slough has the highest frequency of service and there are 8 services per hour into Paddington between 6.59am and 8am. Langley and Iver have a lower frequency with 4 trains and 3 trains respectively to Paddington within broadly the same

morning peak period. These stations also provide services to Reading, Swindon and points west as well as Oxford.

- 2.14 Gerrards Cross and Denham stations provide services on the Chiltern Line to London Marylebone and, for example, High Wycombe, Banbury and Bicester. Gerrards Cross provides 7 services to Marylebone between 7am and 8am whilst there are 4 services from Denham during broadly the same period.
- 2.15 Uxbridge Station provides services on both the Metropolitan Line and Piccadilly lines towards central London.
- 2.16 I have visited the site on a number of occasions to observe the performance of the highway network. During the peak periods there is some congestion but this is relatively short lived and outside the peaks the network performs well.
- 2.17 The main point in the local network that suffers congestion is the Five Points Roundabout (see **Figure 3**) with long queues building up on the A412 Church Road approach. This is because the heavy flow of traffic from the A412 Uxbridge Road to the A4007 Slough Road does not allow sufficient gaps for vehicles to leave Church Road. Even when gaps are created they are often filled by vehicles leaving Pinewood Road.
- 2.18 The other junctions that can cause some delay are the 2 double mini roundabouts on Church Road and Slough Road on the east side of Iver Heath. However, from my observations, any queuing appears to be intermittent and relatively short lived.
- 2.19 At **Appendix A** I enclose graphs that demonstrate the peaky nature of flows in this area. All of the traffic analysis that I describe later in this proof is based on the peak hours. Yet, as the graphs demonstrate, these are short lived conditions and outside the peaks, traffic flows fall away sharply.
- 2.20 My overall conclusion is that the performance of the highway network in this area is very similar to many other areas in the home counties and that the levels of congestion are not unusual.
- 2.21 Turning to accidents, the Transport Assessment analysed accidents in the area in the period 2002 to 2007 and these are reported in the TSOAG. In developing proposals for Project *Pinewood* the design team have been very conscious of safety issues. Several of the accident clusters will be specifically addressed by the proposals, i.e.

- Seven Hills Road will be widened with footways added and the poor alignment section to the north of the M25 will be “bypassed”
- The Seven Hills Road/A412 junction will be signal controlled
- The Five Points Roundabout will have signal control introduced.

2.22 All these improvements, fully funded by the development, will significantly reduce the accident risk.

3 SCHEME PROPOSALS

3.1 In this section I give a brief description of the proposals focussing on the transport aspects. Full details of the scheme are given by other witnesses. Further detail on all the transport initiatives and how they will assist in the sustainability of the proposals is contained in Section 4.

3.2 PSL's proposal is to create a living and working community for the creative industries, comprising external streetscapes for filming, employment uses, education provision, residential development, landscaping and re-profiling of a former landfill area, formal and informal recreation provision, local retail and community facilities, an energy centre, access roads, car parking and ancillary facilities, as detailed in the planning application.

Access and Internal Road Layout

3.3 Access to the site will be provided from Pinewood Road and Seven Hills Road as shown at **Figure 4**. Two new roundabouts will provide access from Pinewood Road to the north of the existing Studios access. On Seven Hills Road, a new roundabout access will be provided. Seven Hills Road itself will be improved to the east of the M25 (incorporating road widening and new footpaths) in order to provide a good quality link to the A412.

3.4 Internally, the layout of the road system is shown on Parameter plan P006 (**Figure 4**) There will be a road hierarchy within the site that facilitates access to all areas but maintains higher traffic flows on the main routes. All primary and secondary routes would be designed to accommodate buses to allow penetration close to people's houses.

3.5 At present it is only intended that the main route between Pinewood Road and Seven Hills Road is adopted although the main spine road through the site will also be built to adoptable standard. Rights of access will be secured over the route from the public highway to the primary school in order to ensure continuous access to the school.

Pedestrian and Cyclist Facilities

3.6 Within the site, safe pedestrian and cycle routes will be provided and a 20 MPH speed limit will be adopted. The site will focus on the needs of pedestrians and cyclists by:

- Appropriate provision of walking and cycling infrastructure;
- Crossings at appropriate points;

- 20MPH speed limit;
- Buildings orientated to allow good pedestrian access;
- Good quality, accessible, cycle parking

3.7 Outside the site, significant enhancements will be provided to the local pedestrian and cycling infrastructure and I provide details of these improvements in Section 4.

Cycle Parking

3.8 Cycle parking will be provided so that all facilities have sufficient spaces for cycles to be parked in a safe and secure manner. The following will be provided:

3.9 **Table 4.3 Proposed Cycle Parking Ratios**

Land Use	Cycle Parking Provision
1 bedroom dwellings	1 space per dwelling
2 and 3 bedroom dwellings	2 spaces per dwelling
4 bedroom dwellings	4 spaces per dwelling
Commercial	1 space per 10 staff
Education facilities	1 space per 5 pupils
Multipurpose Community Facility	1 space per 100 seated capacity

Car Parking

3.10 A parking management strategy will be developed for Project *Pinewood* based on the principles set out in the Travel Plan Framework and Management and Operational Strategy. Designated parking locations and a clear delineation of streets where filming vehicles may be allocated would be a key element of the strategy.

3.11 Parking for residents, workers, and visitors to residents and businesses will be provided within the boundaries of the Main Site. Car parking requirements will be met through a combination of on-street parking; parking on individual plots; ground floor parking; parking under landscape decks and in multi-dwelling buildings.

3.12 It is proposed to provide residential parking at a ratio of 1.29 parking spaces per household, including visitors. Whilst this is lower than the maximum allowance set out in SBDC's Draft Interim Guidance on Residential Parking Standards, I consider this is an appropriate level of parking to cater for the needs of residents and visitors.

- 3.13 220 non-residential parking spaces are proposed. This is lower than the maximum permitted in the Local Plan. However, given the nature of the land uses (Screen Academy, primary school, community uses etc) I consider this an appropriate level of car parking.
- 3.14 To accommodate car parking that may be temporarily unavailable as a result of filming activity in certain streets, the proposals include a separate 200 space overspill car park.
- 3.15 **In the TSOCG BCC have confirmed their agreement that this level of parking is appropriate for this development and location.**

Highway Improvements

- 3.16 As well as the Main Site proposals, planning applications were also submitted for highway improvements at the Seven Hills Road junction and Five Points Roundabout.

Seven Hills Road

- 3.17 The existing priority junction between Seven Hills Road and the A412 Denham Road has a number of existing problems. First, visibility to the left for traffic turning out of Seven Hills Road is poor leading to a safety hazard. Secondly, the junction has inadequate capacity to cater for the flows turning out of Seven Hills Road. The volume of traffic on Denham Road is such that there are few gaps in traffic to allow vehicles to turn out of Seven Hills Road. This not only leads to delay but also safety concerns as people will be tempted to accept smaller gaps.
- 3.18 Between 2003 and 2005 there were a number of accidents at the Seven Hills Road / A412 Denham Road priority junction. These accidents were slight and typically involved vehicles colliding in the process of making turns to and from the A412 Denham Road, often in wet or damp conditions. Accident causes include drivers misjudging speeds, disobeying give-way signs or following other vehicles too closely.
- 3.19 In the light of the above operational and safety issues and the fact that additional traffic from the development will be using Seven Hills Road, a planning application was made to convert this junction to a roundabout.
- 3.20 A safety and operational audit of the proposed roundabout was undertaken by Jacobs on behalf of BCC and this highlighted certain issues with the design of the proposals. Following this, a thorough review was undertaken by the design team at Arup and myself

and it was concluded that a traffic signal junction would address the objections raised by Jacobs and be a preferable solution.

3.21 Therefore a planning application for a signal controlled junction was submitted to SBDC on 16th February 2011. Prior to submission, pre-application discussions took place with BCC and the submitted design incorporates their initial comments. It is this layout that is now being proposed in support of the proposals at Project *Pinewood*. The layout is shown at **Figure 5**.

3.22 The junction has two lane approaches on the A412 and this facilitates the right turn into Seven Hills Road. This right turn will operate on a separate stage of the signals so that right turners will not need to cross gaps in the northbound flow on the A412. This is a major safety benefit. In addition a controlled crossing will be provided. This can be used by horse riders who use the bridle path on the west side of Seven Hills Road. At present these riders have to cross the A412 in an uncontrolled way. The bridle path route is also shown in **Figure 5**.

3.23 As I will describe later in this proof, this junction has adequate capacity to cater for the predicted traffic flows including the Project *Pinewood* proposals. It can also cater for traffic that is diverted from its current route via Pinewood Road and Five Points Roundabout thus offering relief to that junction.

3.24 I therefore consider this an appropriate solution in this location which will be of benefit to the local area since it:

- Provides access to Project *Pinewood*;
- Allows for some relief of Five Points Roundabout;
- Significantly improves safety; and
- Provides controlled crossing facilities.

3.25 In addition PSL has undertaken to improve Seven Hills Road itself to a width of 6.5m and with provision of a 1.8m minimum width footway. This will improve operational and safety conditions for motorists, cyclists and pedestrians. A plan of this improvement is shown at **Figure 6**. At the western end of Seven Hills Road, traffic will use the new route through the site to link to Pinewood Road. This will therefore avoid the need for vehicles to use the current very sub-standard section of the road.

