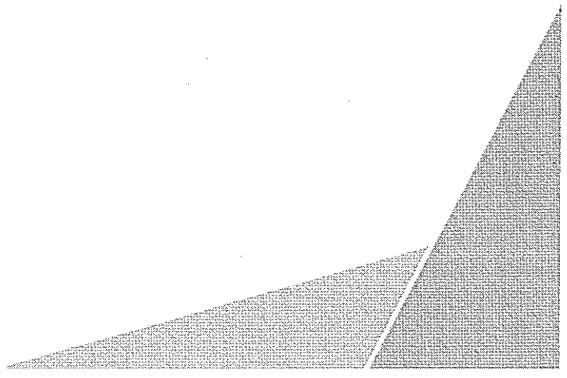
DTPC

Report No. J087/TA
October 2012

PROPOSED RESIDENTIAL DEVELOPMENT
WADDOW VIEW, LAND OFF
WADDINGTON ROAD AND BAWLANDS, CLITHEROE

TRANSPORT ASSESSMENT



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CONTROLLED DOCUMENT

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1. INTRODUCTION

DTPC has been appointed by Ingham and York on behalf of **'The Huntroyde Estate;Clitheroe Auction Mart Co Ltd;Mr J Taylor, Ms Sarah Howard & Ms Samantha Howard'** to provide transport and highway advice for the traffic and transportation implications associated with their planning application submission at the Waddow View area on land off Waddington Road and Castle View/Kirkmoor Road, Clitheroe.

The report relates to the need to assess the site constraints, opportunities and the level of housing in support of taking the site forward for development through the LDF and detailed planning process.

It deals solely with the proposals for the area within the red line plan.

The TA discusses the following issues:

- Site and Local Area
- Existing Highway Conditions
- Possible Development Proposals
- Government Planning and Transportation Policy
- Sustainability
- Access Considerations
- Car parking
- Summary & Conclusions.

This report has been prepared solely in connection with the proposed development as stated above. As such, no responsibility is accepted to any third party for all or any part of this report, or in connection with any other development

2. NATIONAL AND LOCAL POLICY GUIDANCE

2.1 National Policy

Increasing travel choice and reducing dependency on car travel is an established aim across all areas of government policy development, documents and guidance alongside addressing climate change and reducing CO_2 emissions. Travel planning to date has focused on reducing single occupancy car use to specific destinations. Recent national guidance has broadened this, outlining the potential for Residential Travel Plans and addressing trips generated from individual origins (homes) to multiple and changing destinations. The Department for Transport (DfT) also published "Smarter Choices – Changing the Way We Travel" focusing on softer education and persuasive measures which are a key element of travel plans.

National planning policy ensuring that development plans and planning application decisions contribute to delivery of development that is sustainable. It states that development should ensure environmental, social and economic objectives would be achieved together over time.

It will also contribute to global sustainability, by addressing the causes and impacts of climate change, reducing energy use and emissions by encouraging development patterns that reduce the need to travel by car and impact of transporting goods as well as in making decisions in the location and design of development.

2.2 Future of Transport 2004

2004, Department for Transport (DfT) published a long-term strategy (*Future of Transport* White Paper) which examines the factors that will shape travel and transport over the next thirty years. It sets out how the Government will respond to the increasing demand for travel, maximising the benefits of transport while minimising the negative impact on people and the environment.

Central to the strategy is the need to bring transport costs under control, the importance of shared decision making at local, regional and national levels to ensure better transport delivery, and ***improvements in the management of the network to make the most of existing capacity***.

National Planning Policy Framework

The NPPF has replaced the previous PPG13 and sets out the policy framework for sustainable development and supersedes the previous advice.

For 12 months from publication of the NPPF decision makers may continue to give full weight to relevant policies adopted since 2004 even if there is a limited degree of conflict with the NPPF. In other cases and following the 12 month period due weight should be given to relevant policies in existing plans according to their "degree of consistency" with the NPPF.

Policies in emerging plans may be given weight according to the stage of preparation of the emerging plan, the extent to which there are unresolved objections, and the degree of consistency of relevant policies in the emerging plan to the policies in the NPPF.

Abstracts are provided for reference, the ***bold italics*** are added to emphasis the key policies related to the development:

Achieving sustainable development

7 There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:

- an economic role – ***contributing to building a strong, responsive and competitive economy***, by ensuring that sufficient land of the right type is available in the right places and at

the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;

- a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with ***accessible local services that reflect the community's needs and support its health, social and cultural well-being***; and
- an environmental role – ***contributing to protecting and enhancing our natural, built*** and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

The presumption in favour of sustainable development

14 At the heart of the National Planning Policy Framework ***is a presumption in favour of sustainable development***, which should be seen as a golden thread running through both plan-making and decision-taking.

For decision-taking this means

- approving development proposals that accord with the development plan without delay; and
- where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:
  - ***any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole***; or
  - specific policies in this Framework indicate development should be restricted

Core planning principles

17 Within the overarching roles that the planning system ought to play, a set of core land-use planning principles should underpin both plan-making and decision-taking.

- ***encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value***;
- ***actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling***, and focus significant development in locations which are or can be made sustainable; and
- take account of and support local strategies to improve health, social and ***cultural wellbeing for all, and deliver sufficient community and cultural facilities*** and services to meet local needs.

Promoting sustainable transport

29 Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise ***sustainable transport solutions will vary from urban to rural areas***.

32 All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- ***the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure***;

- ***safe and suitable access to the site can be achieved for all people***; and

- improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. ***Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe***.

34 Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. However this needs to take account of policies set out elsewhere in this Framework, particularly in rural areas.

35 Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to

- accommodate the efficient delivery of goods and supplies;
- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- consider the needs of people with disabilities by all modes of transport.

36 A key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan.

37 Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.

38 For larger scale residential developments in particular, planning policies should promote a mix of uses in order to provide opportunities to undertake day-to-day activities including work on site. W here practical, particularly within large-scale developments, key facilities such as primary schools and local shops should be located within walking distance of most properties.

39 If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- the accessibility of the development;
- the type, mix and use of development;
- the availability of and opportunities for public transport;
- local car ownership levels; and
- an overall need to reduce the use of high-emission vehicles.

40 Local authorities should seek to improve the quality of parking in town centres so that it is convenient, safe and secure, including appropriate provision for motorcycles. They should set appropriate parking charges that do not undermine the vitality of town centres. Parking enforcement should be proportionate.

41 Local planning authorities should identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice.

Decision-taking

186 Local planning authorities should approach decision-taking in a positive way to foster the delivery of sustainable development. The relationship between decision-taking and plan-making should be seamless, translating plans into high quality development on the ground.

187 ***Local planning authorities should look for solutions rather than problems,*** and decision-takers at every level should seek to approve applications for sustainable development where possible ***Local planning authorities should work proactively with applicants to secure developments that improve the economic, social and environmental conditions of the area***.

2.3 Regional and Local Policies

Regional Spatial Strategy (RSS) for the North West forms current statutory regional planning guidance. The development and implementation of travel plans support Policies DP5 of the RSS "Manage Travel Demand; reduce the need to travel, and Increase Accessibility" and DP6 "Marry Opportunity and Need".

The preparation and implementation of travel plans is also supported by the Transport Chapter in North West Regional Spatial Strategy "Connecting People and Places" particularly through the following specific policies :

RT1 – Integrated Transport Networks,
RT2 – Managing Travel Demand,
RT9 – Walking and Cycling.

2.4 Ribble Valley Local Plan and Core Strategy Consultation Transport Criteria

The Ribble Valley Plan Sets out detailed policies and specific proposals for the development and use of land in the area. The current Local Plans was adopted by the Council in 1998 and is currently undergoing review.

A number of policies have been "saved" under the Local Development Framework. Policy T1 'Development Proposals' in the Local Plan has the same criteria as the 'Key Statement DMG3" Transport and Mobility in Appendix 4 of the Core Strategy Consultation document. It states that the local planning authority will attach considerable weight to these criteria when making decisions on the development proposals.

The eight points of the criteria are set out below.

1: The availability and adequacy of public transport to serve those moving to and from the development.

2: The relationship of the site to primary route network:

3: The provision made for access to the development by pedestrian, cyclist and those with reduced mobility.

4: Proposals which promote development with the existing developed areas at locations which are highly accessible by means other that the private car.

5: Proposals which locate major generators of travel demand in existing centres which are highly accessible by means other than the private car.

6: Proposals which strengthen existing town and village centres which offer a range of everyday community shopping and employment opportunities by protecting and enhancing their visibility.

7: 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.

8: 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.

The Ribble Valley Core Strategy Consultation Document and the Local Plan both state that the local planning authority will attach considerable weight to these criteria when making decisions on development proposals.

Subsequent chapters of this report describe the development proposals and surrounding existing facilities such as pedestrian footways, public transport services, cycle ways etc and sets out the development proposals comply with the guidelines and polices detailed above.

2.5 Summary

The overriding theme of national policy is approval other than if the **residual impacts are deemed severe.**

That developments must be accessible by sustainable means of transport and accessible to all members of the local community. Local policy echoes the sustainability sentiment of national policy and provides more detail in terms of deliverables.

The proposed development will incorporate uses with good linkages to local facilities and infrastructure which will promote sustainability by reducing the number of car trips to local facilities.

