Town and Country Planning Act 1990 –Section 78
Town and Country Planning (General Development Procedure Order 1995)
Town and Country Planning (Inquiries Procedure) (England) Rules 2002

Appeal by Gladman Developments Limited

Site at Henthorn Road, Clitheroe, Lancashire

Proposed Residential Development of Up to 270 Dwellings, Doctors Surgery, Access Details, Highway Works, Public Open Space and Associated Works

APP/T2350/A/11/2161186

Summary Proof Of Evidence by
Gareth Davis, BSc MSc MCIHT CMILT
On Behalf of Ribble Valley Borough Council

RIBBLE VALLEY
BOROUGH COUNCIL

1. Summary

1.1. My evidence has reviewed the proposals for a 270 unit residential development off Henthorn Road. The scheme was refused by RVBC councillors against the advice of LCC highways officers. In my professional and independent view this decision was reasonable as described in my evidence and summarised below.

1.2. This development is located outside of the urban area with a single vehicular and pedestrian access off Henthorn Road which itself is a cul-de-sac. My view is that this site which is very large in scale, is remote from local facilities which could lead either to more car trips to be generated or more isolation for residents without access to a car. The site also has poor connectivity to the local neighbourhood for both pedestrians and cyclists who only have a single point of access to join the wider highway network.

1.3. My view was also made by LCC in their representations to committee also gave concerns about this and stated that:

'Given the scale of the proposed development it is inappropriate to have all vehicular and pedestrian access available from a single point. This would be unsafe, impracticable or unsustainable.

1.4. LCC also stated that:

'The proposed site requires a secondary pedestrian and cycle access to achieve a basic level of sustainability.'

1.5. The developer proposes a second access for pedestrians and cyclists via the caravan access road onto Edisford Road. LCC suggested this access route could be conditioned. However these works are outside the red line boundary, cross a watercourse and it is not clear what works would be required, when it would be delivered with the phasing of the scheme and therefore leaves uncertainty over what in my view is an essential requirement. Even with such a link it does not meet the desire line of pedestrians and cyclists.

1.6. My evidence has shown that the site is isolated form local facilities and the distances that people need to walk to reach those are beyond acceptable walk distances as defined by the IHT. An accessibility scoring system by LCC shows the existing site as having a very low accessibility score.

1.7. The developer has offered a number of proposals aimed at mitigating the deficiencies of the sites layout and location. These include a play area, diverting the C1 bus service into the site (including financial support) and providing the land and construction costs for a GP Surgery.

1.8. The bus service commitment brings the site up to the level of accessibility of the surrounding areas. However, the numbers of residents that would use this service is forecast to be low with only 3% of residents expected to use this mode. If the C1 bus service is diverted into the site then this would require a diversion of around 900m and additional journey time of between 3-3.5 minutes. This would be frustrating for existing bus passengers from the area but is also unlikely to be achievable without an additional bus needed on the route. If this is not provided then there would have to be a reduction in the frequency or an amendment to the route again reducing the quality of the existing bus service provision.

1.9. Financially supporting such a service helps remove the subsidy for LCC but this proposal only helps raise the sustainability up to a level of the surrounding neighbourhood which I would normally expect as a minimum for a large residential development as this.

1.10. The offer of the land and construction costs for a GP surgery is available for 3 years. Such a surgery would be remote from other facilities from which patients could link their trip purpose, have a limited catchment area and would have a very low profile being accessed off a cul-de-sac. There is uncertainty whether a GP practice would wish to locate there but even if one did then its limited catchment area means that most patients would have to travel out of their way to get there and are more likely to use the car rather than more sustainable modes.

1.11. The developer has also committed to a travel plan and funding an LCC travel coordinating role as well as provision of highway works on Henthorn Road to improve general pedestrian crossings and a toucan crossing upgrade at Whalley Road. While these measures are of benefit they do not overcome the isolated nature of the site or likely to result in a significant modal shift on foot or by bicycle.

1.12. Given that the site suffers from a lack of connectivity and is remote from local facilities then I consider that the development is contrary to sustainable design principles and increase reliance on private car use.

1.13. This is likely to result in more car trips being generated by the site than better planned estates. The trip forecast in the AHA TA were not according to DfT Guidance being average rates derived from a limited range of sites that are not directly comparable to the site at Henthorn Road. The correct method if no directly comparable sites are available is to select a minimum of 20 sites and conduct an 85th percentile assessment. This results in an extra 37 trips in the AM and 51 trips in the PM being generated by the site and in my view more reflective of the sites location and accessibility.

1.14. The analysis of the AHA TA identified incorrect geometric parameters input on the priority junction models which when corrected do result in a significant reduction in capacity than that in the TA. I also consider that as the existing traffic flows predominantly head along Woone Lane North before turning south to reach the A671 the trip distribution should follow that existing traffic pattern rather than that predicted by AHA. When the trip distribution follows current traffic patterns this results in more traffic using the sensitive mini-roundabout at Woone Lane North/Low Moor /Lowergate.

1.15. Traffic capacity models have been developed using correct measurements and the 85th percentile flows and this shows that there are two junctions that move from being within capacity to being over their practical capacity for junction design. This results in the queues and delays increase to increase to what are in my view are unacceptable levels. The junction of Henthorn Road with Thorn Street sees one approach in the assessment year PM peak operating with queues over 12 vehicles in length and an average delay of over one minute per vehicle. The mini-roundabout at Woone Lane/Low Moor/Lowergate also operates with unacceptable delays of one and a half minutes and a queue of 10 vehicles. The increased queues would also block the highway where parked cars are present, notably on Woone Lane (North) and to a lesser extent on Henthorn Road.

1.16. For drivers the increase in queues and delays is compounded by the fact that other links in the vicinity are sensitive with the presence of the level crossing on Eshton Terrace bringing occasional queues and delays to traffic once or twice an hour.

1.17. This congestion is made worse in that there are few alternative routes available to get to the site from the A671 due to the limited railway crossings The links of Woone Lane (North and South) have double parking along their lengths that mean traffic has to give way to opposing vehicles thereby also delaying the movement of traffic restricting the opportunity for traffic to divert along its length.

1.18. The developer has proposed a highways improvements along Woone Lane (north), however, these improvements do not increase capacity at the junction just improve the flow of vehicles along the link.

1.19. Given the level of increased queues and delays to drivers, this development would therefore clearly result in a detrimental impact on the highway operation.

1.20. In conclusion, my evidence has demonstrated that this development is unsustainable in terms of its accessibility to local facilities and poor connectivity to the surrounding urban areas, particularly for pedestrians and cyclists, contrary to principles of good urban design.

1.21. The measures proposed by the developer only partially mitigate this poor accessibility and the site is still scored as a site of low accessibility.

1.22. Furthermore the provision of a second pedestrian/cycle access point and the GP surgery are uncertain in their deliverability. The bus service commitment is expected to impact on existing bus users particularly by looping into the site result in additional journey time for existing bus passengers.

1.23. The unsustainable nature of the site would lead to additional traffic generated by the development which was not assessed in the original TA. When modelled correctly it can be seen that there is a significant detrimental on the highway operation and key junctions along Henthorn Road and Woone Lane which is compounded by the level crossing on Eshton Terrace.

1.24. The highway improvements proposed do not provide additional capacity to mitigate the traffic impact nor do they overcome the poor accessibility by pedestrians and cyclists by being remote from local facilities. The proposals are therefore contrary to the principles of sustainable development, increase reliance on the use of the private motor car, would be detrimental to the traffic infrastructure and contrary to Policy T1 of the Ribble Valley Districtwide Local Plan. In my view the council took a reasonable view in refusing the proposed development based upon their understanding of the local highway operation.

Waterman Boreham
Transport Planning

MAIN REPORT

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1. Introduction

1.1. My name is Gareth Davis I am a Transport Planning Consultant with 22 years of transport planning and transport engineering experience, working for both the private and public sector. I have a Masters Degree in Transport Engineering and Planning from Salford University and I am a Member of the Chartered Institute of Highways and Transportation and a Chartered Member of the Institute of Logistics and Transportation. I am a Divisional Director of Waterman Boreham Transport Consulting Engineers in Manchester.