Five Points Roundabout

- 3.26 Turning to Five Points Roundabout, this is a critical node in the local road network and therefore PSL have been keen to offer an improvement to existing operational and safety concerns.
- 3.27 Therefore, a planning application for major improvements at this junction was submitted at the same time as the Main Site planning application. The scheme involves expansion of the junction and introduction of traffic signal control and is shown at **Figure 7**. All the works are deliverable within the highway boundary or land owned by PSL.
- 3.28 Jacobs undertook a safety and operational audit of the proposals which raised a number of queries on the scheme. Following receipt of those audits, Arup and myself have looked carefully at the design and analysis and further information has been submitted to Jacobs. I consider that this additional information addresses the queries raised by Jacobs and that the design of the junction is satisfactory.
- 3.29 Notwithstanding the above, I have also examined if there is an alternative layout that can provide similar traffic capacity to the original proposal but with a smaller footprint and lesser landscape impact. To this end an alternative scheme has been prepared and this is shown at **Figure 8**. A planning application was submitted to SBDC for this proposal on 16th February 2011. The key features of this layout are:
- All entries are signalised except the Slough Road entry;
 - Controlled pedestrian crossings are provided on all arms; and
 - The scheme is deliverable within highway land or land controlled by PSL.
- 3.30 Prior to submission of the application pre-application discussions took place with BCC and their initial comments were incorporated in the design.
- 3.31 As I describe later in this proof, the junction has adequate traffic capacity and leads to an improvement compared to the without-development scenario. In the light of this and the reduced landscape impact, I invite the Inspector to consider this as the preferred solution at Five Points Roundabout. However, I also consider the original scheme (Figure 7) with subsequent improvements to be an acceptable solution.

Other Transport Measures

3.32 Other transport measures are also proposed in association with the proposals. I consider these in detail in Section 4.

4 SUSTAINABLE TRANSPORT STRATEGY

4.1 A Sustainable Transport Strategy (STS) is at the heart of proposals for Project *Pinewood*. One of the key objectives of the design team has been to create a development where people can undertake many of their day to day activities on site, and use sustainable means to access off-site locations. A number of innovative measures are proposed, which will strongly encourage use of non-car modes.

4.2 This strategy should be seen in the context of a development which will take a number of years to be built out during which time government policies are likely to evolve to give further encouragement to the use of sustainable means of transport. It also chimes with one of the key drivers of the proposals, which is to reduce the need for extensive travel to undertake on-location filming.

4.3 The STS comprises the following 11 elements:

- A mixed use scheme;
- A comprehensive pedestrian strategy;
- A comprehensive cycling strategy
- A high quality bus scheme;
- A car club;
- A car share scheme
- Smart Technology;
- Individualised Marketing;
- An innovative and robust Site Travel Plan;
- Establishment of a Transport Review Group; and
- Highway improvements to reduce congestion and improve safety

4.4 In the following paragraphs I deal with each of these elements in turn.

A Mixed-Use Scheme

4.5 The development comprises a mix of uses on the site which will allow people to undertake many of their day to day activities without leaving the site. In particular:

- People will be able to live and work on the Project *Pinewood* site with some 628 permanent jobs being generated by the employment and community uses;
- People will be able to live on the site and work at the adjacent Pinewood Studios site;
- Virtually all primary education trips will be retained on site since there will be provision of a new primary school and pre-school;
- Day to day shopping can be undertaken at the retail units on site;
- There is land set aside for a wellness centre which can cater for some of the health needs of residents and employees; and
- Activities can be undertaken at the Community Centre.

4.6 In relation to the issue of living and working at Project Pinewood, there will be some 1600 residents of a working age living at Project *Pinewood*. In addition there will be a total of 3900 jobs split between 628 on Project *Pinewood* and 3250 on the Pinewood Studios site once the Studio Masterplan is built out. These are permanent jobs and do not account for production jobs (i.e. people involved in filming).

4.7 This co-location of people and jobs creates excellent opportunities for people to live and work in the same neighbourhood. PSL consider this will be a particularly strong feature given the fact that the area will become one of the leading centres in the world for the film industry. Therefore, people will be attracted to work and live in such a stimulating environment. This matter is covered in more detail by other witnesses.

4.8 The planning application documents assumed that 20% of residents will work at Project *Pinewood* or Pinewood Studios. For the reasons I set out above, I consider this is a conservative estimate.

4.9 Given the innovative nature of Project *Pinewood* there are no fully comparable examples in the UK of living and working in a creative hub. However, one commonly quoted example of living and working at the same location is a major mixed use development at Kings Hill in Kent. The information included at **Appendix B**, demonstrates that 1 person from 15% of households works within the site. If this is translated to Project *Pinewood*, 210 people would live and work on the site (15% x 1400 households). The working population is estimated to be 1600 people and therefore 13% of the working population would live and work on the site (210/1600). As stated above, in reality, I consider the figure is likely to be significantly higher than this.

Comprehensive Pedestrian Strategy

- 4.10 As indicated in Section 3, the site will be designed with pedestrian movement at the forefront. Internal streets will be designed with appropriate footways and crossing points will be introduced on desire lines. These will vary from informal crossings to signalised crossing points. Speeds will be restricted to 20 mph which makes for a safe and pleasant pedestrian environment.
- 4.11 Externally, **Figure 9** shows the walk isochrones from the site. The isochrones indicate that the main areas accessible by foot are:
- Pinewood Studios - less than 5 minute walk;
 - the local shopping parade at Iver Heath which includes a convenience store and pharmacy which will complement the proposed provision on site – less than 15 minute walk;
 - the Black Park Country Park – less than 15 minute walk; and
 - the Crooked Billet Pub – about a 20 minute walk.
- 4.12 To facilitate access by foot to these surrounding attractions improvements are proposed to the surrounding pedestrian infrastructure.
- 4.13 Pedestrians walking from the site to the local shopping parade will be able to do so via a series of well lit, lightly trafficked residential streets. The most direct pedestrian route includes a short section of public footpath that connects Pinewood Close to Ashford Road. The footpath is currently unlit, has an unmade surface and is overgrown.
- 4.14 As part of the proposals, the footpath will be upgraded to a shared footway/cycleway that will provide a 2.5m-3m wide tarmac surface along its entire length. Street lighting will also be introduced along the path if this is deemed appropriate by BCC and SBDC.
- 4.15 The proposed upgrade will significantly improve perceived personal safety for pedestrians from Project *Pinewood* as well as members of the existing community.
- 4.16 Included within the planning permission for the Pinewood Studio Masterplan is the construction of a 3m wide shared footway/cycleway along Pinewood Road from the Pinewood Studio site to the northern side of the Five Points Roundabout. The pedestrian facilities provided along this section of Pinewood Road are currently poor with only short sections of footway provided intermittently.

- 4.17 The proposed footway/cycleway will significantly improve pedestrian connectivity between the proposed development and the facilities to the south (Crooked Billet Pub) and west (Black Park Country Park).
- 4.18 To complement the committed footway/cycleway on Pinewood Road, it is proposed as part of the Five Points Roundabout improvement scheme to enhance the existing footpaths around the roundabout so that they can accommodate shared footway/cycleway infrastructure. Signal-controlled pedestrian/cycle crossings will also be provided across each entry to the roundabout.

Comprehensive Cycling Strategy

- 4.19 Allied with the pedestrian strategy described above is a comprehensive cycling strategy that aims to provide incentives to use cycling as a viable mode of travel to and from the development and significantly improve connectivity for cyclists to the major trip generators of Slough and Uxbridge.
- 4.20 As part of this strategy, upon first occupation, each household at the site will be provided with a voucher for purchase of a fold-up or standard cycle to encourage the take up of cycling from the outset.
- 4.21 Employers at the site will be encouraged to provide a Cycle to Work Scheme, which enables employees to purchase bicycles at around half the usual price using a tax relief scheme.
- 4.22 A Rent-a-bike scheme will be set up that provides a low rate on-street bicycle hire scheme for residents, visitors and employees to travel between sites or for use on other short round-trips (e.g. Oybike).
- 4.23 PSL will also subsidise on-site cycle clinics to provide a maintenance, repair and advice service to residents and employees on a regular basis.
- 4.24 Changing rooms, showers and lockers will be required at all major places of work to allow employees who cycle to work to clean up and change into appropriate work clothing when they arrive at the site.
- 4.25 Walking and cycle signage and maps indicating routes to key off-site destinations will be provided to residents and employees in welcome and induction packs and at an on-site

Community Travel Information Centre. These will be accompanied by maps showing links to walking and cycling published by the authorities and user groups.

- 4.26 As I indicated in Section 3, cycle parking will be provided for residents, employees and visitors.
- 4.27 Within the site, cycle routes and crossing points will be provided as appropriate. This will be a mixture of off-street, shared pedestrian/cycle routes and on street cycle use where speeds and traffic volumes allow.
- 4.28 Externally, **Figure 10** shows the cycling isochrones from the proposed development which demonstrates that both Slough and Uxbridge as well as Langley Station are within a 20 minute cycle ride.
- 4.29 However, existing facilities for cyclists along routes to these two locations are sparse and would require cyclist to frequently travel on the carriageway along roads that experience relatively high flows and speeds. Therefore PSL propose to fund significant upgrades to these routes. The proposed routes are shown at **Figure 11**.
- 4.30 From the site it is expected that cyclists travelling to Uxbridge will travel through Pinewood Green utilising the improved shared footway/cycleway (as I described in the pedestrian section above) to the shopping parade at Iver Heath. The existing Pelican crossing across A 412 Church Road will be upgraded to a Toucan crossing (a crossing that can accommodate pedestrians and cyclists).
- 4.31 Cyclists will then travel along Bangors Road North to the A4007 Slough Road. To facilitate this movement, it is proposed that an off-road shared footway/cycleway be provided along Bangors Road North.
- 4.32 A similar off-road shared footway/cycleway will also be provided along the southern side of the A4007 between Bangors Road North and the boundary with the London Borough of Hillingdon. A Toucan Crossing is proposed to connect the off-road routes on Bangors Road North and Slough Road.
- 4.33 Turning to routes towards Slough and Langley, a new footway/cycleway on the west side of Pinewood Road between Pinewood Studios and Five Points Roundabout will be provided as part of the Pinewood Studios Masterplan planning permission. The Five Points Roundabout improvement incorporates cycle routes and crossings to link with the Pinewood Road provision.