Furthermore there are:

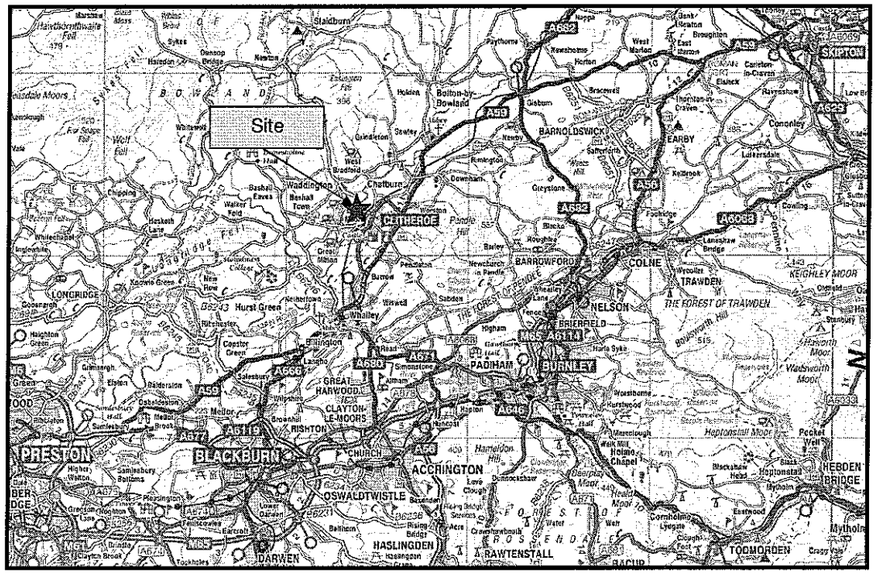
Pedestrian and cycle linkages to a number of locations and facilities are available, frequent public transport services to other major centres and interchanges, and agreed parking provision all ensure that this development is as sustainable, as required in local and national policy.

The assessment shows that the scheme clearly does not give rise to any issues that can be deemed severe and from a transport point of view be approved.

3. SITE DESCRIPTION

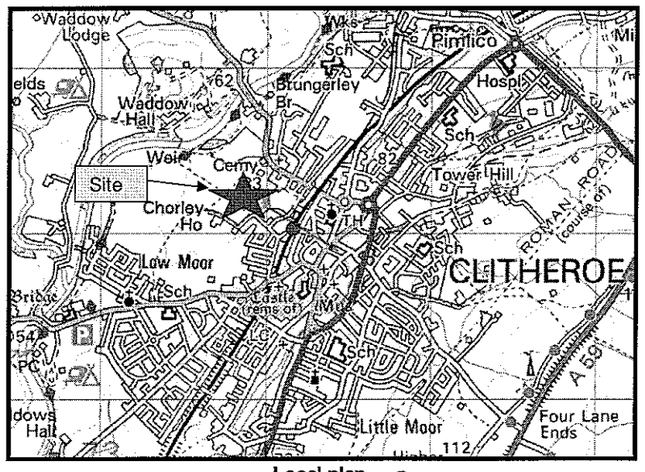
3.1 Site location context

The site lies to the north of the main Clitheroe area which lies along the A59 corridor linking Preston to Skipton and beyond.

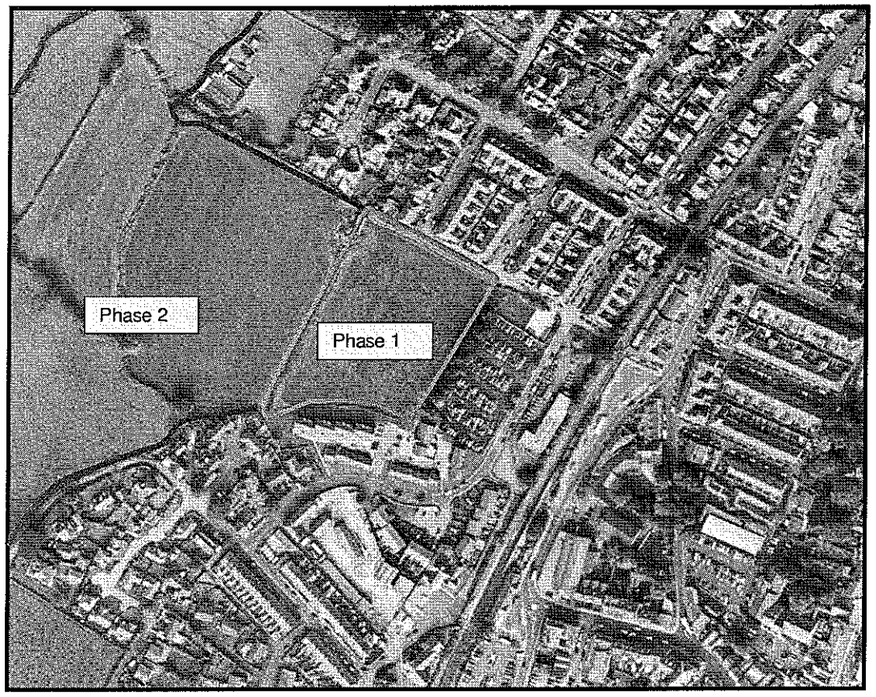


Site location plan in relation to neighbouring settlements (Not to scale)

The location of the site in a local setting is shown below; it is bounded by residential areas with the town centre some 450m to the south.



Local plan



3.2 Local Highway Provision

Northerley side of phase 2 - All the roads in the area are of a standard carriageway width appropriate for their usage, with footpaths and street lighting. They serve primarliy a residential catchment supported by local services/retail units in the town centre.

From local knowledge and site observation the area has a typical traffic flow charateristic associated with an urban area i.e. distinct AM and PM flow periods.

A photographic record of the local access and setting is provided below for future reference

Chester Avenue approach and exit from car park link

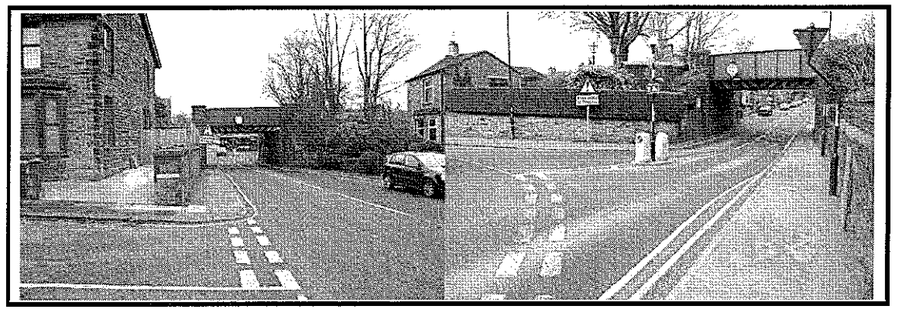
Clearly Chester Road has a parked cars on both side which affect the free flow of traffic, although the flows are lower than the main road traffic.

Chester Avenue sight lines

At its junction with Waddington road cars are parked very close to the radii making it difficult on occasion to turn in and out.

Railway New Rd/Waddington Road junction

Railway New Road has good sight lines in each direction, the bend constrains speeds in the area.



Waddington Rd to and from town centre

The pedestrian refuge is narrow and is not intended for pedestrians

Milton Avenue sight lines with Waddington road

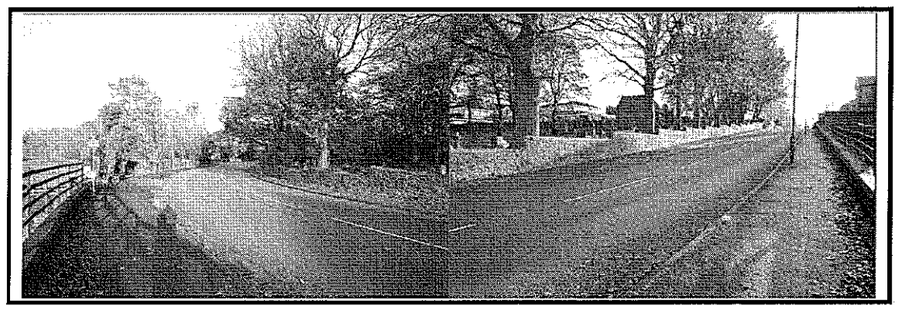
Milton Avenue approach

Milton Avenue view along rear access.

From Milton Avenue the road falls away to the north leaving the 20 mph zone and bends to the right near to the cemetery.

20 mph zone end

Views on approach to site access location in a southerly direction



Sight lines to left and right from access area.

Southerly side of phase 2 – The adjacent area is largely residential in nature with various sections of highway that eventually connect to the wider network at the Bawdlands/Parson Lane junction.

The majority of the Phase 2 areas southerly boundary is along the Back Commons frontage, this is a single track lane with passing areas giving access to a limited number of residential properties.

It has tarmac surfacing for the first 200 m where it turns through 90 degrees and then becomes an un-surfaced track.

Back Commons unmade and tarmaced sections

As Back Commons approaches the main residential area it curves to the right. The location has the first field gate which gives access to the site and the start of a definitive footpath route that runs across the site.

Back Commons and field access

The route widens as it forms the flank frontage of two properties, it then joins the adopted highway network.

Back Commons/adopted network connection

Back Commons leads into Kirkmoor Road. From Kirkmoor Close to Kirkmoor Road the road section is narrower than the majority of the road.

Narrow section

From the limit of the slightly narrow section the road widens and forms a straight length of road leading to a junction with a small un named cul de sac where it turns 90 degrees westward.

Junction with un named cul de sac

The road is again straight with residential properties on either side; it changes its name to Castle View prior to the junction with Bawdlands.

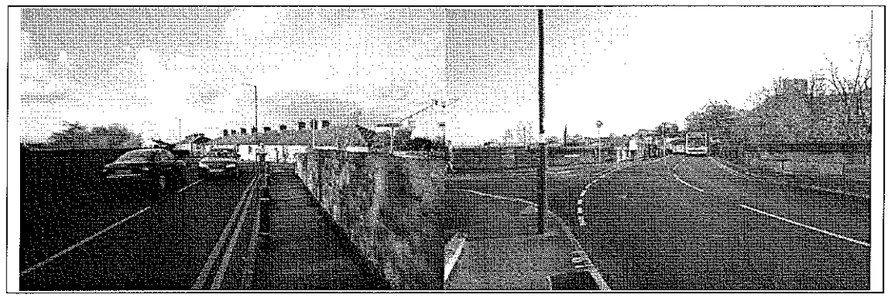
View along Kirkmoor Road leading to Castle View

Castle View has residential properties along its northerly side only. The approach to the junction has a footpath on one side leading to the town centre area.