1.2. I have considerable experience in transport planning and highway engineering advising on development projects similar to that proposed, for both private and public sector clients.

1.3. The proposed development by Gladman Developments Ltd was supported by a Transport Assessment (TA) and Travel Plan (TP) by Ashley Helme Associates (AHA). Lancashire County Council (LCC) is the highway authority for Ribble Valley and they undertook the pre-application negotiations and prepared the report to committee. In that report, LCC stated they had no objection in principle subject to a number of improvements that could be conditioned. However at committee, the local council members refused the application based upon their knowledge of the highway operation and disregarded the advice from LCC.

1.4. I can confirm that my views presented in this evidence are my own independent professional opinions based upon the code of conduct of the Chartered Institute of Highways and Transportation which cover the areas of competence, conduct and professionalism in members' duties to employers and clients, and to the profession and the Institution. It also details members' obligations to safeguard the public interest and maintain professional competence. As a member of the Chartered Institute of Highways and Transportation my duty is abide by that code of conduct and consequently this evidence is my independent professional view rather than the views of RVBC.

1.5. I have reviewed the reasons for refusal and the planning application documents and in my professional judgement I have come to the conclusion that the views of the local councillors do form a reasonable basis for refusal. As will be described in this evidence, LCC in my view did not analyse the Transport Assessment as carefully as I have done and when correctly assessed it is evident there are unacceptable implications of the development which justify the reasons for refusal.

1.6. The reasons for refusal are given below:

> *Reason 1: The proposal is contrary to National Policy in the form of PPS1 and PPS3 in that the development due to its isolated location distant from a primary route network, lack of cycle or sufficient pedestrian access to the town centre and its infrastructure would lead to the proposal being contrary to the principles of sustainable development. The proposal would also have a detrimental impact on the traffic infrastructure of Clitheroe and key traffic junctions of Henthorn Road, Woone Lane, Eshton Terrace and the railway crossing which would lead to the proposal being contrary to the principles of sustainable development.*
>
> *Reason 2: Given the site's relationship to the primary route network the development is considered contrary to the principles of sustainable development in that it fails to provide sufficient pedestrian and cycle linkages back to the town centre facilities or have adequate public transport facilities and as such would increase reliance on the use of the private motor car be contrary to Policy T1 of the Ribble Valley Districtwide Local Plan.*

1.7. This evidence will demonstrate why the view of the local members is the correct decision and that the measures offered by the appellant are not sufficient to achieve a sustainable development that is accessible to local facilities, permeable with convenient connections to the surrounding locality and therefore result in greater use by car and also result in an unacceptable impact on highway operation.

1.8. The reasons for refusal refer to the sites distance from the Primary Route Network. In this context the A671 Whalley Road is classified by LCC as a Primary Distributor Route which approaches Clitheroe from the south from the A59 and then continues around the south east of the town centre. The A671 provides the main link between Clitheroe, the A59 and the East Lancashire Conurbation to the south and is the primary route for drivers accessing employment and other services outside of Clitheroe.

2. Policy Context

2.1. The broader policy context is provided in Richard Purser's Proof of evidence. This Chapter sets out the transport policies that relate to the issues raised in this evidence. The key theme running through Government Policy is sustainability and particularly the aim to reduce the need to travel by car. These policy initiatives a summarised next.

National Policy

PPS1

2.2. This document sets out the overarching planning policies regarding the delivery of sustainable developments, and states that sustainable development is the core principle underpinning planning.

2.3. Key principles stated within this document include references to reduce the potential of climate change through policies that:

- …reduce emissions (for example, by encouraging patterns of development which reduce the need to travel by private car).

PPS3

Achieving high quality housing

2.4. PPS 3 on Housing Policy also has a theme of sustainability and in its objectives it states that the planning system should deliver:

- Housing developments in suitable locations, which offer a good range of community facilities and with good access to jobs, key services and infrastructure.
- Is easily accessible and well-connected to public transport and community facilities and services, and is well laid out so that all the space is used efficiently, is safe, accessible and user-friendly.

PPS4 – Planning for Sustainable Economic Growth

2.5. The government's overarching objective is sustainable economic growth, in order to promote this regional planning bodies and local planning authorities should ensure that their development plan includes a wide range of points, including:

- identifying, protecting and promoting key distribution networks, and locating or co-locating developments which generate substantial transport movements in locations that are accessible (including by rail and water transport where feasible), avoiding congestion and preserving local amenity as far as possible; and
- plans for the delivery of the sustainable transport and other infrastructure needed to support their planned economic development and, where necessary, provides advice on phasing and programming of development.

PPG13

2.6. The key aim of PPG13 is to ensure that local authorities carry out their land use policies and transport programmes in ways which help to:

- promote more sustainable transport choices for both people and for 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.

2.7. Accessibility by non-car modes is important for all, especially for those who do not have regular use of a car, and to promote social inclusion. Walking is recognised as being the most important mode of transport at the local level, offering the greatest potential to replace short car trips, particularly those under 2km. Beyond 2km and up to 5km PPG13 considers that cycling has the potential to be a substitute for car trips.

2.8. The guidance follows on to suggest that local authorities should focus land uses which are major generators of travel demand in city, town and district centres and near to major public transport interchanges.

Regional Policy

North West Regional Spatial Strategy

2.9. The North West Regional Spatial Strategy was adopted on the 30 September 2008. It has since been renamed the Regional Strategy (RS). The RS highlighted how the region would progress over the next twenty years. However, in a letter to Chief Planners on 6 July 2010 the Government revoked the regional tier of planning policy with immediate effect. As outlined above, the Government then produced the Localism Bill which has now become an Act of Parliament.

2.10. Section 109 of the Localism Act states that RSS will be removed on a permanent basis, but we understand that this will take place on a region by region basis, likely in the New Year. Therefore, at this time, it does remain a material component of the Development Plan for the purposes of Section 38(6) of the Planning and Compulsory Purchase Act (2004).

2.11. Key transport policies in respect of this appeal are set out below:

- Policy DP5 states that development should be located so as to reduce the need to travel, especially by car, and enable people as far as possible to meet their needs locally.
- Policy DP9 gives high importance to reducing emissions and adapting to Climate Change, reducing traffic growth, promoting walking, cycling and public transport.

The Lancashire Local Transport Plan (May 2011)

2.12. The transport goals stated within this document include the following statements:

- To provide all sections of the community with safe and convenient access to the services, jobs, health, leisure and educational opportunities that they need.
- To improve the accessibility, availability and affordability of transport as a contribution to the development of strong and cohesive communities.
- To create more attractive neighbourhoods by reducing the impact of transport on our quality of life and by improving our public realm.
- To reduce the carbon impact of Lancashire's transport requirements, whilst delivering sustainable value for money transport options to those who need them.

- To make walking and cycling more safe, convenient and attractive, particularly in the more disadvantaged areas of Lancashire, bringing improvements in the health of Lancashire's residents.

Local Policy

The Ribble Valley District Local Plan

2.13. Policy T1 – In making decisions on development proposals the local planning authority will attach considerable weight to:

- the availability and adequacy of public transport to serve those moving to and from the development;
- the relationship of the site to the primary route network;
- the provision made for access to the development by pedestrian, cyclists and those with reduced mobility.
- proposals which promote development within existing developed areas at locations which are highly accessible by means other than the private car;
- proposals which locate major generators of travel demand in existing centres which are highly accessible by means other than the private car;
- proposals which strengthen existing town and village centres which offer a range of everyday community shopping and employment opportunities by protecting and enhancing their viability and vitality;
- proposals which locate developments in areas which maintain and improve choice for people to walk, cycle or catch public transport rather than drive between homes and facilities which they need to visit regularly;
- proposals which limit parking provision for developments and other on or off street parking provision to discourage reliance on the car for work and other journeys where there are effective alternatives.