- 4.34 From the south side of the Five Points Roundabout it is proposed to construct a 2.5m-3m wide off-road shared footway/cycleway along the western side of Wood Lane to its junction with Langley Park Road.
- 4.35 A similar facility will then be provided along the northern side of Langley Park Road up to Langley Rail Station. From here cyclists will feed into the cycle network within Slough.

A High Quality Bus Scheme

- 4.36 A key component of the Sustainable Transport Strategy for the proposed development is the introduction of frequent and efficient bus services providing connections between the site and the local centres and rail stations at Slough, Uxbridge and Gerrards Cross. These services will be underwritten by PSL.
- 4.37 As part of PSL's commitment to reducing reliance on the car for travel to and from the development, the first occupier of each household will be provided with a period of free travel on local public transport, with a period of subsidised travel provided thereafter.
- 4.38 To complement this, employers at the site will be required to offer employees interest free annual season ticket loans for public transport and provide free travel home for those travelling by public transport in the event of an emergency.
- 4.39 It is proposed that the bus services will be public services and therefore available to residents and employees of Project *Pinewood*, those working at Pinewood Studios and the local community, thus providing significant enhancements to the current public transport provision.
- 4.40 The core components of the proposed bus services are:
- A 'Limited Stop' service connecting Slough, Project Pinewood and Uxbridge;
 - A 'Limited Stop' service between Project Pinewood and Gerrards Cross; and
 - A 'Stopping' service connecting Slough, Project Pinewood and Uxbridge.
- 4.41 **Figure 12** summarises the proposed bus service routes described above. It shows that all of the routes will stop on the main internal spine road within the site, meaning that all of the residential dwellings will be within a short walk of a bus stop.
- 4.42 It is proposed that the limited stop service connecting Slough, Project Pinewood and Uxbridge will operate on Weekdays at 10-minute intervals between 7am and 9am, and

5pm and 7pm. A 20 minute service will operate between 6am and 7am, 9am and 10am, 4pm and 5pm and 7pm and 8pm. This service will serve Slough and Uxbridge stations.

- 4.43 It is expected that journey times from Project Pinewood will be approximately 16 minutes to Slough and 16 minutes to Uxbridge. To provide this service it is anticipated that a fleet of 8 vehicles, with a capacity of approximately 50 passengers each, will be required.
- 4.44 The limited stop service between Project Pinewood and Gerrards Cross will provide a fast and frequent route to the Chiltern Mainline Routes to London and High Wycombe and employment destinations around Gerrards Cross.
- 4.45 It is anticipated that the journey time for the service will be approximately 22 minutes and that the services will operate to the same timetable as the route described above. It has been estimated that a fleet of 6 vehicles will be required to service this route, each one with a capacity of 50 passengers.
- 4.46 The stopping service between Slough, Project Pinewood and Uxbridge will be an enhancement of the existing bus route 58 and will operate seven days a week, 6am to 10pm Monday to Saturday and 7am to 9pm on Sundays. Its frequency will be 20 minutes from Monday to Saturday, reducing to 30 minute intervals on Sundays.
- 4.47 It is anticipated that a fleet of 6 vehicles will be required to operate this route, each with a capacity of 50 passengers.
- 4.48 All bus stops within the development will have Real Time Information displays to assist people in seeing when the next bus is due. In addition bus priority measures will be introduced at Five Points Roundabout as part of the improvement scheme.
- 4.49 Therefore comprehensive, high quality services will be provided that can be used by the existing communities as well as those who live and work at Project *Pinewood* and Pinewood Studios. BCC have agreed that the proposed bus services provide an appropriate Level 1 service.

Car Club

- 4.50 It is proposed to introduce a Car Club for residents and businesses located at the development. Such clubs are becoming commonplace across the UK and operate through the provision of several vehicles, located across the site in designated car parking spaces, which can be rented by members for set periods of time. The members book the

vehicles online on a pay-as-you-go-basis in half-hourly units, with prices typically being approximately £6 per hour, up to a maximum of around £60 for any one 24-hour period.

- 4.51 A number of private companies currently set up and operate similar systems in the UK, with one provider currently having over 75,000 members across 1000 sites in the UK. They have developed successful car clubs in Brighton, Cambridge, Oxford, Glasgow, Southampton and Maidstone.
- 4.52 Initial discussions with commercial car club operators suggest that a minimum of two vehicles should be provided on initial occupation and subsidised by PSL for the first year of operation. Following the first year of occupation it is anticipated that demand will have developed sufficiently for the car club to operate on a commercial basis. Therefore, PSL will offer free membership to the car club for the first year following first occupation of every residential unit. PSL will also provide space for a car club operator's office or customer service desk if required by the operator. As the scheme becomes more successful it is expected that additional vehicles will be provided across the site to meet demand.
- 4.53 Whilst the Car Club is primarily aimed at residents and businesses on Project *Pinewood*, it could also be made available to businesses at Pinewood Studios and the local community.
- 4.54 One of the key features of a car club is that people pay a higher rate per mile of travel than if they owned a car but the overall cost is much reduced. Therefore this gives a stronger incentive to use alternative modes of travel.
- 4.55 Research by Transport for London suggests that each vehicle provided at a site takes 20 privately owned vehicles off the road as members often sell or choose not to replace their own car. Members have also been found to use a car up to 68% less than they would if such a scheme was not available as they are more likely to consider their transport options, what they hope to achieve and their cost of travel before starting their journey.
- 4.56 For businesses it means that employees can use a car club car during the day for business and thus they can potentially avoid bringing a car to site.

Car Sharing Scheme

- 4.57 To complement the proposed Car Club, PSL will facilitate and promote links to the existing Bucksarshare scheme. This will provide a free matching service for all those who live and work at Project *Pinewood*. The scheme is also available to those working at Pinewood Studios as well as for those who live and work in the surrounding community. This database will be accessed via the site's intranet and the number of matches that are made will be monitored and recorded by the Group Travel Plan Co-ordinator.
- 4.58 These schemes allow residents and employees at the site to register onto a centrally maintained database that will match their journey requirements with other members who undertake similar journeys each day.
- 4.59 The aim of the scheme is to reduce the number of single or low occupancy vehicle journeys by private car. To encourage membership, various incentives can be offered by the participating employers such as discounts on car insurance and vouchers for various goods and services.

Smart Technology

- 4.60 As part of the Community Travel Plan, it is proposed to introduce smart technology across the site to provide current travel information to residents and employees so that they can make informed choices as to how and when to undertake their journeys.
- 4.61 This will include real-time transport information displays located at the bus stops on site and within the main areas of employment. Facilities will also be provided so that residents can access this information within their own homes.
- 4.62 The information displays will inform users of the current status of the transport network, including the proposed local bus services, appropriate National Rail and London Underground services and the road network at key locations adjacent to the site.
- 4.63 Residents and employees at the site will also be able to sign up to a remote information service that will relay travel information to them via their mobile phones and email accounts.
- 4.64 A website will also be developed for Project *Pinewood* that will provide employees with journey planner facilities, links to public transport operator websites and real-time travel information.

- 4.65 It is proposed to locate a Travel Information Centre within the site that will provide residents, employees and visitors with journey planning information and advice on sustainable travel options. It is expected that this facility will also accommodate the Travel Plan Coordinator.
- 4.66 External to the site, PSL have undertaken to fund the introduction of CCTV cameras at Five Points Roundabout and the Seven Hills Road/Denham Road junction. In addition funding will be provided towards Variable Message Signing on local roads to assist with traffic management and route choice thus maximising use of the available infrastructure.

Personalised Travel Planning

- 4.67 Integral to the Sustainable Transport Strategy is the use of Personalised Travel Planning. This is a well established method of encouraging residents and employees to consider their current travel arrangements and determine whether more sustainable options are available to them.
- 4.68 The starting point of this process will be in the form of a travel pack that will be provided for each resident upon occupation of their property informing them of the surrounding public transport services, pedestrian and cycling routes, and options available to them in terms of securing funding for buying cycles and/or season tickets for public transport.
- 4.69 A full programme of Personalised Travel Planning will be undertaken across the entire Project *Pinewood* and Pinewood Studios sites. All new residential and commercial occupiers will be approached on initial occupation and offered the opportunity to take part in the programme. Subsequent invitations will be sent out for follow up consultations at regular intervals.
- 4.70 The Travel Plan Coordinator will also liaise with local transport operators, the adjacent local highway authorities and emergency services to identify any issues that may affect sustainable travel options to and from the site. They will also inform occupiers of possible changes or planned disruptions to services.
- 4.71 It is expected that, by providing a point of contact for occupiers of the site to discuss and review their travel options significant reductions in external car trips can be achieved. Research undertaken by the Department of Transport suggests that individualised marketing and personal travel planning can typically reduce the number of car driver

trips by 9% among the targeted population and reduce the distance travelled by car by 7%. This research is contained in **Appendix C**.