Approach to Bawdlands Junction

Sight lines at the Bawdlands junction

The main road leading towards the centre crosses a rail line via a bridge which is narrower than the approaching sections and also has a narrow footway protected by bollards.



Narrow section across bridge area

The narrow section across the bridge is not signed in advance and some crossing of the centre line takes place.

3.3 Parking near junctions

During the day surveys and the night observations recorded below parking was noted near to junctions and the following statement is made to show why this in clear contravention of the guidance in the highways code where it states:

Para 242 - You **MUST NOT** leave your vehicle or trailer in a dangerous position or where it causes any unnecessary obstruction of the road. **[Laws RTA 1988, sect 22 & CUR reg 103]**

Para 243 - DO NOT stop or park

- near a school entrance
- anywhere you would prevent access for Emergency Services
- **opposite or within 10 metres (32 feet) of a junction, except in an authorised parking space**
- where the kerb has been lowered to help wheelchair users and powered mobility vehicles
- in front of an entrance to a property

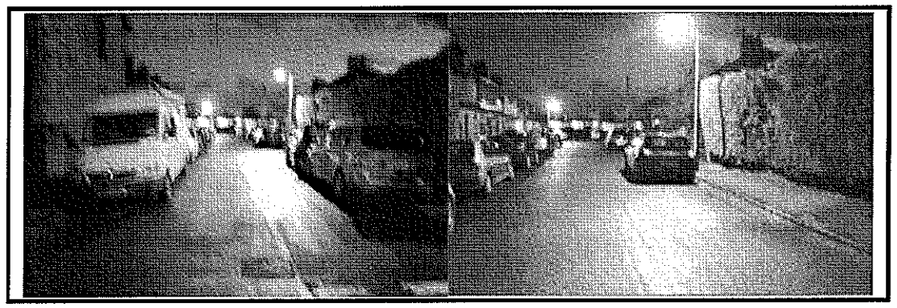
Accordingly to park in such a manner is potentially enforceable as a criminal offence by the police.

More importantly the planning system should not operate on the basis that otherwise acceptable development ought to be precluded in order to facilitate ongoing unlawful behaviour

3.4 Milton Avenue night survey

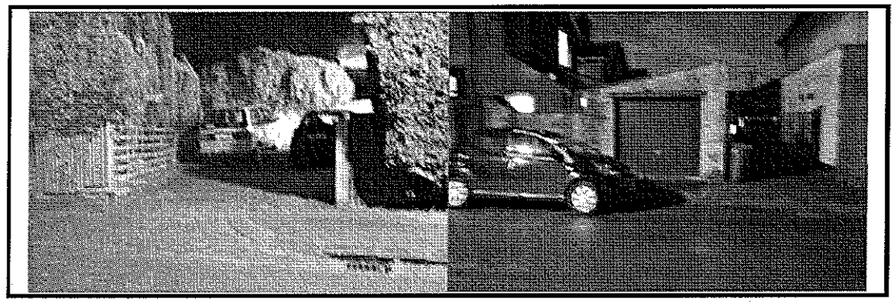
The previous submission and consultation raised issues regarding the night time parking along the road, a series of observations have been undertaken that shows that parking does naturally occur but there are gaps and the junction can be more heavily parked up.

The following photos are from the latest survey undertaken on 19/9/2012 between 8.00 and 9.00 PM.

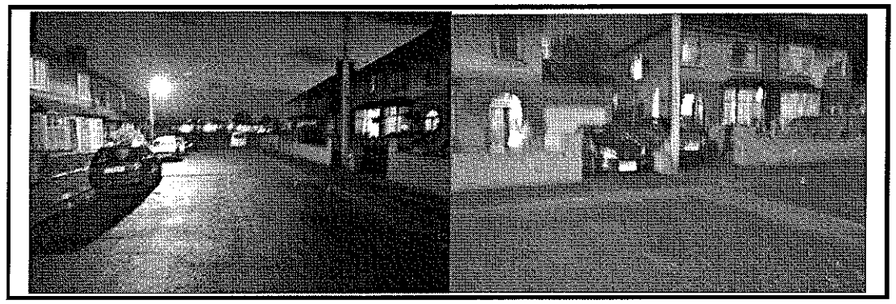


Parking occurs in the junction area into Milton Avenue and as shown below on Waddington Road.

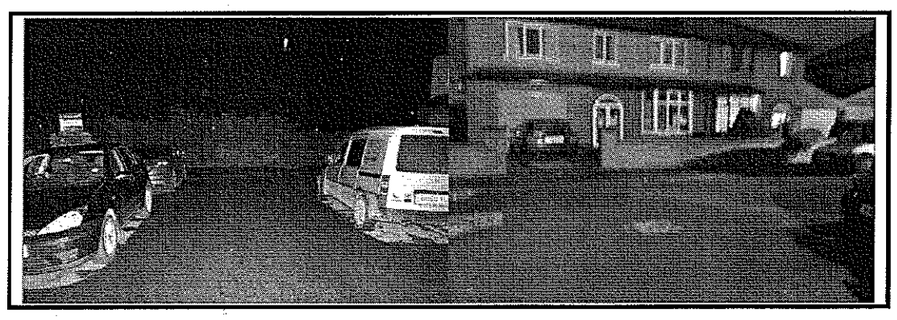
There is little or parking on Eastham Street opposite Milton Avenue during the survey as shown overleaf.



Where off street parking is provided but some blocking of the garages is occurring.



The above shows significant lengths of the street un parked between the off road parking.



The end of the street is similarly not fully parked up

The side road running from Milton Avenue also has limited parking occurring on it.

3.5 Castle View/Kirkmoor route night survey

The route was also surveyed for on street parking following the public consultation feedback. Snap shots are provided below for the gaps in parking and shown in red on mapping in the figures section.

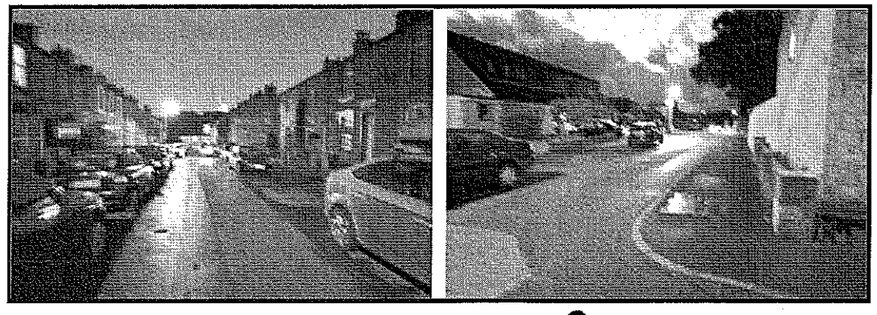
Castle View section

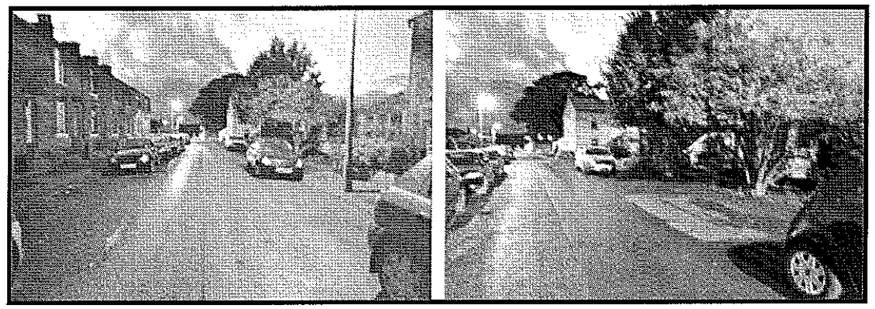
Views around the Castle View to Bawlands junction showing gaps in parking.

Parking along middle section shows further gaps and reasonable parking around the junctions, there is clearly sufficient width for single lane flows along the route.

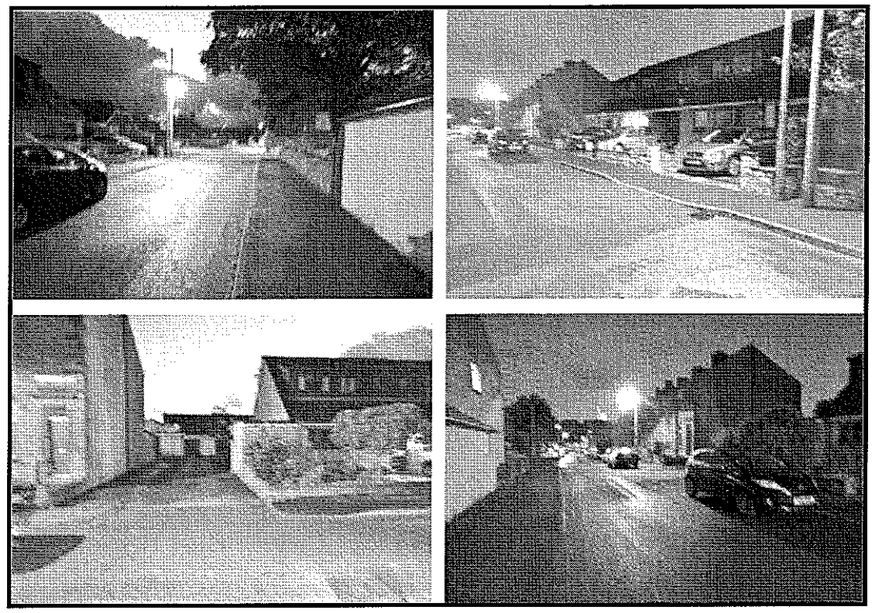
There are more limited gaps in parking approaching the bend to turn north along the route.