3. Development Proposals

3.1. The site is located outside of the existing urban area of Clitheroe on fields to the south west of the Henthorn Road residential area. The planning permission applied for is in outline for up to 270 houses with access as a reserved matter. An illustrated master plan for the site is shown in the Reference Documents as **Dwg 4370-P-02 Rev E.**

3.2. It is proposed that the site offers 30% (81) of its units for affordable housing. Specific housing for the elderly is provided with 40 units allocated, 20 of which are allocated under the affordable housing offer.

3.3. The site also provides for a play area and a community park. The development has offered to land for doctor's surgery (PCT facility) positioned within the central core of the development site of approximately 125m^2 gross floor area. The draft Legal Agreement outlines that land for this facility would be reserved for a period of three years with a sum of £156,250 as a contribution towards the costs of constructing the PCT.

3.4. The site is accessed off Henthorn Road and this road (with footways) is diverted to meet the new access road at a give way junction. Henthorn Road itself is a cul-de-sac which terminates approximately 800m to the south west.

3.5. The developer has proposed a secondary pedestrian access route to Edisford Road via an access road serving to the Edisford Caravan and Camping Site. However, as described in Richard Pursers evidence, it is uncertain what form this access will take and the works needed to achieve it as this link crosses a watercourse and is not lit at present. Also, given the phasing of the site, it is uncertain when it would be developed and provide a link for the first residents of the development.

3.6. The LCC Highways Engineer has suggested that this access link could be conditioned despite access being a reserved matter for the outline application. According to Richard Pursers evidence he considers that it would require a further planning application to be made. This uncertainty is, in my view, unsatisfactory given that access was a reserved matter for this outline application.

Transport Improvements

3.7. In discussions between AHA and LCC a package of highway improvements was established. The package of transport improvements measures are described in the Statement of Common Ground and in summary include:

- A commitment to finance the diversion of a bus service that will draw on the existing C1 service (or a new replacement service) linking the site and Clitheroe Interchange delivered upon occupation of the 51st dwelling. This would be funded for 5 years with fare revenues reinvested.
- Cycle parking for 4 cycles within the development and in Clitheroe Town Centre.
- At Woone Lane north of Eshton Terrace it is proposed to form a one way link or if that is not possible due to the TRO process, a priority shuttle chicane scheme is an alternative proposition.
- Upgrade of the Pelican Crossing on the A671 near to Turner Street to a Toucan Crossing (to permit cyclist to cross at the same time as pedestrians)
- A zebra crossing on Henthorn Road close to Siddows Avenue including some footway and kerb works.
- A review of kerb works at junctions on Henthorn Road along the desire to make it easier for pedestrians to cross the minor arms including dropped kerbs, tightening junction radii and signage.
- The renewal of junction surfacing at the various junctions of Henthorn Road.

3.8. I now assess in Chapter 4 how the site compares to good sustainable design principles.

4. Sustainability

Introduction

4.1. The recurring theme in the reasons for refusal is sustainability. A key consideration to this is that the site is outside of the urban area it is distant from local facilities. A second consideration is that the site is in my view, too large a development to be accessed from a single access point, with no links meeting the desire line for pedestrians or cyclists, thereby limiting the connectivity with the local neighbourhood.

LCC Accessibility Questionnaire

4.2. LCC have an Accessibility Questionnaire from which they assess the accessibility level of residential sites and score then according to Low, Medium or High levels of accessibility. Since the submission of the AHA TA the questionnaire has changed slightly and also the relocation of the Spar convenience store away to Edisford Road has also affected the results. I have recalculated the accessibility score for the existing location and then with development, assuming there is a half hourly bus service diverted into the site, a play area and a GP Surgery on site. A site with a score of less than 20 is described as having low accessibility and between 20-35 medium accessibility and above 35 a high level of accessibility. The accessibility calculations are shown in **Appendix A**.

4.3. It can be seen that the existing site has a very low accessibility score of **10**. There are no library, post office or bank facilities within 1.5km and the site is around 2km from any cycle links. If a new half hourly bus service is provided between the site and Clitheroe Town Centre then this figure is raised to an **Accessibility Level of 19** which is still described as a site of **Low** accessibility.

4.4. It is noted that the proposed GP Surgery would not change the scoring as, while there is a pub within 1.5km, there are no other facilities such as a library, post office or a bank within that distance.

Walk Distance to Local Facilities

4.5. The walk distance to local facilities is presented in **Dwg 10686/001/C**. Walking is a key factor in sustainable design as it is an important mode for the vast majority of people but it is more important for certain groups, particularly children, older people, those without access to a car and those who are not the main driver within a household.

4.6. It can be seen from **Dwg TRN 10686/001/C** that the facilities that a large residential area would reasonably expect to be within walking distance such as a post office, library or a bank are all absent from a reasonable walk distance of the site.

4.7. It can be seen that the nearest bus stop on Kenilworth Drive is 700m from the central point of the site and McColls Newsagents is 880m away. The Spar has been relocated to Edisford Road now 1260m away. The Edisford Road primary school is 1070m away when accessed from Siddows Avenue. Clitheroe Town Centre is just under 2km from the site where there are a variety of facilities and services available.

4.8. The Institute of Highways and Transportation published guidelines 'Providing for Journeys on Foot (2000) describe what it considers acceptable walk distances and what may be the maximum that someone is likely to walk. The distances that people will work will vary according to the type of journey. This is summarised in **Table 4.1** below.

	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

Table 4.1: Suggested Acceptable Walking Distances

Source: '*Providing for Journeys on Foot'*, IHT

4.9. It can be seen from the above table that the acceptable walk distances vary by journey type. It can be seen that commuting or school trips have a greater acceptable walk distance than other trip types and these have an acceptable walk distance of 1000m and a maximum of 2000m. Shopping trips or trips to access town centre facilities are much shorter with an acceptable walk distance of 400m and a maximum of 800m.

4.10. It is noted that the local primary school and the main employment opportunities in Clitheroe are beyond an acceptable walk distance of 1000m but they do lie within the maximum walk criteria. I consider that it is unlikely that anyone from the site will make a shopping trip or a trip to town centre services on foot unless it is in exceptional circumstances. Furthermore, I consider that a journey to collect say a pint of milk from either the Spar or McColls Newsagents are also unlikely to be made on foot as they involve a round trip of 1760m in order to do so. Such long walk trips are more likely to be made by car or as part of a linked trip say on a walk back from school or work.

4.11. As well as pedestrian accessibility, the same issues arise for cyclists when considering a site with a single access, the lack of connectivity to the local neighbourhood and also the distance to local facilities and services. While cyclists can travel further in a shorter time there is still a deterrence effect for travelling further and away from the desire line. There are no cycle lanes in the vicinity and the nearest cycle facilities are on road cycle routes around 2km to the west and north.

4.12. In my view, as the site is distant from many local facilities and is beyond what most people would consider reasonable or acceptable to walk or cycle, this is likely to result in residents choosing to drive by car. If residents do not have access to a car then this could lead to residents being isolated from accessing local facilities.

Site Layout

4.13. The site layout has an important effect on the likelihood on whether residents are more or less likely to use a car. By Design – Better Places to Live (DTLR 2001) refers to the permeability of urban areas. The layout of housing development can have a significant difference on mode choice and this document states that:

'Routes should lead to where people want to go. Introverted, dead end layouts limit people's choice of how to travel, especially if they want to walk, cycle or use the bus'.

4.14. The proposed layout is a large scale development based upon a 'dead end layout'. The first issue of concern is that the single access point means that most residents would have to walk away from their desire line right at the start of their journey. Residents on the site would have to head south before they can return to their desire line of a north easterly direction along Henthorn Road. This problem arises as there is a lack of connectivity with the surrounding neighbourhood such as a link between the site and the residential area around Fairfield Drive that would meet the desire line. Such a layout means that neighbours on the site and in the existing neighbourhood face a long walk to reach them and is likely to lead to residents choosing to drive for journeys that would be made on foot in better planned developments.

4.15. On the matter of a single access point, LCC in their representations to committee stated that:

'Given the scale of the proposed development it is inappropriate to have all vehicular and pedestrian access available from a single point. This would be unsafe, impracticable or unsustainable.