Site Travel Plan

- 4.72 The development and maintenance of a bespoke site travel plan is fundamental in promoting travel by sustainable modes and reducing the number of external private car trips.
- 4.73 Rather than a series of travel plans for each of the individual land uses, it is proposed to provide an overarching plan that recognises the inter-relationships that arise when people make transport choices. It will therefore, encompass the whole community and the variety of transport needs that arise from it.
- 4.74 It will provide a framework for delivering the sustainable travel vision for Project *Pinewood* by co-ordinating service delivery, facilities and information. It will also be the mechanism by which travel patterns are monitored and reviewed.
- 4.75 A Framework Travel Plan has been prepared for Project *Pinewood* (and agreed with Buckinghamshire County Council), from which the detailed Travel Plan will be developed. This is provided in **Appendix D**. Its aims are:
- To set a hierarchy of transport modes which emphasise more sustainable choices, and to ensure that these are embedded in the design process and subsequent evolution of Project *Pinewood* as a community;
 - To provide real and appropriate transport choices for the range of trips that would be undertaken by residents, occupiers and visitors;
 - To ensure that transport 'consumers' are thoroughly and properly informed to enable those choices to be made and to assist in making those choices where appropriate;
 - To create a framework that allows changing infrastructure and operational needs to be accommodated and supported over the life of the development; and
 - To provide a method of managing and responding to travel behaviour which is ultimately owned and driven forward by members of the community themselves.
- 4.76 The key components of the Travel Plan are as follows;:

- High frequency bus services to National Rail and London Underground stations at Slough, Uxbridge and Gerrards Cross;
- Personalised travel planning services;
- On site car club and car sharing schemes;
- Parking management;
- Secure cycle parking for residents, employees and visitors;
- Public transport and cycle purchase subsidies; and
- Continuous monitoring of travel patterns to inform the evolution of the sustainable travel plan.

Transport Review Group

4.77 As part of the ongoing management of travel at Project *Pinewood*, PSL are proposing the establishment of a Transport Review Group (TRG). This will involve representatives of PSL and BCC along with public transport operators by invitation.

4.78 The purpose of the TRG is to monitor travel at Project Pinewood and if necessary bring forward new initiatives. These initiatives have two aims. First to improve the use of sustainable modes of transport. Secondly, to mitigate any unforeseen impacts in surrounding communities. Examples of initiatives include:

- Additional safety improvements on the surrounding highway network;
- Environmental improvements on the surrounding highway network;
- Enhanced incentives; and
- Enhanced Personal Travel Planning.

4.79 The TRG will manage the Additional Mitigation Fund that will be provided by PSL to address any issues that arise from the monitoring exercise.

Highway Improvements

4.80 The highway improvements proposed as part of the development are dealt with separately in Sections 3 and 5 of this document. However, by reducing congestion in the area such improvements will assist in reducing carbon emissions. Furthermore, bus priority and pedestrian/cycle facilities will be enhanced by the improvements.

4.81 In summary, the Sustainable Transport Strategy will deliver a comprehensive set of measures that will provide strong encouragement to residents, employees and visitors of Project *Pinewood* to use sustainable transport modes.

The Local Community

4.82 However, the measures go further than that. The proposals will bring forward real benefits for those working at Pinewood Studios and those living within the local community. In particular:

- There is currently no bus service to Pinewood Studios (other than the shuttle bus) and the residential area to the south of Project Pinewood. The new and enhanced bus services provided by PSL will dramatically improve services for these people;
- They will benefit from the new pedestrian and cycle links to the local area;
- They can use the car club to be established on site;
- They can benefit from Personalised Travel Planning initiatives.
- Capacity and safety improvements at the Seven Hills Road/Denham Road junction and Five Points Roundabout will benefit all road users.
- They will benefit from Smart Technology initiatives in the area such as Variable Message Signing.

4.83 I consider that the above measures are likely to lead to a significant improvement in use of sustainable modes and consequent reduction in traffic generation in the local area.

4.84 **Appendix E** provides evidence of the effectiveness of certain sustainable travel measures including walking and cycling; car clubs; car share schemes; and Individualised Marketing at various locations in the UK and globally. Some key examples are:

- Cycling: 56-94% of cyclists had access to a car but chose not to use it, cycling increased where routes had been provided by between 54% and 95% since 2004, and over 90% of cyclists said that the presence of routes has enabled them to increase the amount of physical activity they undertake on a regular basis;
- Walking: Walking increased by 20% since 2004 and pedestrians account for up to 88% of all journeys in some locations;

- Car Clubs: Establishment of car clubs resulted in 26% of residents giving up a private car when joining, while members were more inclined not to use a car for journeys with members using a car for a third of the number of trips compared to those undertaken by non-car club members;
- Car Sharing: Studies indicate a modal shift from single car journey's to car sharing at employments sites with car sharing schemes of between 15% and 50%.
- Individualised Marketing; This has resulted in some areas in 14% less car travel and increases in walking of 16%, cycling of 91% and public transport of 21%. More generally car trip reduction has been seen to reduce by between 6% and 14% in locations where individualised marketing has been undertaken.

4.85 This research, along with that in Appendix C, demonstrates that real improvements in modal choice can be achieved by a number of the measures being introduced at Project Pinewood. I consider that these are likely to lead to reductions in car use greater than the 10% that I have assumed in my analysis.

5 ASSESSMENT OF THE EFFECTS OF THE DEVELOPMENT

5.1 In this section I consider the potential effects of the development on the surrounding highway network. I do this in the following way

- I consider the traffic flows used to assess the impacts of the development
- I outline the proposed mitigation measures
- I report the residual impacts on the network

Traffic Flows

5.2 Within the Transport Assessment (TA) traffic flows are derived for 2014 (the end of Phase 1) and 2022 when the full development is complete. In this proof I concentrate on the 2022 situation since that is when the impacts are at their maximum.

5.3 Section 6 of the TA sets out the derivation of base flows and development flows. Base flows are those that would occur on the network in any case if Project *Pinewood* did not take place. They comprise:

- The observed (surveyed traffic flows)
- Plus any committed development (i.e. that which has planning permission)
- Plus growth to take account of "general" growth in the area

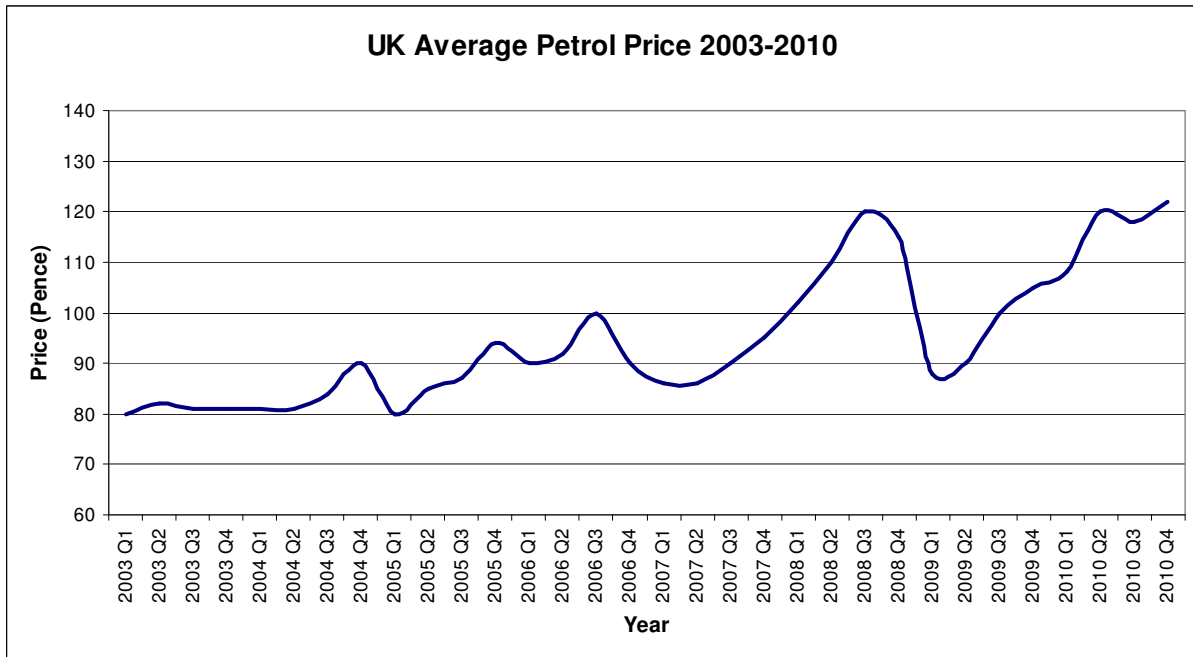
5.4 Development traffic is that estimated to be generated by the various land uses proposed at Project *Pinewood*.

5.5 I consider the flows used within the TA to be an over-estimate of the likely traffic flows in 2022. This applies to both the base flows and the development flows.

5.6 Considering first the base flows, the surveyed flows were adjusted from the surveyed month to a neutral month. However, the factor used was for the month of the year with the highest flows. This is therefore a robust assumption.

5.7 The next factor used was requested by BCC since they considered July 2008 to be an unusually low period for traffic flows due to the high oil price and emerging recession. 2008 counts were the latest available at the time and these were factored back to 2007 flows to give what BCC considered to be more realistic figures. The surveyed flows were increased by 9.3% in the morning peak and 5.3% in the evening peak to take account of this issue.

5.8 I do not consider the above to be the right approach. First, because petrol prices are no lower now than in 2008. The graph below shows recent trends and demonstrates the comparable prices in 2008 and 2010. If one is looking to the future it seems inevitable that, with future constraints on supply, the price will remain high.



5.9 Secondly, what BCC refer to as recession flows may well be normal for the foreseeable future. It may be equally valid to argue that flows in recent years have been “boom” flows.