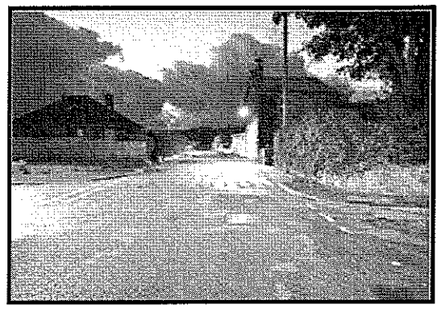
Kirkmoor route





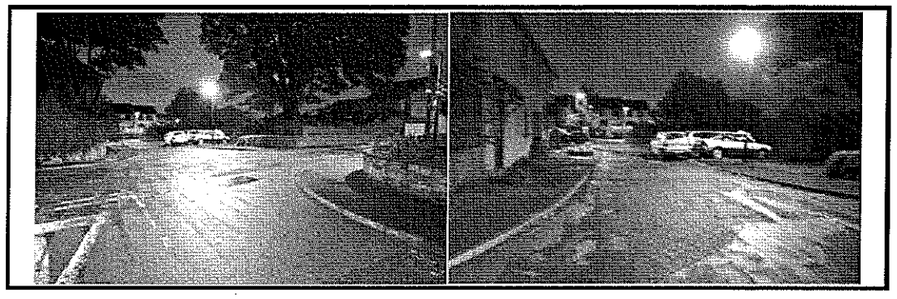
This section also has gaps in parking along the route.





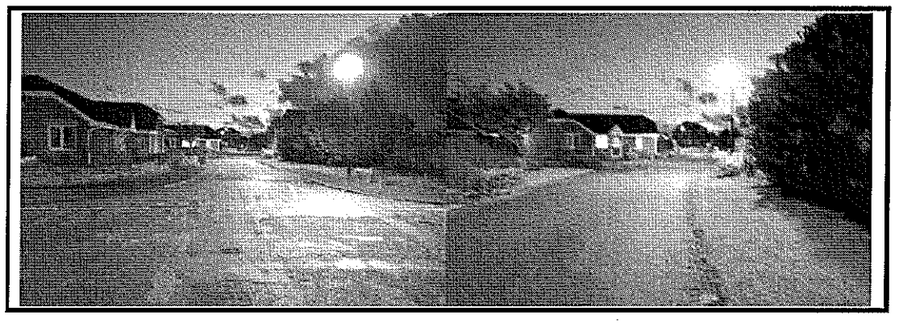
The upper section has less parking demand as there are garages, drives and lower numbers of terrace properties.

Kirkmoor Close



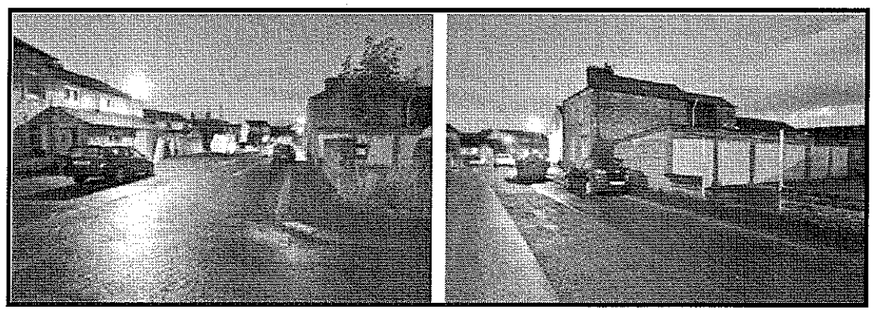
The close has limited on street parking demand and most parking occurs in the turning area/drives away from the junction.

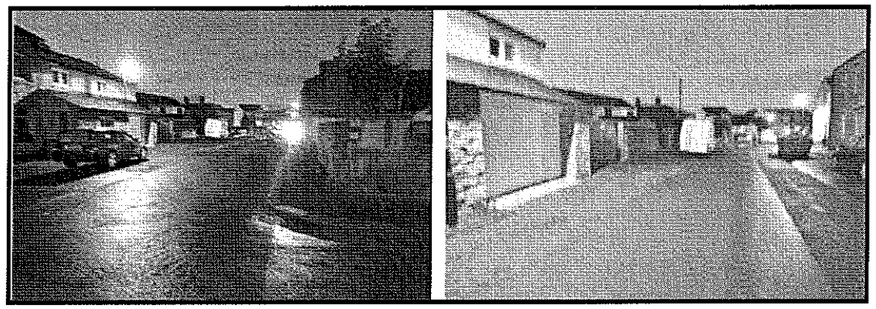
Swan Meadow

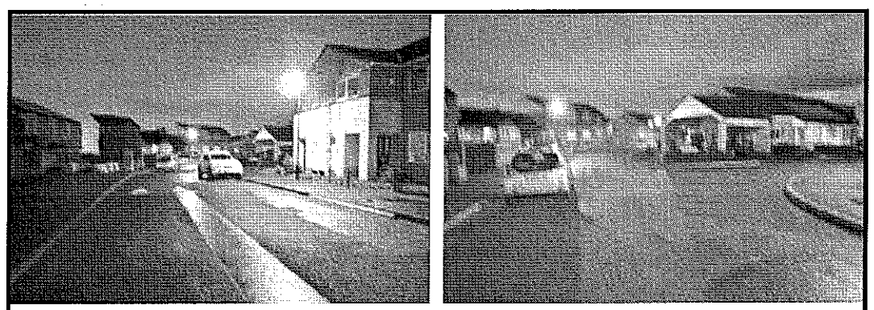


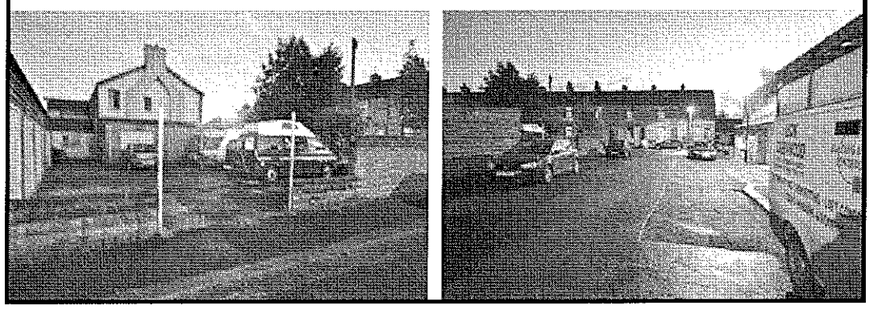
Similar to the close the area has little or no on street parking as the units have drives etc.

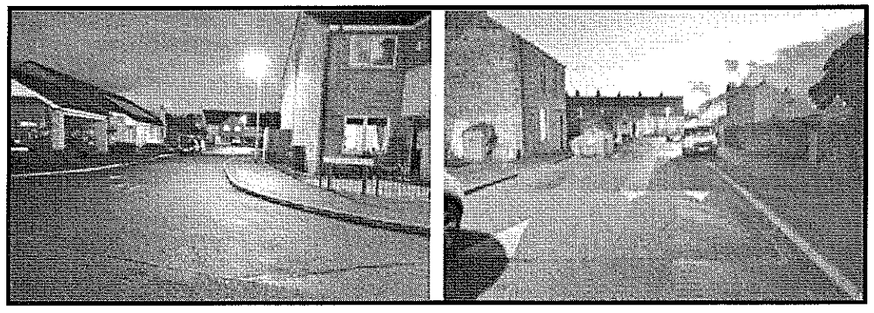
Kirkmoor side road to east side.