4.16. Considering the above, it can be seen that LCC did raise concerns in turn there are issues that having such a large development accessed off a single access.

4.17. Expanding upon these issues LCCs reference to the site being **unsafe** in my view, principally arises from the lack of a secondary emergency access. The site is a large single access development of 270 accessed off Henthorn Road which itself is a cul-de-sac. The guidance in Manual for Streets states that the criteria for the number of units accessed off a cul-de-sac should be reviewed by the fire service as their criteria should be based upon a response time rather than a numbers based approach. However, based upon previous guidance and in the absence of a response from the Fire Service, I would consider it good practice to provide two access points for such a large development. If that is not possible then a secondary emergency access would be appropriate. If neither were available, then good practice would be to minimise the distance over which emergency vehicles have an alternative route choice.

4.18. The distance between the junction of Henthorn Road with Kenilworth Drive, (where an alternative route is available) and the point internally where the internal loop develops is around 190m. I consider this to be too far and contrary to good design.

4.19. The issue of an **impracticable** access arises from the fact that if there are any highways works or a blockage by an accident or incident then there is no alternative route for residents to get passed. This issue of practicality is exacerbated by the scale of development where more people would be affected should a problem arise. Furthermore vehicles on a delivery schedule or refuse collection vehicles also find a large a development located off a single access more inconvenient and inefficient as they must retrace their movement.

4.20. LCC stated that without a secondary access the site would be **unsustainable**. LCC also stated in their committee response that:

'The proposed site requires a secondary pedestrian and cycle access to achieve a basic level of sustainability.'

4.21. The issue of accessibility to local facilities and only a single access as described above increases the likelihood that residents will use a car. The additional car use as a result of this will lead to increased CO2 emissions than a better planned estate.

4.22. It has already been described that it is uncertain whether the secondary access to Edisford Road under the current application. This together with the lack of links meeting pedestrian or cycle desire lines means that the site in my opinion is unsustainable.

Summary

4.23. I consider that even though the site is in outline, the limitations on access means that whatever design comes forward, the development will inevitably result the development being remote from local facilities and poor permeability with no direct connectivity to their neighbours on the local surrounding estates. There is therefore a greater likelihood that residents will choose the car and therefore make the development unsustainable.

4.24. The provision of a pedestrian link to Edisford road is not deliverable under the current application and there is uncertainty as to what works would be needed to achieve that.

4.25. In mitigation of the poor accessibility of the site, the developer has offered to fund a number of measures that are aimed at improving accessibility of the site. These include the provision of a play area and community park, the diversion of the C1 bus service into the site and the offer of land and a financial contribution to a GP Surgery on the site. They also offer pedestrian crossing improvements for the minor arms along Henthorn Road cycle parking and a Toucan Crossing upgrade on Whalley Road.

4.26. I now review those measures and consider whether these are able to improve the sustainable outcomes for the site.

5. Improvements to Site Accessibility

Introduction

5.1. The developer has offered several measures to improve accessibility. The effectiveness of these are considered next.

Play Area and Community Park

5.2. The developer has offered several measures to improve accessibility. The site will benefit from a play area and a community

Bus Service Diversion

5.3. The current nearest bus stop is located on Kenilworth Drive some 700m from the centre of the site.

5.4. The appellant proposes either a new bus service or diversion of existing bus services in to the site to improve accessibility for its residents.

5.5. The IHT has published Guidelines for Planning for Public Transport in Developments (1999) and states that:

'The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m. Bus services should not be distorted to satisfy this criterion. Direct and simple bus routes are more important than walking distances a little more than 400m for a few passengers or destinations.'

5.6. In considering the level of passengers that would benefit from this service. The Travel to Work information in Table 2 of the AHA TA shows that just 2.6% of the Edisford and Low Moor ward use the bus to travel to work. This is consistent with the TRICS trip generation information discussed later which indicates a daily modal share of 3% by bus. The modal share proportion is given in **Appendix B**. Therefore, while bus services to residential areas are important, they only carry a small proportion of people wishing to travel towards the town centre. This is evidenced by the fact that the existing C1 bus service requires a subsidy to operate.

5.7. I consider that while the proposal represents a significant financial commitment for the developer and reduces the level of subsidy to LCC, the new bus service for residents of the estate would only bring the bus accessibility of the site up to the levels of the existing neighbourhoods and would only meet the needs of a small proportion of residents.

5.8. If the existing C1 bus service is diverted into the site it would bring some disbenefits for existing bus users. Because there is no route through the site, bus passengers that get on the bus at the Kenilworth Road bus stop are diverted 900m into the site to loop round only to return to the route they previously were on. This journey is estimated to take around 3 to 3.5 minutes based upon the current timetabled times to cover a similar distance. This extra journey time in my view would be very frustrating for existing bus users.

5.9. The timetable for the C1 and also the C2 bus services are shown in **Appendix C**. It can be seen that the C1 service operates on two loops one round the Peel Park area returning to Clitheroe Interchange and then to the Henthorn Road/ Low Moor residential areas again returning back to Clitheroe Interchange. The C1 service was previously operated by Travel for All as a commercial service but that organisation could not continue commercially so LCC had to step in and now subsidises the C1 service. The C2 is a longer distance hourly service from Sawley/Grindleton/Chatburn.

5.10. It can be seen from the above table that the C1 service does not start until 09.35 in the morning and wait finishes at 19.32. Each time the service passes through the Market Place there is a two minute layover period. The proposed diversion inot the site would result in this layover time being removed.

5.11. LCC are currently reviewing the C1 and C2 services so that they can provide a combined service with a consistent headway. LCC have stated that a diversion of a service into the site is possible. In my view the diversion of the bus service into the site could be achieved but only with a variation to existing frequency, routeing or by the introduction of a new bus onto the route.

5.12. While LCC would benefit from a reduction in subsidy, the existing bus passengers, particularly for those in the Kenilworth Road area are likely to see a longer journey time and a more frustrating outcome.

5.13. It is also noted that the new bus service will only commence at construction of the 51st housing unit. Residents up to then will benefit from a temporary bus stop on Henthorn Road at a location to be agreed. Therefore up until the occupation of the 51st house, residents will have to walk to a temporary bus stop before the bus can access the internal highway layout. This does limit the opportunity to establish good sustainable travel behaviour from the outset.

GP Surgery

5.14. The developer has also offered land and a £156,250 towards the cost of a new GP Surgery on site which is reserved for 3 years. I have advised on the development and improvement over 20 health care centres in Greater Manchester. I consider that the proposed GP surgery is unlikely to be developed and occupied as it is so poorly located.

5.15. To be a successful and sustainable GP surgery, it would have to draw upon a catchment population beyond those of the new housing development. As well as being away from the town centre where there are opportunities for linked trips, the site is also remote from the main road and therefore its profile would be low and patients would have to make a specific journey to a remote location.

5.16. It is noted that there are pressures on the existing GP surgeries and that the PCT has indicated it is interested in the offer of a facility at this Henthorn Road site. The absence of further certainty on occupation, I still consider that this location is unlikely to be attractive to a GP practice. If it was occupied then it would give rise to more unsustainable driving patterns than a facility located in a more accessible location. It is noted that the traffic forecasts for a surgery have not been assessed in the TA and would lead to an increase in traffic demands to the area.

Travel Plan

5.17. A Travel Plan has been submitted and a contribution of £18,000 offered to support LCC officer in giving travel planning advice for residents. While this is a significant contribution the outcomes are in my view likely only to be limited. Residents travel patterns are more difficult to influence than say office workers as they have more varied travel needs and they have little restriction on parking spaces. I expect the Travel Plan Coordinator will be able to provide information on bus and train times and also provide marketing campaigns to get people to walk or cycle rather than drive. However, in my experience I expect that without a better location or site layout the actions of a travel coordinator will be limited in reduce the level of car use on site.

Highways Works

5.18. Considering the proposal to review the pedestrian facilities along Henthorn Road it can in my view improve the pedestrian amenity with dropped kerbs, tighter radii on the minor arms a zebra crossing and signage. However, I consider that such works do not address the fundamental problem of the sites remoteness from local facilities and services and it is the distance that is the deterrent not the ability to cross the highway.