5.10 We now have the benefit of more recent traffic flows from 2009 and 2010. I have reproduced these along with trend graphs at **Appendix F**. This shows that flows continue on a downward trend from 2008. On this basis there should be no upward adjustment to the 2008 surveyed flows to produce 2008 baseline flows. The figures suggest there should be a reduction but no change is a sensible approach.

5.11 In the TA the 2008 base flows have then been growthed using traditional DfT factors (National Road Traffic Forecasts) adjusted for local factors using TEMPRO. The factors used are about to be superseded and the revised figures are likely to show a reduction in projected growth. Furthermore, the TEMPRO factors used already include some 250 new residential units in Iver Heath by 2022. So by including this factor and the proposed development flows there is an element of double counting.

- 5.12 In the TA the estimated growth from 2008 to 2022 is 10% in the morning peak and 7% in the evening peak. However, the local traffic trends indicated shown in **Appendix F** suggest that traffic flows in the area are falling. This is not surprising within an area such as Pinewood where any potential increase in flows will tend to be constrained by the capacity of the highway network. Furthermore with the overall sustainability agenda and encouragement to drive less I question whether it is right to continue to assume and plan for continued growth particularly in urban and sub-urban areas in the peak hour. Therefore, again use of such growth factors will tend to overestimate traffic flows.
- 5.13 The committed development flows comprise the estimated traffic from the consented Pinewood Studios Masterplan. However no reduction has been made to these flows to take account of the excellent bus services that will be provided in association with Project *Pinewood* that will serve the studios as well.
- 5.14 Turning to development traffic, I consider the trip rates used for the residential element of the development to be reasonable.
- 5.15 However, I consider that the deductions made in the TA for people assumed to be living and working at Project *Pinewood*/Pinewood Studios are an underestimate. This is because the 11% of residents assumed to be working at home and the 3% assumed to be working within 2Km of home (and using non car modes) have been included in the 20% estimate for people living and working at the site whereas they should have been additional (see TA paragraph 6.6.4.14). Therefore, in practice, an assumption of only 6% of people living and working on the site has been made. This should be increased to 20% as a minimum.
- 5.16 On employment and community uses I consider that there are a number of over estimates as described below. The movement numbers referred to are for the morning peak hour since this is the critical period on the highway network.
- For the Creative Industries, full occupation of all buildings and full attendance has been assumed. It is common practice to assume 90% occupation and an 85% attendance rate. Making these assumptions would reduce the vehicular movements generated by 16;
 - For the Screen Crafts Academy, TRICS had been used but I believe this gives an over-estimate. There will be approximately 140 learners and 10 staff. If we assume 50% arrive by car (a pessimistic assumption) and 39% arrive in the morning peak (a pessimistic assumption as this is the arrival proportion for

Pinewood Studios and one would expect an Academy to attract a smaller proportion in the peak hour) then this leads to a traffic generation of 30, 21 less than used in the TA;

- For the community uses and Adult training I believe it reasonable to assume that the great majority of these trips will be from residents and employees at Project *Pinewood* and Pinewood Studios. Some may come from the adjacent residential area but these movements will have no impact on the wider highway network. This would lead to a reduction of 18 movements;
- For the primary school and pre-school it has been assumed that all teachers are external to the site, arrive in the morning peak hour and will drive leading to a traffic generation of 42 vehicles. I consider this highly unlikely to happen. If one assumed 90% came from outside the site, a 75% car driver mode share and that 70% arrived during the peak hour (all pessimistic assumptions) this would lead to a traffic generation of 20 movements ie a reduction of 22 compared with the TA analysis.
- For production staff an arrival rate of 39% in the morning peak has been assumed as for Pinewood Studios. However, I have been advised by PSK that productions run from 7am to 7pm on weekdays. As such, it is likely that all production staff will be on site before 7am and will not therefore, have an impact during the morning peak period. This equates to an overestimation in the TA of 28 movements.

5.17 Adding the above effects together leads to a total over estimate of 105 trips which is 36% of the non residential traffic generation.

5.18 Finally, no allowance has been made for members of the existing community, including employees at Pinewood Studios, using the proposed bus service and thus reducing car trips.

5.19 To summarise, I consider:

- The “neutral year” adjustments of base flows are unjustified;
- The application of DfT low growth is likely to over-estimate growth on a constrained network;
- No reductions have been made to Pinewood Studios Masterplan traffic to take account of the new bus services;
- Insufficient allowance has been made for living and working at Project Pinewood;
- The employment traffic has been over-estimated;

- No allowance has been made for reduced car trips in the local community.

5.20 In the light of the above I have undertaken a sensitivity test using what I consider to be more realistic traffic flows. I still consider these robust because I have made no deduction for the under estimate of those living and working at Pinewood nor for reductions in existing flows due to people using the enhanced bus services. Also I have only reduced employment trips by 20% rather than the 36% I have estimated above. The assumptions I have made are as follows:

- Use of observed traffic flows.
- Pinewood Studios Masterplan traffic reduced by 10%
- 20% reduction in employment trips.

5.21 Flow diagrams showing these revised flows are shown at **Appendix G**.

5.22 Turning to analysis, the network to be analysed was agreed with BCC. There are two junctions where significant improvements are proposed in association with this development: at Seven Hills Road and Five Points Roundabout. There has been extensive discussion on the form and analysis of these junctions since production of the TA.

5.23 As I described in Section 4, at Seven Hills Road it is now proposed to install a traffic signal controlled junction rather than the previously proposed roundabout. We have analysed this junction using the LINSIG programme and the results, assuming the TA flows are shown in **Table 6.1**:

Table 6.1: Summary of LINSIG Results for Signalisation (TA Flows)

Approach Arm	Degree of Saturation (%)	Queue (PCU)
2022 AM Peak Base: (PRC=-2.2%)		
Denham Road North Ahead & Right Turn	92	34
Denham Road South Ahead and Left Turn	84	19
Seven Hills Road Left & Right Turn	14	1
2022 PM Peak Base: (PRC=3.4%)		
Denham Road North Ahead & Right Turn	72	15
Denham Road South Ahead and Left Turn	87	19
Seven Hills Road Left & Right Turn	23	2
2022 AM Peak Base + Dev: (PRC=-3.7%)		
Denham Road North Ahead & Right Turn	93	37
Denham Road South Ahead and Left Turn	83	18
Seven Hills Road Left & Right Turn	90	8
2022 PM Peak Base + Dev: (PRC=-1.6%)		
Denham Road North Ahead & Right Turn	74	15
Denham Road South Ahead and Left Turn	92	22
Seven Hills Road Left & Right Turn	67	7

- 5.24 As can be seen each approach works within its theoretical capacity (Degree of saturation of 100%) during the morning and evening peak periods with all of the growthed background traffic and robust development traffic included. The design capacity (Degree of saturation of 90%) is only marginally exceeded on the Denham Road North approach in the morning peak hour and on the Denham Road South approach in the evening peak hour.
- 5.25 I consider this a satisfactory level of performance given the over-estimate of traffic flows and the fact that these flows only occur for a short peak period. Furthermore there are safety benefits brought about by the scheme that I have highlighted in Section 3.
- 5.26 I have also analysed the junction using the sensitivity test flows described above. The results are shown in **Table 6.2:**

Table 6.2: Summary of LINSIG Results for Signalisation (Sensitivity Test)

Approach Arm	Degree of Saturation (%)	Queue (PCU)
2022 AM Peak Base + Dev: (PRC=22.1%)		
Denham Road North Ahead & Right Turn	74	16
Denham Road South Ahead and Left Turn	74	14
Seven Hills Road Left & Right Turn	72	5
2022 PM Peak Base + Dev: (PRC=16.2%)		
Denham Road North Ahead & Right Turn	62	11
Denham Road South Ahead and Left Turn	76	15
Seven Hills Road Left & Right Turn	75	9

5.27 As can be seen the junction operates well within design capacity using what I consider to be more realistic traffic flows.

5.28 The performance of the improved junction needs to be compared with the existing priority junction. The analysis included in the TA (para.10.14.1.1) shows that the existing junction operates significantly over capacity with a Flow to Capacity Ratio (RFC) of 2.0 on Seven Hills Road. This leads to the safety concerns that I described in Section 3.

5.29 Therefore, I consider the Seven Hills Road/Denham Road signals scheme will not only cater for development traffic but also bring forward material benefits in terms of capacity and safety.

Five Points Roundabout

5.30 At Five Point Roundabout the preferred solution is shown at **Figure 8**. The LINSIG analysis of this junction using the TA flows is summarised in **Table 6.3**:

Table 6.3: Summary of LINSIG Assessments (2009 TA Flows)

Approach Arm	AM Deg Sat	AM MMQ	PM Deg Sat	PM MMQ
Pinewood Road	103%	29 pcu	96%	16 pcu
Church Road	103%	27 pcu	93%	14 pcu
Slough Road	85%	9 pcu	71%	4 pcu
Wood Lane	99%	21 pcu	97%	17 pcu
Uxbridge Road	98%	23 pcu	96%	17 pcu

5.31 As can be seen, the junction operates at about theoretical capacity in the morning peak and below capacity on the evening peak. As for the Seven Hills Road junction, the period when the junction operates over design capacity is for just the very peak morning period and using what I consider overly robust traffic flows.