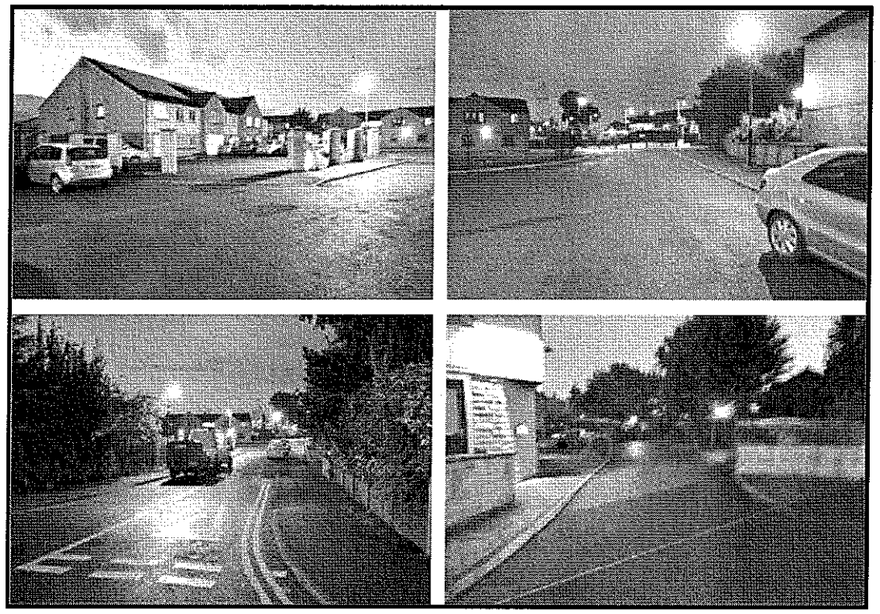






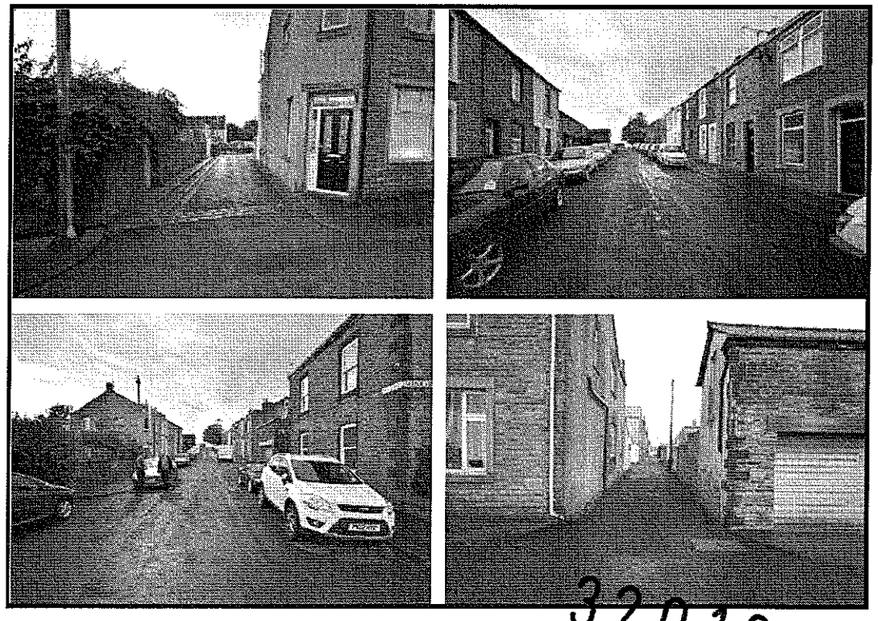
This section has limited on street parking, blocks of garages and off street parking provision.

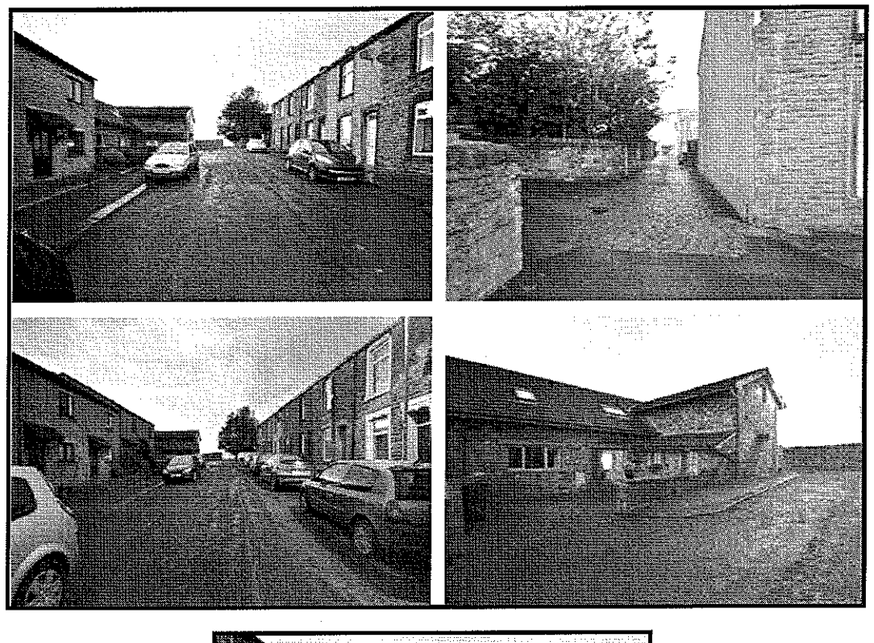
Castleview close route to station



This short section has some on street parking but significant numbers in the sheltered area cartilage.

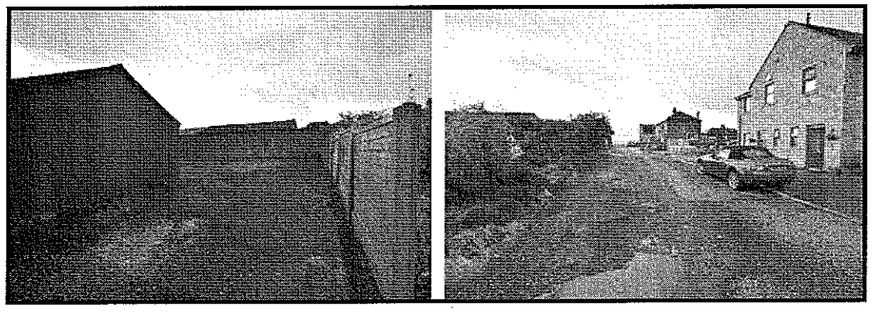
Delacy Street



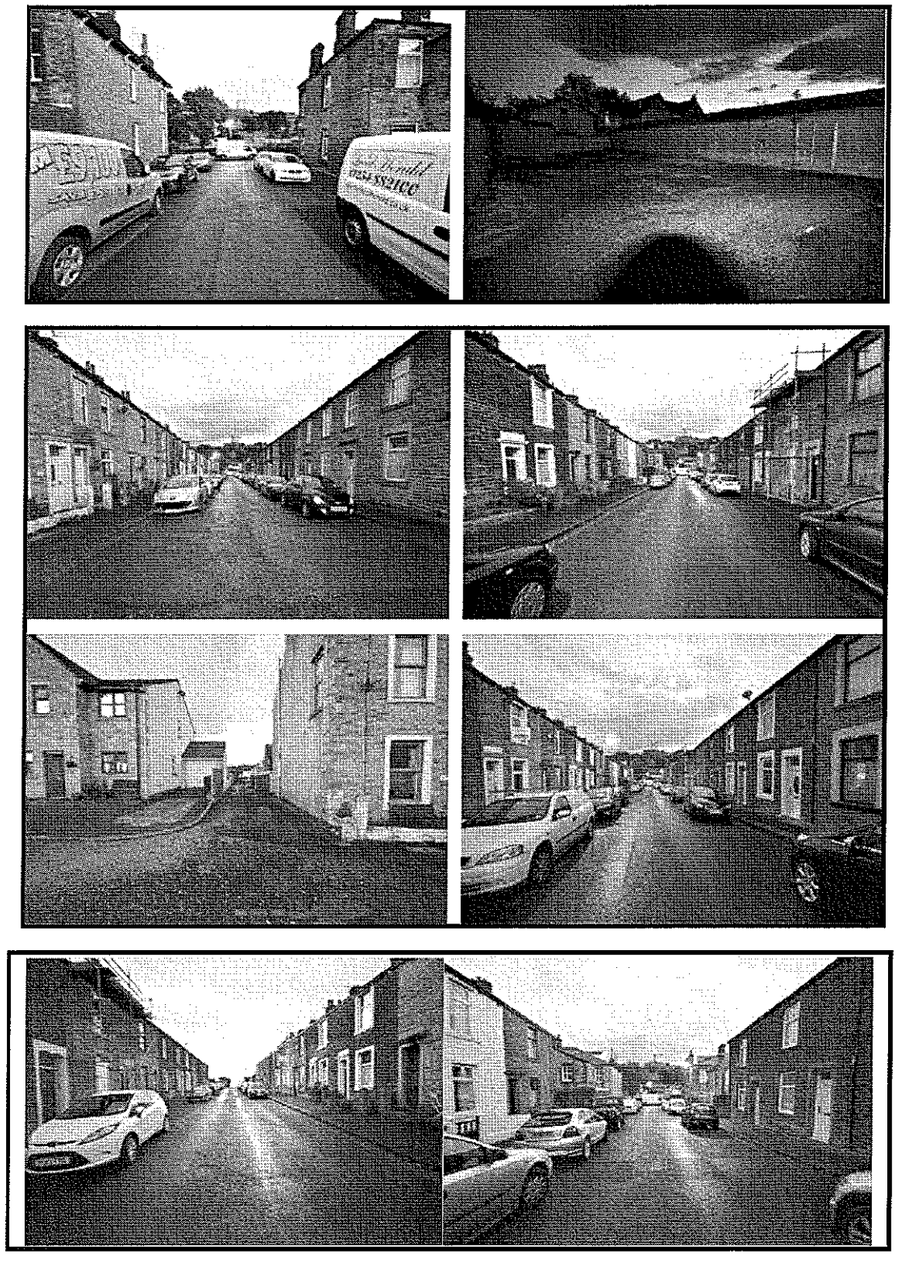


This route has gaps on each side and longer unbroken lengths towards the top of the road.

Monatgue Street



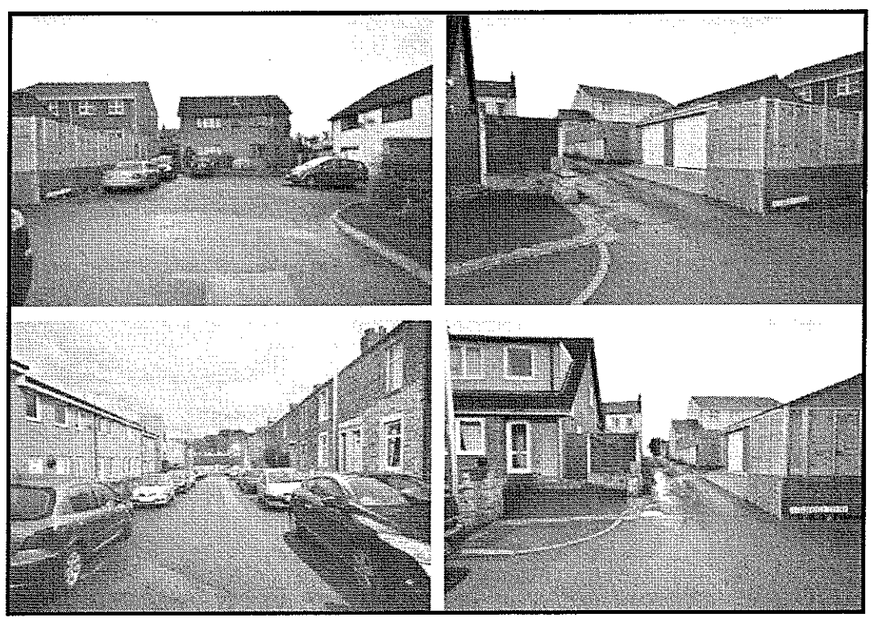
From the upper section of the road the route has a garage block.