5.19. An upgrade of the Toucan Crossing is proposed on Whalley Road. Unfortunately there are no cycle lanes in the area for that facility to tie into and the footways are not appropriate to carry bicycle users. I consider this to be limited in value in promoting cycle use.

5.20. The 4 no cycle parking spaces within the site and in Clitheroe is a helpful provision but is unlikely to significantly affect the modal choice of residents to cycle into Clitheroe.

5.21. It is proposed to resurface/renew the junction layouts along Henthorn Road and such highway works do represent improvements to the highway layout but in my opinion it is the isolated nature of the site that restricts pedestrians from accessing local facilities not the ease of crossing the minor arms along Henthorn road.

Summary

5.22. Considering the issues identified in Chapters 4 and 5 above, it is considered that the proposed development is unsustainable due to the isolated location, poor permeability and a lack of connectivity with the local neighbourhood and is contrary to the principles of sustainable development. The developers proposals to improve accessibility with a bus service commitment and a play area do raise the accessibility of the site but that accessibility still remains at a low level.

5.23. I consider the proposal for a GP Surgery to be uncertain and unlikely to be taken up due to its location. If it did so it would be in an unsustainable location for its catchment. Other highway works proposed are unlikely to overcome the poor accessibility and shift model choice away from reliance on the private car.

5.24. These problems of accessibility are likely to result in more people travelling by car than would be the case for a better planned estate. The impact of additional traffic on the highway is considered next.

6. Trip Generation

Introduction

6.1. The developer has forecast the level of traffic generated by the development by reference to the TRICS database. Those that are presented in the AHA TA and are based upon average trip rates and are derived from 8 sites. The selection of size was based upon sites that are between 215 and 372 units with no other selection criteria being used except to exclude those sites from Ireland and Greater London. When this was conducted the date range of the sites was between 1/1/00 and 10/2/10.

6.2. These sites have mixed variability in their location as some are located within the urban area close to rail stations, next to employment opportunities or local retail facilities. These sites are therefore not directly comparable to a residential area located on the edge of a market town. The Department for Transports (DfT) Guidance for Transport Assessments states where comparable sites are not selected, it recommends the use of 85th percentile trip rates which in turn is based upon 20 sites. In my view the 85th percentile trip rate is needed to reflect the higher traffic use due to the unsustainable location and layout.

6.3. As it is difficult to obtain information for sites that are directly comparable to the situation at Henthorn Road I have undertaken an 85th percentile interrogation of the TRICS database (2011b). To derive an 85th percentile assessment a greater range of sites is needed with a minimum of 20 recommended. I retained AHA's selection criteria of excluding sites outside of Ireland and Greater London, just increasing the dataset to cover sites between 120 and 372 units in size dating from 1/1/00 up until the present day. From this dataset it is also possible to derive the multi-modal data surveys previously described in Chapter 5.

6.4. The results of this 85th percentile assessment are provided in full in **Appendix D** and summarised in **Table 6.1.**

85th %ile Rates	AM (0800-0900)			PM (1700-1800)		
	ARR	DEP	TOTAL	ARR	DEP	TOTAL
Trip Rate	0.174	0.548	0.722	0.495	0.355	0.850
Trips	47	148	195	134	96	230

Table 6.1 TRICS Trip Generation Forecast 85th %ile Rates

6.5. The above analysis does forecast additional traffic movements over and above the trips forecast by AHA in the Transport Assessment. The analysis based upon the 85th percentage trip rates result in 37 extra vehicle movements in the AM peak and 51 vehicles in the PM peak period more that was assessed in the AHA TA and also complies with the DfT Guidance.

7. Existing Highway Operation

Introduction

7.1. Prior to examining the traffic impact of additional development traffic I consider how the network operates under existing conditions.

7.2. The local highway network has been observed at peak times on during typical weekday periods. There are several aspects of the highway network that make traffic operation sensitive to additional traffic movements.

7.3. In this description I focus on the movement of traffic from the site to and from the Primary Distributor Road, the A671 Whalley Road.

7.4. Clitheroe is a market town that lies to the north of the East Lancashire Conurbation. Commuters that are travelling outside of Clitheroe itself will tend to head south along the A671. To reach the A671 traffic would tend to travel along Henthorn Road and turn right along Thorn Street/Eshton Terrace. Drivers then have a choice to head either North or South along Woone Lane. As will be discussed most traffic tends to head north to the mini-roundabout with Moor Lane before then turning south to join the A671. A smaller proportion do head south and join the A671 at Primrose Road.

7.5. Other routes for traffic heading south and meet the main road network are more convoluted and slow. It is possible to travel through Clitheroe Town Centre but the one way system makes this journey less direct and would add several minutes to a journey to reach the same point.

7.6. A second alternative is to take the back lanes by heading west on Edisford Road before passing through the village of Great Mitton and then passing through Whalley eventually joining the A671 south of the A59. This route also takes longer at around an extra 5 minutes compared to the more direct route via Whalley Road.

Highway Operation

7.7. In order to access the A671 from the proposed site, development traffic must pass through a network of sensitive junctions and links. The route away from the site is considered first as the one way link along Greenacre Street does change the reverse direction.

7.8. The first junction that experiences traffic stress is the junction of Henthorn Road and Thorn Street. The approach to the junction from the south west is limited by residents parked cars that mean that the highway can become temporarily blocked. Occasional queues and delays of a moderate nature can arise on Thorn Street or for right turners off Henthorn Road but these are only transient.

7.9. The next issue is the presence of the level crossing and here surveys show that when the barrier comes down it is for around 2 minutes and when it does so the queues reach up to 15 vehicles in length. This is an occasional frustration for drivers that get caught and the AHA showed this occurs once or twice in the peak hours depending on the timing of trains.

7.10. The next junction is at Eshton Terrace/Woone Lane. Here, there is a school crossing patrol and parents dropping off their children at School peak times.

7.11. There is a choice for traffic at this point to head either north or south along Woone Lane. The traffic counts in **Figure E1** of the AHA TA reveal that most traffic (83%) turns left to head north rather than south (17%). This is against the desire line of most traffic, most of which then turns right at the mini-roundabout to head south to then join the A671.

7.12. The reason for this lies in the ability of traffic to progress along both lengths of Woone Lane, north and south. Both links have cars parked on both sides of the road for much of their length with occasional gaps. Two cars cannot pass each other between the parked cars and so when traffic meets an opposing vehicle they must then pull into a gap and give way each time incurring a delay.

7.13. The experience of driving along Woone Lane either north or south is similar but it is noted that the length of this restricted operation along Woone Lane South is twice as long as that for Woone Lane North. In addition the volumes of opposing traffic on Woone Lane North are much lower than on Woone Lane South. In the AM peak the level of opposing traffic is only 19 vehicles in an hour while of Woone Lane South this is over 70 vehicles. This makes it much more likely that drivers would meet an opposing vehicle heading along Woone Lane south than travelling north, no doubt increasing the delay to their journey and affecting their route choice

7.14. For the traffic that does head north it then needs to make a tight turn to head south at the mini-roundabout with Moor Lane which experiences occasional periods of queuing and delay which show that the junction is sensitive but not over capacity.

7.15. For traffic heading south along Woone Lane South it turns into Primrose Road and meets the A671 at a give way junction. This junction has relatively low traffic volumes using it but can occasionally experience periods of relatively long delay with three occurrences observed where cars were delayed for over 100 seconds.

7.16. It is noted that AHA and LCC have agreed highway improvements for Woone Lane North. This is either a one way link northbound or a priority shuttle chicane system. These measures are aimed at improving movement along the link rather than improving the capacity of the junctions at either end.

Junction Models

7.17. AHA have provided their PICADY traffic models for the junctions linking the site with the A671 Whalley Road. PICADY models give way junctions and those tested included Henthorn Road/Thorn Street, Eshton Terrace/Woone Lane and Primrose Road/A671. In addition to these I have prepared an ARCADY traffic of the Woone Lane/Moor Lane/Lowergate mini roundabout as this was not modelled in the TA. ARCADY models mini-roundabouts.