5.32 An assessment of this junction arrangement has also been undertaken using the sensitivity test flows, the results of which are shown in Table 6.4:

Table 6.3: Summary of LINSIG Assessments (Sensitivity Test Flows)

Approach Arm	AM Deg Sat	AM MMQ	PM Deg Sat	PM MMQ
Pinewood Road	88%	10 pcu	83%	8 pcu
Church Road	82%	7 pcu	83%	9 pcu
Slough Road	61%	3 pcu	84%	3 pcu
Wood Lane	85%	9 pcu	55%	7 pcu
Uxbridge Road	86%	11 pcu	80%	9 pcu

5.33 The results of the LINSIG assessments using the sensitivity test flows show that the junction would operate with all approaches within their design capacity (90% DoS), resulting in reduced queues and congestion.

5.34 It is important to compare these results with what would be the case if Project *Pinewood* did not proceed. The proposed junction operates much better than the existing situation, which is summarised in **Table 6.4**, where extensive queuing builds up as I described in Section 2.

Table 6.4: Summary of Existing Junction Operation

Approach Arm	AM RFC	AM MMQ	PM RFC	PM MMQ
Pinewood Road	0.926	8 pcu	0.591	1 pcu
Church Road	1.317	254 pcu	1.066	41 pcu
Slough Road	0.934	9 pcu	0.670	2 pcu
Wood Lane	1.117	73 pcu	1.041	30 pcu
Uxbridge Road	0.935	11 pcu	0.796	4 pcu

5.35 There is also an improvement scheme for the junction that was secured through the Pinewood Studios Masterplan permission and this is shown at **Figure 13**. A TRANSYT assessment of these proposals has been undertaken using base flows (i.e. without Project *Pinewood*). The results are shown in **Table 6.5**:

Table 6.5: Summary of Consented Scheme Operation

Approach Arm	AM DoS	AM MMQ	PM DoS	PM MMQ
Pinewood Road	101%	27 pcu	103%	29 pcu
Church Road	148%	203 pcu	96%	25 pcu
Slough Road	92%	17 pcu	91%	14 pcu
Wood Lane	104%	53 pcu	96%	25 pcu
Uxbridge Road	93%	35 pcu	58%	16 pcu

5.36 The assessments demonstrate that this junction arrangement would operate with much higher levels of congestion and queuing than the improvement proposed under Project *Pinewood*.

5.37 Therefore the Five Points Roundabout scheme not only caters for development traffic but also brings forward significant capacity and safety enhancements for the benefit of the local community.

5.38 The proposed layout shown in the original TA (May 2009) has also been reassessed with the TA flows and lower sensitivity test flows. Those results are shown in **Appendix H**.

5.39 I now turn to the other junctions on the local network. The only junctions that have capacity issues during the peak periods are as follows:

- Denham Road/Bangors Road North/Church Road/Thornbridge Road Double mini roundabouts
- Bangors Road North/Slough Road /Bangors Road South Double mini roundabouts
- Wood Lane/Langley Park Road roundabout

5.40 I deal with each of these in turn:

Denham Road/Bangors Road North/Church Road/Thornbridge Road Double Mini-Roundabout

5.41 In the 2009 Transport Assessment, the two mini-roundabouts that comprise this junction were assessed separately using ARCADY, the results of the assessment are shown in **Table 6.6** and **Table 6.7** below:

Table 6.6: Denham Rd/Bangors Rd North/Church Rd Mini Rbt – TA Flows

Junction Arm	2022 Base Case		2022 Base Case + Development	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Denham Road	1.136	230	1.137	228
Bangors Road North	0.970	9	0.811	4
Church Road	1.206	183	1.246	202
PM Peak:				
Denham Road	0.893	7	0.906	8
Bangors Road North	1.311	122	1.356	159
Church Road	1.016	21	0.852	5

Table 6.7: Church Road/Thornbridge Road Mini Roundabout – TA Flows

Junction Arm	2022 Base Case		2022 Base Case + Development	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Church Road North	0.985	51	0.826	5
Church Road South	1.344	296	1.190	167
Thornbridge Road	1.053	10	1.394	47
PM Peak:				
Church Road North	0.83	5	0.796	4
Church Road South	1.088	35	0.974	13
Thornbridge Road	1.156	15	0.506	1

- 5.42 The results of the base case analysis show that, when assessed separately, the junctions were both shown to operate significantly above capacity in the morning and evening peak periods.
- 5.43 The results of the development case analysis show that the RFC's and queues on some of the approaches reduce marginally when the additional traffic is added, while the adjacent approaches increase. It should be noted that Arcady tends to over-estimate the effects of additional traffic on queuing when a roundabout is at or approaching capacity.
- 5.44 In overall terms, the results indicate that the Project *Pinewood* development traffic has a very small effect on the operation of the roundabout.
- 5.45 However, the analysis undertaken in 2009 used flows that I have already stated I consider to be overly robust. Therefore, the with-development assessments have been repeated using the sensitivity test flows that I have described above. The results and a comparison with the TA analysis are shown in **Table 6.8** and **Table 6.9** below.

Table 6.8: Denham Rd/Bangors Rd North/Church Rd Mini Rbt

Junction Arm	2022 Base Case + Dev (2009 TA)		2022 Base Case + Dev (Revised Flows)	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Denham Road	1.137	228	1.014	21
Bangors Road North	0.811	4	0.57	1
Church Road	1.246	202	0.89	7
PM Peak:				
Denham Road	0.906	8	0.793	4
Bangors Road North	1.356	159	1.032	22
Church Road	0.852	5	0.779	3

Table 6.9: Church Road/Thornbridge Road Mini Roundabout

Junction Arm	2022 Base Case + Dev (2009 TA)		2022 Base Case + Dev (Revised Flows)	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Church Road North	0.826	5	0.747	3
Church Road South	1.190	167	0.911	8
Thornbridge Road	1.394	47	0.681	2
PM Peak:				
Church Road North	0.796	4	0.701	2
Church Road South	0.974	13	0.852	5
Thornbridge Road	0.506	1	0.335	1

5.46 The results show that the roundabouts would generally operate satisfactorily with much reduced queuing using what I consider to be more realistic traffic flows.

Bangors Road North/Slough Road/Bangors Road South Double Mini-Roundabout

5.47 The results of the analysis of this junction using flows from the 2009 Transport Assessment are shown in **Table 6.10** and **Table 6.11**:

Table 6.10: Bangors Road North/Slough Road Mini Roundabout – TA Flows

Junction Arm	2022 Base Case		2022 Base Case + Development	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Bangors Road North	1.535	211	1.847	386
Slough Road East	1.031	27	1.065	41
Slough Road West	1.182	102	1.203	113
PM Peak:				
Bangors Road North	0.392	1	0.468	1
Slough Road East	0.870	6	0.974	15
Slough Road West	0.809	4	0.905	7

Table 6.11: Bangors Road South/Slough Road Mini Roundabout – TA Flows

Junction Arm	2022 Base Case		2022 Base Case + Development	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Slough Road West	1.085	86	1.208	225
Slough Road East	1.185	66	1.267	101
Bangors Road South	1.501	96	1.540	105
PM Peak:				
Slough Road West	0.834	5	0.896	7
Slough Road East	1.260	141	1.397	237
Bangors Road South	1.167	44	1.299	90

5.48 The analysis suggests that the roundabouts would be operating above capacity in the base case and that addition of development traffic would have a more significant impact than at the Denham Road roundabouts. As I have stated earlier it is unlikely that this level of queuing would materialise in reality since Arcady does not replicate the performance of junctions at or approaching capacity particularly well.

5.49 Analysis of this junction using the sensitivity flows and a comparison with the TA analysis is shown in **Table 6.12** and **Table 6.13**.

Table 6.12: Bangors Road North/Slough Road Mini Roundabout

Junction Arm	2022 Base Case + Dev (2009 TA)		2022 Base Case + Dev (Revised Flows)	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Bangors Road North	1.847	386	1.421	178
Slough Road East	1.065	41	0.855	5
Slough Road West	1.203	113	0.903	8
PM Peak:				
Bangors Road North	0.468	1	0.349	1
Slough Road East	0.974	15	0.869	6
Slough Road West	0.905	7	0.733	3

Table 6.13: Bangors Road South/Slough Road Mini Roundabout

Junction Arm	2022 Base Case + Dev (2009 TA)		2022 Base Case + Dev (Revised Flows)	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Slough Road West	1.208	225	1.006	28
Slough Road East	1.267	101	0.777	4
Bangors Road South	1.540	105	1.090	24
PM Peak:				
Slough Road West	0.896	7	0.715	3
Slough Road East	1.397	237	1.191	97
Bangors Road South	1.299	90	1.032	41

5.50 As can be seen with these more realistic flows the junction operates with significantly reduced queuing.

Wood Lane/Langley Park Road

5.51 The Pinewood Studios Masterplan consent requires improvements to be undertaken at this roundabout, which includes the widening of the Wood Street approach. These improvements have not yet been implemented as insufficient floor space has been built to date to trigger the implementation under the S106 agreement.