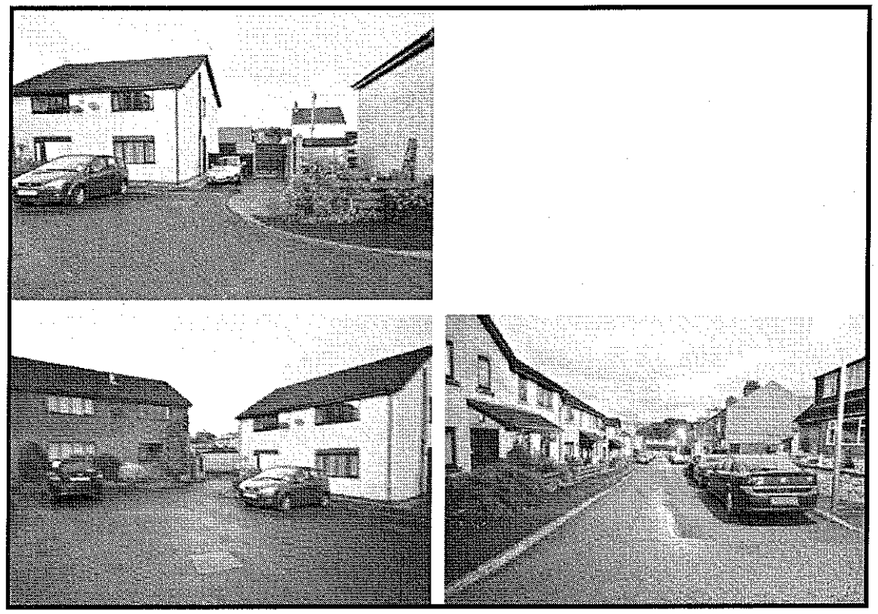


The lower section of the street is a terraced section with no off street parking, however the survey shows reasonable gaps in the on street parking.

Albermarle Street

The lower section of the street has terraced properties gaps in the on street parking along this section



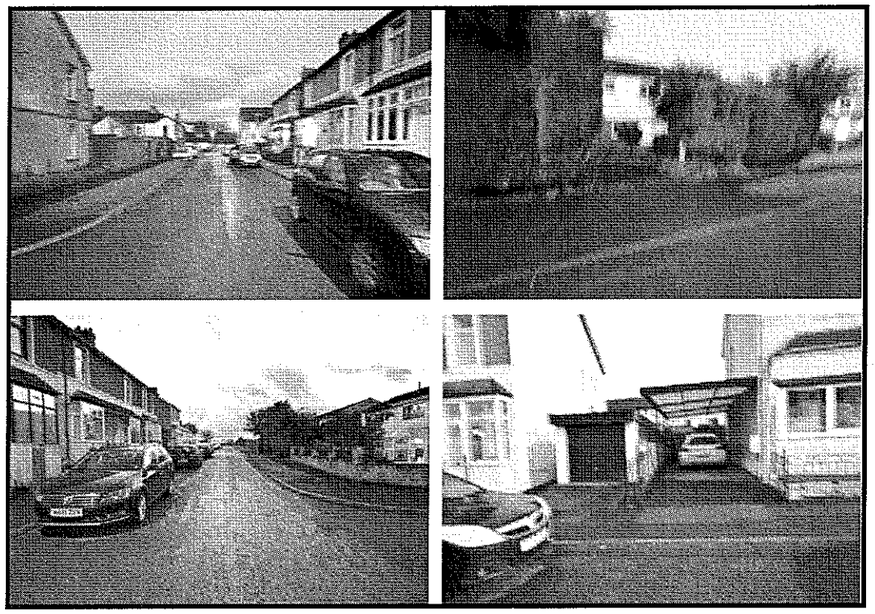


The upper section has newer properties with off street parking and parking areas/drives. This section is also narrower than the lower section.

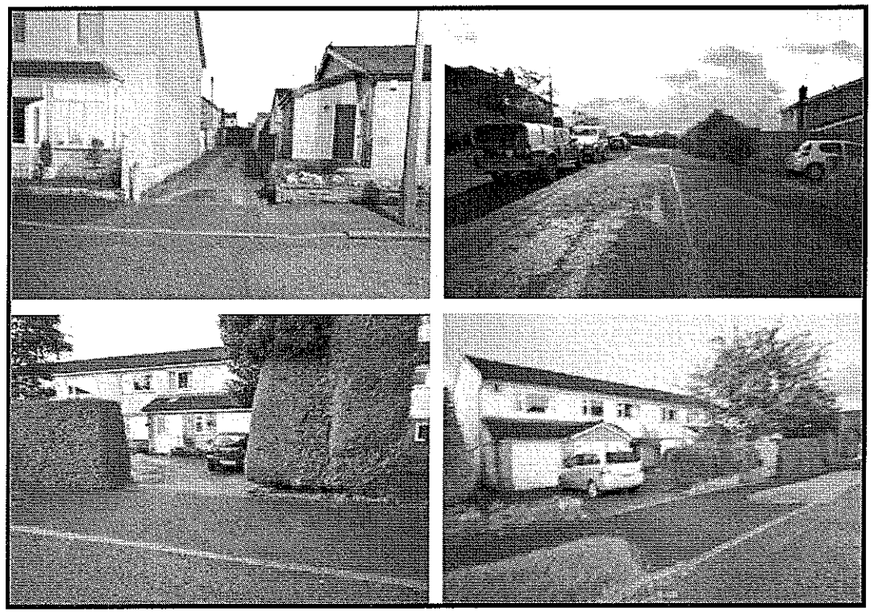
Buccleuch Avenue

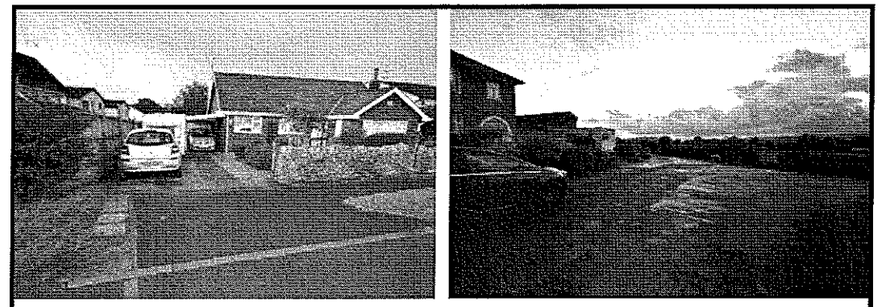
The first section has grass verges on the east side that looks to be undamaged and therefore not parked on regularly.

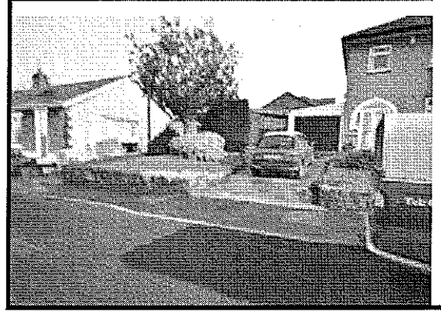
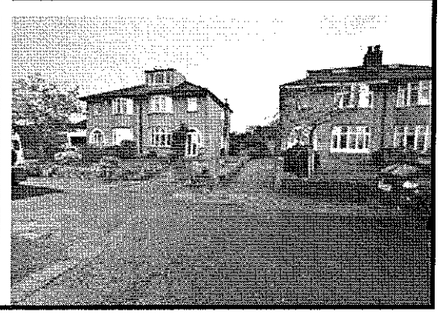
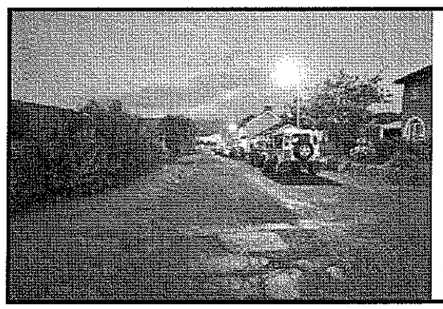
Two garages had cars parked in front of them.



The middle and upper section is not terraced and has drives/garages, the route also narrows at its mid point.