7.18. Examining the AHA PICADY traffic models in the TA at Henthorn Road/Thorn Street and Eshton Terrace/Woone Lane, it is noted that the visibility measurements entered were incorrect. In summary the visibility measurements should be taken at a point 10m from the give way line whereas they appear to be made from a drivers viewpoint at the give way line. This makes a significant difference to the performance.

7.19. The PICADY models have been amended using correct geometric geometric parameters and the 2010 survey flows from the AHA TA. The model results for the give way junctions of Thorn Street/Henthorn Road, Eshton Terrace/Woone Lane and Primrose Road/Whalley Road are given in **Tables 7.1, 7.2** and **7.3** below and presented in full in **Appendix E**.

7.20. It should be noted that the general operation of the junction is described by the term RFC or Ratio of Flow to capacity. This is a figure (which can also be described as a percentage) whereby a figure of 1.0 represents the theoretical capacity where junction would be overloaded and for priority junctions and roundabouts a figure of 0.85 is taken as the practical capacity level recommended by the DfT as a design threshold, above which the junction is more likely to experience persistent queues and delays.

Arm	Base 2010					
	AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Henthorn Rd (N)	0	0	0	0	0	0.09
Thorn Street (E)	0.44	0.77	0.18	0.75	2.76	0.47
Henthorn Rd (S)	0.38	0.7	0.14	0.41	0.85	0.15
Thorn Street (W)	0.12	0.14	0.15	0.11	0.13	0.17

Table 7.1 2010 Base PICADY Model, Henthorn Road/Thorn Street

Arm	Base 2010 Flows					
	AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Greenacre St	0.12	0.14	0.15	0.08	0.09	0.13
Woone Lane (S)	0.18	0.21	0.16	0.16	0.19	0.18
Eshton Terrace	0.13	0.15	0.12	0.12	0.14	0.14
Woone Lane (N)	0.05	0.15	0.12	0.14	0.16	0.16

Table 7.2 2010 Base PICADY Model, Eshton Terrace/Woone Lane/Greenacre Street

Arm	Base 2010 Flows					
	AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Whalley Rd (N)	0.05	0.07	0.07	0.03	0.04	0.07
Side Road	0.05	0.05	0.24	0.00	0	0.25
Whalley Rd (S)	0.01	0.01	0.06	0.01	0.01	0.06
Primrose Rd	0.30	0.43	0.30	0.40	0.64	0.37

Table 7.3 2010 Base PICADY Model, Primrose Road/A671

7.21. It can be seen from the above models that all three junctions operate within the 0.85 RFC threshold. However it is noted that the Thorn Street (E) approach to the junction with Henthorn Road has a RFC of 0.75 and average delays of 28 seconds per vehicle. When considering all of these results, recognition should be made to the presence of parked cars and the school crossing patrol which are not modelled and can also reduce the performance of the junction operation.

7.22. The mini-roundabout at Woone Lane/Moor Lane/Lowergate was also tested for capacity using the ARCADY (6) computer program. The junction geometry was measured according to the ARCADY guidelines and assessed using the 2010 survey flows. The results are included in **Appendix F** and summarised in **Table 7.4** below.

Arm	Base 2010					
	AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Woone Lane	0.75	2.9	0.36	0.63	1.7	0.26
Lowergate	0.36	0.6	0.14	0.53	1.1	0.18
Moor Lane (S)	0.40	0.7	0.10	0.48	0.9	0.12

Table 7.4 2010 Base ARCADY Model, Woone Lane/Moor Lane/Lowergate

7.23. It can be seen that the Woone Lane approach operates at an RFC of 0.75 which reflects that it is starting to be sensitive with delays of 22 seconds per vehicle although the maximum queues are around three vehicles.

7.24. I now assess the distribution of development traffic on the network and the consequential impact of that on operation.

8. Trip Distribution

Introduction

8.1. The Trip Distribution prepared by AHA in their TA has been reviewed. AHA have used a staged process in order to derive the trip distribution but the underlying principle has been to use existing traffic flows as a basis for understanding where the current traffic travels. In this section I will focus on one issue which makes the largest difference in terms of the traffic impact.

8.2. The existing traffic flows as obtained from the AHA surveys in the TA **Figure E1**, an extract of which is repeated is replicated below as **Figure 8.1.**

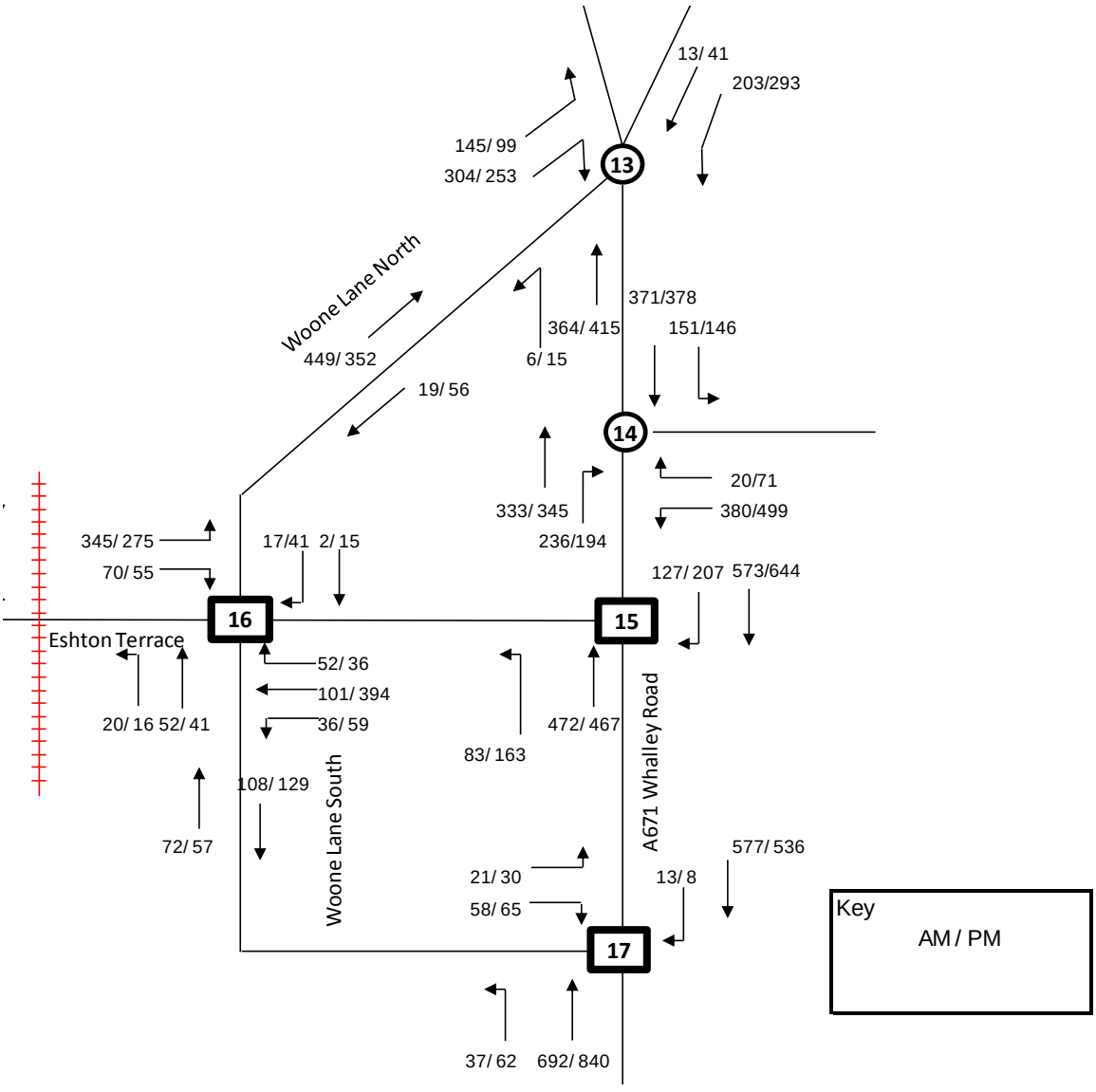

Figure 8.1 Extract from AHA TA Figure E1 Traffic Counts

8.3. It can be seen from the diagram that traffic leaving the site heading towards the A671 along Eshton Terrace must split either left or right as Greenacre Street ahead is one way westbound. It can be seen from the traffic flows that most traffic turns left to head north to the mini-roundabout and then most of this traffic then turns left to head along Moor Lane before joining the A671.