5.52 The capacity assessments of this junction assuming the consented improvements are shown in **Table 6.14**.

Table 6.14: ARCADY Assessments of Wood Lane/Langley Park Road Junction - Masterplan Assessments

Junction Arm	2022 Base Case		2022 Base Case + Development	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Wood Lane	1.155	50	1.258	99
Langley Park Road East	0.914	9	0.983	19
Langley Park Road West	0.791	4	0.885	6
PM Peak:				
Wood Lane	0.911	8	1.021	22
Langley Park Road East	0.793	4	0.868	6
Langley Park Road West	0.809	4	0.906	7

- 5.53 The capacity assessments show that, in the morning peak period under the base case scenario, Wood Lane operates above capacity. The RFC's on Langley Park Road are both below 1.0 and the queues remain moderate.
- 5.54 When the development traffic is added on to the base scenario the RFC and queues on Wood Lane increase to a moderate extent.
- 5.55 In the evening peak period, under base traffic flow conditions, the junction operates within its theoretical capacity, with all RFC's under 1.0 and short queues on each approach.
- 5.56 When the development traffic is added, the RFC on the Wood Lane approach increases to be marginally above 1.0 and the resulting queues are moderately higher than in the base case. There is no material change in the performance of the other arms.
- 5.57 Analysis using the sensitivity flows is shown below:

Table 6.14: ARCADY Assessments of Wood Lane/Langley Park Road Junction

Junction Arm	2022 Base Case + Dev (Masterplan)		2022 Base Case + Dev (Revised Flows)	
	RFC	Queue (PCU)	RFC	Queue (PCU)
AM Peak:				
Wood Lane	1.258	99	1.006	17
Langley Park Road East	0.983	19	0.799	4
Langley Park Road West	0.885	6	0.662	2
PM Peak:				
Wood Lane	1.021	22	1.098	40
Langley Park Road East	0.868	6	0.818	4
Langley Park Road West	0.906	7	0.777	3

- 5.58 As can be seen with these more realistic flows, queuing is significantly reduced on Wood Lane and Langley Park Road East in the morning peak period and the impact of adding development traffic is small. There is a moderate increase in queue on Wood Lane in the PM peak, with marginal decreases on the other arms.

Conclusions on Analysis

5.59 In conclusion I would summarise the highway analysis as follows:

- The development will bring forward significant capacity and safety benefits at Five Points Roundabout and the Seven Hills Road/Denham Road junction.
- Only three other junctions operate over capacity using the TA flows. However, this is the case without Project *Pinewood*. With the revised flows that I consider more realistic, the junctions generally operate close to capacity in both the base and with-development scenarios.

5.60 As with virtually all successful areas in the South East there will be some residual congestion in the peak periods. This is already taking place and is not caused by Project *Pinewood*. However, the analysis suggests that the scheme will make some parts of the network worse. This raises the question of whether this increased congestion will happen in reality and what the implications are.

5.61 The starting point when considering congestion is to examine the policy position. Policies T1 (Manage and Invest) and T2 (Mobility Management) of the South East Plan both seek a re-balancing of the transport system in favour of sustainable modes. The supporting text to T1 states:

“Achieving a more sustainable pattern of development is dependent upon accepting that the transport system within the region is a resource that has a finite capacity at any point in time. While this capacity will increase as a consequence of the investment already programmed, the RTS reflects the simple fact that it is not possible to build our way out of the problem”.

5.62 The key components of “manage” are stated to be:

- *“Influencing the pattern of activities and specifically new development, so that more people have the opportunity to work and shop etc closer to their home location.*
- *Seeking greater utilisation of capacity on the existing transport system, eg. more active management of the road network and intelligent transport systems, and route capacity utilisation.*

- *Managing demand on the transport system, particularly on the road network, e.g. re-allocating capacity, promoting sustainable modes, parking policy, travel planning and possible fiscal measures”.*

5.63 Therefore it can be seen that the South East Plan policy is clear on encouraging sustainable modes and not necessarily seeking to provide highway improvements to solve peak hour congestion problems.

5.64 The DFT “Guidance on Transport Assessment” (March 2007) sets out at paragraph 1.19 measures to be considered to mitigate residual impacts of development. Four measures are listed. The fourth in order of priority is provision of new or expanded routes. The text states:

“It is considered good transport planning practice to demonstrate that the other opportunities above have been fully explored before considering the provision of additional road space such as new roads or major junction upgrades”.

5.65 The second point I would wish to make is that the conditions predicted by the analysis are very unlikely to happen in reality. This is mainly due to peak spreading. It is inevitable that people will vary their journey time to avoid congestion. This is a concept accepted by The Highways Agency. For example at the M20 Junction 4 the concept of peak spreading due to congestion was accepted by Parsons Brinckerhoff on behalf of the Highways Agency (see **Appendix I**). As my analysis has shown, off peak conditions at Project Pinewood are not congested.

5.66 Thirdly, it must be remembered that the conditions analysed only occur for a short period of time during the peak hours and outside those periods there is virtually no congestion.

5.67 Finally, it is important to remember that the development and therefore the effects on the local highway network will not appear overnight. Project Pinewood will take some 10 years to build out thus the effects will be gradual and people will be able to adjust their travel habits gradually.

5.68 I therefore conclude that the impact of the proposals on the surrounding highway network is acceptable. Only three junctions experience a material increase in delay and this is more than offset by improvements elsewhere on the network particularly at Five Points Roundabout. In any case people will adjust their travel times to avoid congestion.

5.69 It is central and regional government policy to encourage a re-balancing of the transport system towards more sustainable modes and not necessarily to solve peak hour problems by more road building. The development proposals comply with these policy objectives by providing strong encouragement for people to change mode and use public transport to travel to and from the site.

6 COMPLIANCE WITH TRANSPORT POLICY

6.1 I will now describe how the proposed development complies with national, regional and local transport policies.

National Policy

Planning Policy Guidance 13: Transport

6.2 The objectives of PPG 13 are generally to:

- Integrate planning and transport at the national, regional, strategic and local level
- Promote more sustainable transport choices for both carrying people and moving freight;
- Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling; and
- Reduce the need to travel, especially by car.

6.3 In relation to accessibility, PPG 13 states that 'a key planning objective is to ensure that jobs, shopping, leisure facilities and services are accessible by public transport, walking and cycling'.

6.4 It then states that 'the likely availability of public transport is a very important ingredient in determining locational policies designed to reduce the need to travel by car'.

Planning Policy Statement 3: Housing

6.5 PPS 3 provides guidance on a range of issues relating to the provision of housing whose objectives include the creation of sustainable, inclusive, mixed communities in all areas, both urban and rural.

6.6 It states that Local Planning Authorities should encourage applicants to bring forward sustainable and environmentally friendly housing developments that:

- Are easily accessible and well connected to public transport and community facilities and services;
- Provide, or enable good access to, community and green and open amenity and recreational space; and
- Provides car parking that is well integrated with a high quality public realm and streets that are pedestrian, cycle and vehicle friendly.

- 6.7 The proposals comply with these national objectives by providing local services, integrating residential and employment uses and providing people with a choice of using non car modes of transport.

Regional Policy

- 6.8 Development in the South East of England is guided by the South East Plan, which is the Regions Spatial Strategy. It provides a framework for the region until 2026 and is a key tool to help achieve more sustainable development, protect the environment and combat climate change.

- 6.9 The Plan incorporates the Regional Transport Strategy (RTS) that, amongst other things, seeks:

- To facilitate urban renaissance and foster social inclusion by re-balancing the structure and use of the transport system. In particular, bringing forward measures that encourage modal shift to more sustainable modes and significantly improve the attractiveness of local public transport services, walking and cycling;
- To reduce the wider environmental, health and community impact associated with the transport system, by bringing forward management measures that reduce our reliance on single occupancy car use.

- 6.10 As I explained in Section 5, Policies T1 (Manage and Invest) and T2 (Mobility Management) of the South East Plan both seek a re-balancing of the transport system in favour of sustainable modes. The proposals comply with these policy objectives by focussing investment on non car modes, i.e. pedestrians, cyclists and public transport.

Local Policy

Buckinghamshire County Council Structure Plan 1991-2011

- 6.11 The Buckinghamshire Country Structure Plan 1991-2011 was adopted in March 1996 and a Replacement Buckinghamshire Country Structure Plan was published in September 2003. A number of the Adopted Structure Plan policies have been saved. The relevant transport policies are outlined below:

TR1A – Traffic in Towns and Villages: 'In seeking to restrain future levels of traffic growth in the county, and to promote more environmentally sustainable travel, the County Council will implement measures to reduce growth in the length and number of

motorised journeys; encourage alternative means of travel which will have less environmental impact than the private car; and reduce reliance on the private car. The measures to be implemented will include, in towns and villages, the management of heavy goods vehicle traffic and parking to minimise environmental damage, essential junction and road improvement schemes, the reduction of traffic speed to a level commensurate with the type of road, safety requirements and the local environment by the implementation of traffic calming principles...'

South Bucks District Council Local Plan Review

6.12 The South Bucks District Council Local Plan Review was adopted in 1999 and remains the statutory Development Plan. The South Bucks LDF Local Development Scheme document contains a list of Policies from the Local Plan that will be replaced by the Core Strategy following the implementation of the LDF. Those relating to transport are not included in the list.

6.13 Chapter 11 of the Local Plan deals with transport. The Local Plan aims to co-ordinate land-use planning and transport planning to reduce the impact of motorised traffic on the surrounding area, and produce a more sustainable strategy. The policies outlined below aim to reduce the need for travel, in particularly, travel by private car, and encourage the use of sustainable modes of transport.

Saved Policy TR5: Accesses, Highway Works and Traffic Generation – 'In considering proposals involving a new or altered access onto the highway, works on the highway, the creation of a new highway or the generation of additional traffic the District Council will have regard to their effect on safety, congestion and the environment. Development will only be permitted where:-

- a) The proposal complies with the standards of the relevant Highway Authority; and
- b) The operational capacity of the highway would not be exceeded, or where the proposal would not exacerbate the situation on a highway where the operational capacity had already been exceeded; and
- c) Traffic movements, or the provision of transport infrastructure, would not have an adverse effect on the amenities of nearby properties on the use, quality or character of the locality in general, including rural lanes.

I consider the proposals comply with the objectives of these local policies by a balanced investment in transport that focuses on sustainable modes but improves what is the most significant bottleneck in the local highway network (Five Points Roundabout).