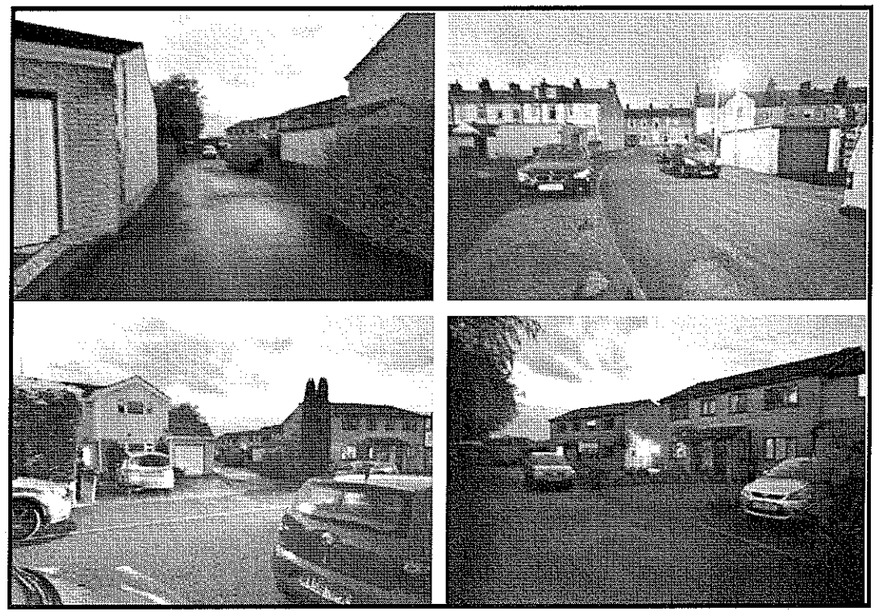



The top section has longer drives and reduced demand for on street parking.

Cardigan Avenue


The first section also has highway verges that do not appear to be driven over and gaps in parking demand.



The middle and Close section has off street drives and garages

Again the section near to Kirkmoor has highway verges that are not driven on.

3.6 Parking summary

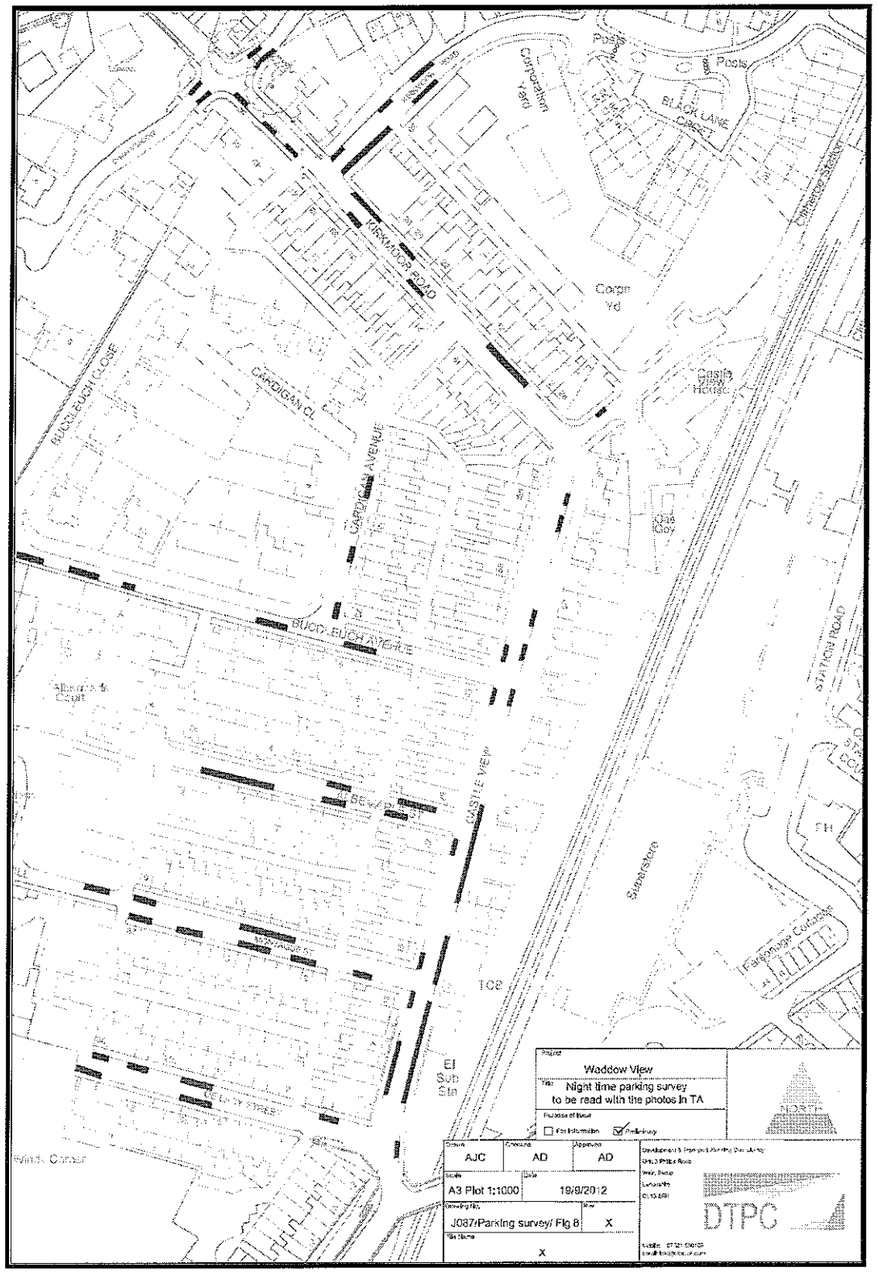
The day and night observation detailed above have always shown gaps in parking, widths between parked cars that can accommodate cars easily and larger vehicles when needed.

The gaps and junction areas provide sections where cars can pass by each other. The majority of the roads are straight and clear lines of sight are available.

The Castle View/Kirkmoor Road junction/bend has 24hr parking restrictions which allows passing of vehicles and larger vehicles to turn the corner easily.

The mapping overleaf shows visually the gaps in parking surveyed and are considered representative of the situation, there will be times when the parking is greater and lower.

Indeed the night time survey was undertaken up to 9.00 PM, from the surveys provided in the next pages there were 34 in and 21 out vehicles entering the area after the 9.00 PM cut off, thus some 13 additional cars were parked after the survey which as shown can easily be accommodated in the area.



3.7 Existing traffic flows

Traffic counts have been undertaken across the agreed network.

These show that the network has link flows within the DMRB criteria set out overleaf and would fall between UAP3 and 4, for the purposes of assessing the link capacity UAP4 have been used.

Feature	ROAD TYPE				
	Urban Motorway	Urban All-purpose			
	UM	UAP1	UAP2	UAP3	UAP4
General Description	Through route with grade separated junctions, hardshoulders or hardstrips, and motorway restrictions.	High standard single/dual carriageway road carrying predominantly through traffic with limited access.	Good standard single/dual carriageway road with frontage access and more than two side roads per km.	Variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings.	Busy high street carrying predominantly local traffic with frontage activity including loading and unloading.
Speed Limit	60mph or less	40 to 60 mph for dual, & generally 40mph for single carriageway	Generally 40 mph	30 mph to 40 mph	30mph
Side Roads	None	0 to 2 per km	more than 2 per km	more than 2 per km	more than 2 per km
Access to roadside development	None Grade separated for major only	limited access	access to residential properties	frontage access	unlimited access to houses, shops & businesses
Parking and loading	none	restricted	restricted	unrestricted	unrestricted
Pedestrian crossings	grade separated	mostly grade separated	some at-grade	some at-grade	frequent at-grade
Bus stops	none	in lay-bys	at kerbside	at kerbside	at kerbside

Table 1 Types of Urban roads and the features that distinguish them

		Two-way Single Carriageway- Busiest direction flow (Assumes a 60/40 directional split)									Dual Carriageway			
		Total number of Lanes									Number of Lanes in each direction			
		2				2-3	3	3-4	4	4+	2		3	4
Carriageway width		6.1m	6.75m	7.3m	9.0m	10.0m	12.3m	13.5m	14.6m	18.0m	6.75m	7.3m	11.0m	14.6m
Road type	UM	Not applicable										4000	5600	7200
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300	3350	3600	5200	*
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700	2950	3200	4800	*
	UAP3	900	1110	1300	1530	1620	*	*	*	*	2300	2600	3300	*
	UAP4	750	900	1140	1320	1410	*	*	*	*	*	*	*	*

Table 2 Capacities of Urban Roads One-way hourly flows in each direction

The above provides the AM and PM network flows for the Waddington Road route with the peak hours of 0800 hours and 0900 hours and between 1645 hours and 1745 hours.