8.4. From the surveys flows in **Figure 8.1**, it can be seen that on Eshton Terrace in the AM peak, 345 vehicles turn left and only 70 vehicles turn right and head south. This is repeated in the PM peak where 275 turn left and only 55 turn right. As has been described the reason for this split is that traffic on these links have a restricted carriageway width due to parked cars and must give way to opposing traffic before shuttling forward.

8.5. This can be frustrating for drivers and in my opinion the reason why more drivers choose to go via Woone Lane North and away from their desire line is that Woone Lane South has issues of double parking and limited road width over twice the length experienced along Woone Lane North. This means that there is more chance that drivers would meet an opposing vehicle pull into a gap and give way before progressing.

8.6. The level of opposing traffic is also to be a likely factor and it is notable that there are just 19 vehicles heading south in the AM peak that oppose the 449 vehicles heading north. This figure rises to 56 vehicles in the PM peak opposing 352 vehicles. Woone Lane South has 72 and 57 vehicles heading north in the respective AM and PM peak which opposes 104 and 114 vehicles that are heading south. This level of opposing traffic on Woone Lane North would be removed if that link were made one way.

8.7. The AHA distribution of trips in **Figure E4** of their TA forecast 24% of development traffic to turn right and head south and only 16% of traffic to turn left and head north. If this distribution was according to the observed traffic flows then the distribution would be 33% turning left and heading North and only 7% turning right and heading South. This effectively doubles the level of development trips forecast to use Woone Lane North and pass through the mini-roundabout.

8.8. It is noted that the traffic in the reverse direction heading inbound to the development site benefits from the one way direction of Greenacre Street so this issue does not arise to such an extent for traffic heading towards the site from the A671.

8.9. I consider that a more representative trip distribution would be based upon the observed patterns of traffic flow as this reflects current driver demand aiming to reach the A671. Making this single change to the distribution of trips forecast by AHA gives the Trip Distribution as described in **Figure 8.2**.

8.10. Applying the 85th percentile trip generations as described in Chapter 6 gives the trip forecasts as shown in **Figure 8.3**.

8.11. Adding these flows to the 2016 and 2021 Base flows in the AHA TA (**Figures E6** and **E7** respectively) gives the assessment flows for assessment in **Figure 8.4** for the 2016 year of opening and **Figure 8.5** for 2021 assessment year.

8.12. The impacts of these trips on the highway are considered next.

9. Future Highway Operation

Introduction

9.1. This chapter simply applies the traffic forecasts as described above to the traffic models presented in Chapter 6.

Traffic Capacity Assessments

9.2. The impact of the 85th percentile trip forecasts on the operation of the highway at 2016 and 2021 levels on the junction of Henthorn Road/Thorn Street is described in **Table 9.1** below and in full in **Appendix G**. This uses the same modelling base as used for the 2010 base assessment.

Arm	2016 with Development						2021 with Development					
	AM Peak			PM Peak			AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Henthorn Rd (N) R Turn	0	0	0	0.01	0	0.08	0	0	0	0.005	0	0.08
Thorn Street (E)	0.57	1.3	0.29	0.94	9.4	1.26	0.59	1.36	0.31	0.97	12.35	1.58
Henthorn Rd (S) R Turn	0.57	1.54	0.2	0.4	0.77	0.16	0.58	1.67	0.21	0.41	0.81	0.16
Thorn Street (W)	0.14	0.16	0.18	0.12	0.13	0.16	0.15	0.17	0.18	0.12	0.14	0.17

Table 9.1 2016/2021 With Development PICADY Model, Henthorn Road/Thorn Street

9.3. It can be seen that the junction of Henthorn Road with Thorn Street now exceeds its practical capacity threshold of 0.85 with and RFC of 0.94 at 2016 and 0.97 in 2021. This deterioration in performance is evidence by the queues of 9 vehicles on Thorn Street at 2016 levels and 12 vehicles at 2021. The delays per vehicle are now at around 1minute 16 seconds per vehicle at 2016 and over 1.5 minutes 2021. This performance is clearly much worse than that forecast by AHA in their TA and is a consequence of the incorrect visibility measurements made at the time.

9.4. In my view the performance of this junction would be unacceptable for drivers to face on a daily basis. The frustration for drivers would be compounded by the limited alternative routes available due to the limited railway crossings and the fact that occasionally drivers would be doubly delayed by the level crossing coming down. It is noted that the queues of 12 vehicles would not block back to the railway crossing.

9.5. The junction of Eshton Terrace and Woone Lane has been tested for capacity at 2016 and 2021 levels and this is presented in **Table 9.2** below and in full in **Appendix H**.

Arm	2016 with Development						2021 with Development					
	AM Peak			PM Peak			AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Greenacre St	0.14	0.15	0.15	0.09	0.10	0.14	0.14	0.16	0.16	0.09	0.1	0.14
Woone Lane (S)	0.26	0.34	0.19	0.23	0.29	0.21	0.27	0.36	0.19	0.23	0.3	0.22
Eshton Terrace	0.16	0.19	0.13	0.17	0.2	0.15	0.17	0.2	0.13	0.17	0.21	0.15
Woone Lane (N)	0.06	0.06	0.16	0.18	0.22	0.2	0.06	0.16	0.16	0.19	0.23	0.2

Table 9.2 2016/2021 With Development PICADY Model, Eshton Terrace/Woone La/Greenacre St

9.6. It can be seen from the above results that this junction of Eshton terrace with Woone Lane operates well within capacity with a low level of queues and delays at a low level.

9.7. The junction of Primrose Road has been tested for capacity with the assessment follows at 2016 and 2021 levels. This is shown in **Table 9.3** and in full in **Appendix I**.

Arm	2016 with Development						2021 with Development					
	AM Peak			PM Peak			AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Whalley Rd (N)	0.06	0.09	0.07	0.11	0.24	0.08	0.06	0.09	0.07	0.09	0.1	0.14
Side Road	0	0	0	0	0	0	0	0	0	0	0	0
Whalley Rd (S)	0	0	0	0	0	0	0	0	0	0	0	0
Primrose Rd	0.62	1.53	0.59	0.61	1.5	0.71	0.67	1.8	0.68	0.67	1.9	0.88

Table 9.3 2016/2021 With Development PICADY Model, Primrose Road/Whalley Road

9.8. The junction of Primrose Road with Whalley is shown to continue to operate within capacity. This junction. It can be seen that the average delay for traffic increases to 50 seconds by 2021 but the queues remain relatively low.

9.9. The mini roundabout at Woone Lane / Low Moor / Lowergate was not tested in the AHA TA. This has now been tested for capacity with the ARCADY (6) computer programme and the trips based on the 85th percentile trips described in Chapter 6. This model also reflects the traffic distribution that follows the current observed traffic movements which predominantly use the mini-roundabout to reach the A671.

9.10. The capacity assessments at the 2016 and 2021 assessment years is shown in **Table 9.4** and in full in **Appendix J.**

Arm	2016 with Development						2021 with Development					
	AM Peak			PM Peak			AM Peak			PM Peak		
	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)	RFC	Max. Q	Delay (min/v)
Woone Lane	0.89	6.9	0.75	0.69	2.1	0.29	0.94	10.0	1.04	0.73	2.5	0.34
Lowergate	0.42	0.7	0.17	0.60	1.4	0.23	0.44	0.8	0.18	0.62	1.6	0.24
Moor Lane (S)	0.38	0.6	0.10	0.41	0.7	0.10	0.40	0.7	0.10	0.43	0.7	0.11

Table 9.4 2016/2021 With Development ARCADY Model, Woone Lane/Moor Lane

9.11. The mini-roundabout, which operates within practical capacity at current levels goes over capacity by 2016. Here the RFC reaches 0.89 with maximum queues of nearly 7 vehicles in length on the Woone Lane approach. These problems increase when the 2021 assessment year is examined. Here the RFC reached 0.94, well above the guidance level of 0.85. The queues increase to 10 vehicles in length on Woone Lane and average delays of over a minute.