Buckinghamshire County Council Local Transport Plan 3

6.14 Buckinghamshire County Council is currently consulting on a new Local Transport Plan which takes account of the Coalition Government's emerging policies and the recent Spending Review. It will describe the County's strategy to 2016 and beyond. Its key objectives are to:

- Maintain or improve the reliability of journey times on key routes
- Deliver transport improvements to support and facilitate sustainable housing and employment growth.
- Ensure local transport networks are resistant and adaptable to shocks and impacts.
- Reduce the need to travel
- Increase the proportion of people travelling by low emission modes of transport
- Protect, improve and maintain the local environment
- Reduce the risk of death or injury on the county's roads
- Improve health by encouraging walking and cycling
- Enable disadvantaged people to access employment sites & opportunities
- Enable disadvantaged people to access leisure opportunities and social network
- Enable disadvantaged people to access key goods and services including education and healthcare

South Bucks District Council Local Development Framework Core Strategy

6.15 South Bucks District Council has recently adopted their Local Development Framework Core Strategy, which will guide the development of the district up to 2026. The Strategy sets out objectives and a long-term vision for future developments in South Bucks and contains the over-arching spatial policies from which more detailed policies will be drawn.

6.16 Core Policy 7 in the Draft Core Strategy Document, dated March 2010, relates to Accessibility and Transport. It states that *'it is important that the pattern of development is actively managed, so that more people have the chance to work, shop and spend their leisure time close to where they live. National Guidance in PPG13 (Transport) recognises that there is a need to rebalance the transport system in favour of more sustainable*

modes, whilst maintaining or even improving accessibility. It adds that 'mobility management' measures such as parking charges, intelligent transport systems and travel planning can be used to help achieve this rebalancing, but it also acknowledges that in rural areas the car will continue to provide the primary mode of travel.

6.17 Core Policy 7: Accessibility and Transport then states that *'The Council will seek to improve accessibility to services and ensure a safe and sustainable transport network by supporting the rebalancing of the transport system in favour of more sustainable modes of transport, whilst recognising that in rural parts of the District, the car will remain the primary mode of travel. This rebalancing will be achieved by:*

- Focusing new development that generates substantial transport movements in location that are accessible by public transport, walking and cycling.*
- Working with the highway authority, Rights of Way and Access Group, and others to improve transport choices for local residents, especially in rural parts of the District.*
- Encouraging safe and attractive improvements to pedestrian and cyclist routes and facilities.*
- Supporting the greater use of rail services, including improvements to parking at train stations and connecting bus services where viable.*
- Ensuring that the impact of new development on the road network is minimised and mitigated through the use of 'mobility management' measures such as Travel Plans, parking charges and car parking levels.*
- Supporting public transport schemes, including Crossrail, as long as there are strong environmental safeguards in place.*

7 REASONS FOR REFUSAL

- 7.1 This section will deal with the Reasons for Refusal and statement of case from BCC.
- 7.2 There are 2 reasons for refusal that relate to transport; Reasons 4 and 5.
- 7.3 Reason 4 argues that the site is a relatively isolated and unsustainable location with poor accessibility to facilities and services.
- 7.4 Clearly the development needs to be located where it is because of its relationship with Pinewood Studios. This will create sustainable movements as people live and work in the same location. In addition there is the broader saving in long distance travel for filming – a point covered by other witnesses. The employment is related to the filming industry and is therefore appropriately located close to the existing studios site.
- 7.5 Services and facilities are provided on site and are available in Iver Heath which will allow many day to day needs to be satisfied locally. Significant enhancements are being provided to the walking, cycling and bus networks to allow people to access other locations such as Slough and Uxbridge as well as train stations. I note that the bus services are agreed by BCC as providing an appropriate level of service. Furthermore the footpath and cycling strategy has been significantly enhanced since the application was refused. These enhancements to sustainable modes of travel are consistent with South East Plan policies.
- 7.6 Reason 5 suggests that the applicant has failed to demonstrate that the traffic generated can be accommodated on the highway network. Much progress has been made on this issue since the application was refused and, as I set out in Section 5, I consider that the generated traffic can be satisfactorily accommodated on the highway network with the proposed junction improvements. Indeed at both Five Points Roundabout and Seven Hills/Denham Road junction, both capacity and safety are enhanced by the proposals.
- 7.7 I now turn to BCC's Statement of Case:
- 7.8 *2.0: Existing Conditions.* Response: Congestion and safety in this area are not exceptional compared to other similar areas in the South East. The traffic generation can be accommodated on the network and enhancements are being made at a key node – Five Points Roundabout.

- 7.9 *3.0 Traffic forecasts.* Response: Rather than being an under-estimate in fact the assessment in the TAR is robust and will over-estimate the impacts as I have demonstrated in this proof.
- 7.10 *4.0 Impact on network:* Response: I have demonstrated the impact of the proposals is acceptable especially taking account of the fact that traffic flows reduce significantly outside the peak periods and that people will adjust the time of their journey to avoid delay.
- 7.11 *5.0 Five Points Roundabout.* Response. Much progress has been made on both designs for the Five Points Roundabout and I consider that either junction design is acceptable in terms of design and capacity. Indeed both designs lead to operational improvements compared to the committed scheme.
- 7.12 *6.0 Seven Hills Road Junction.* Response: Again much progress has been made on this matter and a planning application for a signalised junction has now been submitted to SBDC.
- 7.13 *7.0 Shortfall in Mitigation Package.* Response: I consider the mitigation package proposed is appropriate to mitigate the impacts of the development and brings forward enhancements to local bus services and walking and cycling infrastructure as well as a robust Travel Plan.
- 7.14 *8.0 Form of Agreement.* Response: The approach taken by PSL to the agreement is reasonable and policy compliant.

8 SUMMARY AND CONCLUSIONS

- 8.1 Project *Pinewood* will be an innovative and world beating development that will lead to significant overall sustainability gains as film crews will be able to dramatically reduce their global travel.
- 8.2 This theme of sustainability runs throughout the transport strategy that has been developed for the site. The objective has been to develop a scheme and bring forward improvements in the local area that provide every encouragement for people to either reduce their travel or use non car modes.
- 8.3 The scheme brings forward a number of transport **benefits** which I summarise below.
- 8.4 **Location:** Being located adjacent to Pinewood Studios will lead to the formation of a creative hub. This gives people the opportunity to be a part of this community and live and work within Project *Pinewood* and Pinewood Studios thus reducing travel demand.
- 8.5 **Layout and Design:** The scheme puts a strong emphasis on pedestrian and cycle priority over cars. The aim is to create a community where people feel safe to walk or cycle without fear of fast moving vehicles. This chimes with recent innovations in masterplan design that are encapsulated in Manual for Streets. There will be a 20MPH speed limit throughout the development and controlled crossings will be provided where appropriate.
- 8.6 **Local facilities:** Local retail and community facilities will be provided that will allow people to satisfy many of their day to day activities on site. The facilities will also be available to people working at Pinewood Studios.
- 8.7 **Pedestrian and Cycle Facilities:** PSL will make a significant contribution to improving facilities in the local area. In particular this will allow people to cycle to Slough and Uxbridge using mainly off-street cycle routes.
- 8.8 **Bus Services:** Bus services to Project *Pinewood* will be dramatically improved with services to Uxbridge, Slough and Gerrards Cross. This will allow access not only to those communities but also to train and underground stations for onward travel.
- 8.9 **Travel Plan:** An innovative and well funded Travel Plan will be introduced on site that will provide assistance to both residents and employees to make more sustainable transport choices. Measures include a car club, car sharing, information technology

within the home and Personal Travel Planning. Personalised Travel Planning has been demonstrated to have a significant effect on people's travel habits.

8.10 **Transport Review Group and Additional Mitigation Fund:** PSL will establish a Transport Review Group that will monitor the performance of the development and the effects on the local community. A fund will be available to this group to spend on additional improvement measures if the need for such measures becomes apparent.

8.11 **Highway Improvements.** Improvements will be brought forward at Five Points Roundabout and the Seven Hills Road/Denham Road junction that will lead to capacity and safety enhancements.

8.12 It is important to recognise that the above measures will benefit the **local community** as well as those living and working at Project *Pinewood*. The local community includes those working at Pinewood Studios as well as people from nearby residential areas. They will have a dramatically improved local bus services as well as enhanced pedestrian and cycle links. They will also benefit from the highway improvements being brought forward.

8.13 The potential impacts of the development in the local area have been carefully assessed. The most significant existing bottleneck in the area is at Five Points Roundabout which experiences long queues and has safety issues at present. The performance of this junction will be significantly improved by introduction of the proposed junction enhancement. The Seven Hills Road/Denham Road junction will also be improved.

8.14 Three other junctions are predicted to experience congestion problems in the peak periods. However, these problems exist in any case and are not brought about by traffic from Project *Pinewood*.

8.15 I consider the analysis included in the TA to be overly pessimistic and have therefore included a sensitivity test within this proof that I believe shows a more realistic picture of future network performance. I would also add the following comments on the predicted traffic effects:

- Congestion in the Project *Pinewood* area is not unusual compared to other areas in the South East;
- Congestion is short lived lasting only for the peak hours or part of those hours;
- People will adjust their travel time in order to avoid the most congested times;

- Impacts will not all happen in a sudden way but will build gradually over a 10 year period allowing people to adjust their travel habits; and
- Government policy puts the emphasis on providing sustainable choices to people rather than more road building to deal with peak hour travel.

8.16 I therefore consider that the impacts in the local area are acceptable.

8.17 In summary, Project *Pinewood* will bring forward significant transport benefits that will be available to the local community as well as those living and working on the development. I consider the impacts on the local road network are acceptable and that there are no transport reasons why planning permission should not be granted.