9.12. As has been described, the developer in agreement with LCC have offered an improvement scheme on Woone Lane. It should be noted that such a proposal whether it is the one way scheme or the priority give way scheme does not provide additional capacity to this junction.

Summary

9.13. These capacity assessments have been conducted with the correct geometry measurements in the model and the trip forecasts that comply with the DfT guidance and are based upon the 85th percentile trip rates. As well as complying with guidance, I consider that these trip rates better reflect the fact that the poor accessibility of the site and poor connectivity with the surrounding neighbourhood is likely to generate more trips than the simple average trip rates previously assessed.

9.14. The assessments show two key junctions that lie between the site and the A671 Whalley Road moving from operating within capacity at current levels to operating over their practical capacity with development at 2016. Their performance worsens by 2021 at the future year assessment flows.

9.15. Drivers passing through the The Henthorn Road/Thorn Street junction would experience long delays predicted to be over 1 minute delays by 2016 and 1.5 minutes delay in the PM peak by 2021. This level of delay is on a link that already faces uncertainty with the possibility of the level crossing coming down once or twice in an hour.

9.16. The other junction that experiences problems is the mini-roundabout at Woone Lane/Low Moor/Lowergate. This junction moves from within capacity at 2010 levels to being over practical capacity by the 2016 opening year. This performance worsens with traffic growth to 2021 so that queues build up to 10 vehicles in length and over 1 minute delays for traffic heading towards the A671. The alternatives for traffic to avoid these delays and reach the A671 are limited.

9.17. Traffic congestion causes frustration for drivers but also leads to additional CO2 emissions generated. Developing new developments of such a large scale in areas where the impact of additional traffic causes considerable congestion is in my view unacceptable.

9.18. I consider that traffic impact of development to be unacceptable and therefore it was reasonable for RVBC to refuse the application based upon a detrimental impact on the highway infrastructure.

10. Conclusions

10.1. My evidence has reviewed the proposals for a 270 unit residential development off Henthorn Road. This development is located outside of the urban area with a single vehicular access off Henthorn Road which itself is a cul-de-sac.

10.2. I conclude that the site, which is very large in scale, does not conform to sustainable design principles, being located away from local facilities and with poor connectivity with the local surrounding neighbourhood being accessed off a single point of entry for all modes.

10.3. The site is remote from local facilities and the distances that people would have to walk are beyond the recommended acceptable walk distances. I consider this remoteness to be contrary to urban design principles when considering a site of this scale.

10.4. This poor isolation is compounded by the lack of connectivity between the site and the local area particularly for pedestrians and cyclists who have only one access to connect them and their desire lines into the surrounding neighbourhood. My views are consistent with the view of LCC highways officers who stated that it is inappropriate to have all the development accessed off a single point stating it would be unsustainable and that a second access is needed.

10.5. The developer has proposed a second pedestrian/cycle link to Edisford Road via the Caravan Access Road and LCC in their recommendations to committee suggested that this could be conditioned. However, this access lies outside of the red line boundary and requires an uncertain level of works which cannot be delivered without a further planning application.

10.6. The proposed development is located away from local facilities and services. Using LCCs accessibility scoring the current site scores at a very low level. The developer has proposed several measures to improve this scoring. These include a play area, a financial commitment to provide a bus service between the site and the town centre and the offer of a site for a GP Surgery. Even with these measures in place the site still remains with a low accessibility range in LCCs accessibility score.

10.7. The play area does improve the accessibility score but I consider this to be a basic essential facility for a development of this size.

10.8. The commitment to fund the either the diversion of the C1 bus service between the site and the town centre or a wholly new service does reduce the subsidy that LCC currently pay and it also raises the accessibility score of the site. However, in my view would require alterations to the existing timetable, routeing or frequency to accommodate the diversion of around 900m into and then back out of the site.

10.9. It is uncertain what the level of these changes would be, but I expect they would impact on existing users who would in my view be frustrated by the extra journey time to travel into and then out of the site which again is contrary to good design principles. In my view the bus service commitment brings the developments accessibility by public transport up to the level that is of experienced by the neighbouring residential areas but this is not particularly high itself and only a small proportion of residents are likely to use such a service.

10.10. The provision of a site for a GP Surgery is a provision that has a high degree of uncertainty in terms of take up as the site is remote and has a low profile. If it were occupied it is in a very unsustainable location as the catchment area would be limited, patients would not have the opportunity to link their trip with another purpose and is reliant on only one bus service.

10.11. Given that the site suffers from a lack of connectivity and is remote from local facilities then I consider that it is likely that traffic generated by the site will be greater than the average rates as predicted by AHA in their TA. As AHA did not use directly comparable sites in their TRICS database search, the DfTs Guidance is to use 85th percentile trip rates. This assessment results in an extra 37 trips in the AM and 51 vehicles in the PM peak assessment. These trips in my view, better reflect the likelihood that people are more likely to use their cars due to the unsustainable location and design.

10.12. The main route for traffic travelling outside of Clitheroe is to use Eshton Terrace and access the A671 Whalley Road. This route is sensitive with several junctions operating within capacity but showing occasional issues of queueing and delay. There are several links where double parked cars limit the road space and traffic has to give way to opposing flows. The presence of the level crossing on Eshton Terrace also has an occasional impact, stopping traffic for around 2 minutes at a time.

10.13. In assessing the give way junctions on the network, AHA did not enter the correct geometrical data and this does result in a considerable difference in performance. In particular the junction of Henthorn Road with Thorn Street which at current levels operates within capacity is forecast to operate above its practical capacity at the year of opening and by the 2021 assessment year, average delays are forecast to be over one and a half minutes per vehicle.

10.14. The other sensitive junction is the mini-roundabout of Woone Lane/Low Moor/Lowergate. AHA's TA distributed most traffic away from this junction but this is contrary to the current traffic patterns. If the distribution follows current patterns then this junction too will operate over its practical capacity of 0.85 at 2016 and by the 2021 assessment year the delays are just over a minute per vehicle.

10.15. Consequently I consider that the development will have an unacceptable and detrimental impact on highway operation.

10.16. The alternative routes that traffic could use are not in my view appropriate to accommodate additional traffic flows.

10.17. The developer has proposed with LCC a number of highways improvements. However, these improvements do not increase capacity only the flow of traffic along the links.

10.18. This development would therefore clearly result in a detrimental impact on the highway operation.

10.19. In conclusion, my evidence has demonstrated that this development is unsustainable in terms of its accessibility to local facilities and poor connectivity to the surrounding urban areas, particularly for pedestrians and cyclists contrary to principles of good urban design.

10.20. The measures proposed by the developer to raise accessibility of the site do raise its accessibility level but the site still remains a site of low accessibility. These measures have uncertainty whether they can be delivered.

10.21. The unsustainable nature of the site would lead to additional traffic generated by the development which was not assessed in the original TA. Also the junction assessments in the TA did not reflect the correct parameters which make a significant difference to the results. Consequently, there is a significant detrimental on the highway operation and key junctions along Henthorn Road and Woone Lane which is compounded by the level crossing on Eshton Terrace.

10.22. The highway improvements proposed do not provide additional capacity to mitigate the traffic impact nor do they overcome the poor accessibility by pedestrians and cyclists to local facilities. The proposals are therefore contrary to the principles of sustainable development, increase reliance on the use of the private motor car, would be detrimental to the traffic infrastructure and contrary to Policy T1 of the Ribble Valley Districtwide Local Plan. In my view the council took a reasonable view in refusing the proposed development based upon their understanding of the local highway operation.