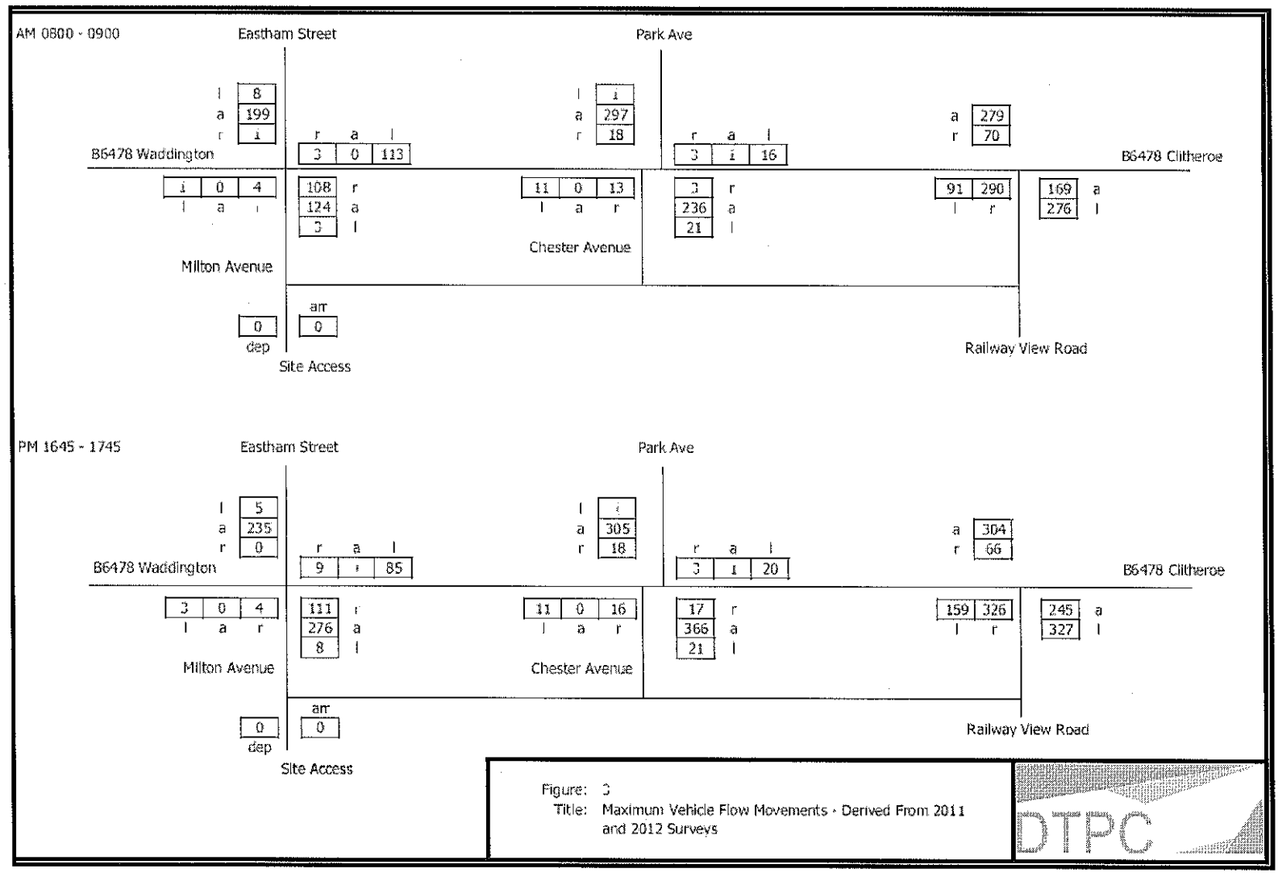


Figure: 3
Title: Maximum Vehicle Flow Movements - Derived From 2011 and 2012 Surveys

DTPC

A UAP4 link would have 750 one way flow, 404 is the highest one way flow along the link i.e. 46% spare capacity.

Similarly the Castle View route has been surveyed and the following dia overleaf shows the surveyed flows. The ATC was placed slightly along the route and a correction factor for the houses that were not recorded has been made.

The ATC flow directly relates to some 213 units ignoring the sheltered unit blocks i.e. a very robust view of the houses access the route. The streets in front of the ATC counter have also been counted i.e. 71.

An adjustment factor of 1.286 has been derived and this has been applied to each of the hourly flows.

A UAP4 link would have 750 one way flow, 103 is the highest one way flow along the link i.e. 86% spare capacity.

Automatic Classified Counts, Clitheroe

TRANSPORT DATA COLLECTION

DATE: 13/09/2012 TO 19/09/2012

LOCATION: CASTLE VIEW

Direction : SOUTHBOUND

TIME PERIOD	VEHICLE VOLUMES								
	Thursday 13/09/2012	Friday 14/09/2012	Saturday 15/09/2012	Sunday 16/09/2012	Monday 17/09/2012	Tuesday 18/09/2012	Wednesday 19/09/2012	Weekday Average	Week Average
0:00 - 1:00	1	2	6	7	2	1	1	2	3
1:00 - 2:00	1	0	3	4	3	0	0	1	1
2:00 - 3:00	0	1	1	3	3	0	2	2	1
3:00 - 4:00	0	0	1	1	0	0	0	0	0
4:00 - 5:00	3	2	1	0	3	2	2	3	3
5:00 - 6:00	2	4	2	1	6	5	5	6	6
6:00 - 7:00	13	19	12	6	13	14	15	19	20
7:00 - 8:00	64	61	17	12	68	65	54	80	71
8:00 - 9:00	69	72	37	12	77	71	76	94	90
9:00 - 10:00	40	49	45	42	34	37	32	49	55
10:00 - 11:00	45	32	61	64	44	43	43	53	60
11:00 - 12:00	46	47	44	45	44	44	46	58	62
12:00 - 13:00	43	34	38	41	37	35	45	50	52
13:00 - 14:00	48	50	53	38	44	41	49	60	65
14:00 - 15:00	35	45	42	35	45	49	31	53	57
15:00 - 16:00	61	51	25	50	45	46	47	64	60
16:00 - 17:00	38	62	49	39	53	54	64	70	77
17:00 - 18:00	68	50	40	36	48	67	56	74	74
18:00 - 19:00	56	80	37	36	45	48	60	74	77
19:00 - 20:00	32	35	34	23	31	50	40	48	53
20:00 - 21:00	33	23	20	19	18	29	27	33	34
21:00 - 22:00	14	13	11	8	17	17	21	21	21
22:00 - 23:00	9	17	10	3	14	14	5	15	16
23:00 - 0:00	6	10	12	1	4	1	4	6	9
7-19	613	633	488	450	584	600	603	780	798
6-22	705	723	565	506	663	710	706	902	927
6-24	720	750	587	510	681	725	715	924	952
0-24	727	759	601	526	698	733	725	937	966

Automatic Classified Counts, Clitheroe

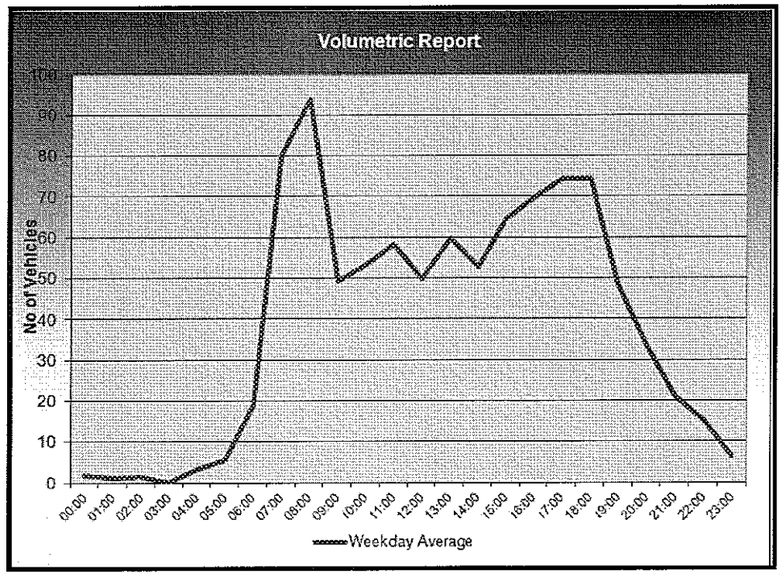
DATE: 13/09/2012 TO 19/09/2012

LOCATION: CASTLE VIEW

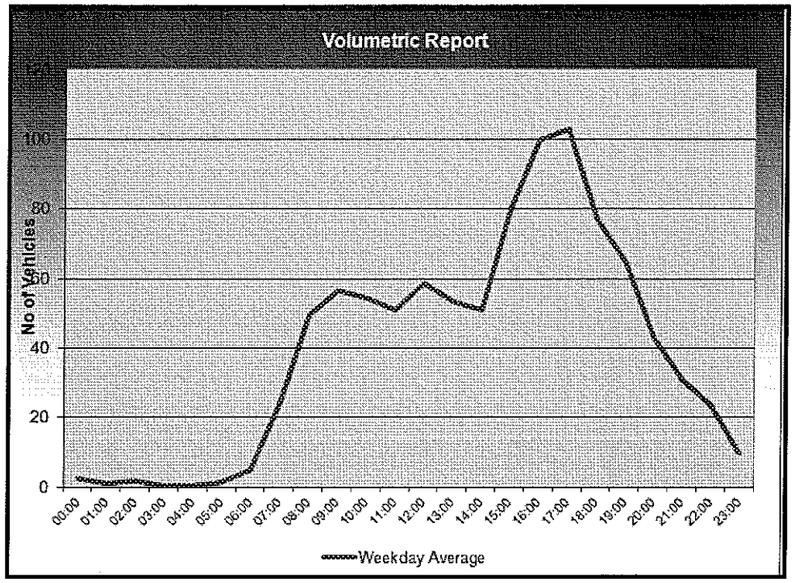
Direction : NORTHBOUND

TRANSPORT DATA COLLECT

TIME PERIOD	VEHICLE VOLUMES								
	Thursday 13/09/2012	Friday 14/09/2012	Saturday 15/09/2012	Sunday 16/09/2012	Monday 17/09/2012	Tuesday 18/09/2012	Wednesday 19/09/2012	Weekday Average	Week Average
0:00 - 1:00	1	2	7	11	2	1	3	2	4
1:00 - 2:00	0	2	3	3	2	0	0	1	2
2:00 - 3:00	1	0	2	4	3	1	2	2	2
3:00 - 4:00	1	1	1	1	0	0	0	1	1
4:00 - 5:00	1	0	2	0	1	1	0	1	1
5:00 - 6:00	0	2	2	1	1	1	1	1	2
6:00 - 7:00	3	8	6	2	2	2	4	5	6
7:00 - 8:00	18	15	8	6	24	20	17	24	22
8:00 - 9:00	34	34	19	10	40	49	35	49	48
9:00 - 10:00	47	44	35	22	42	45	42	57	57
10:00 - 11:00	41	35	38	32	47	42	47	55	56
11:00 - 12:00	34	45	54	45	43	36	40	51	58
12:00 - 13:00	56	35	51	46	43	36	58	59	61
13:00 - 14:00	47	39	43	45	39	45	37	53	56
14:00 - 15:00	36	57	40	44	41	36	28	51	55
15:00 - 16:00	65	67	41	54	54	61	65	80	81
16:00 - 17:00	70	84	57	45	76	79	79	100	103
17:00 - 18:00	75	73	49	41	69	85	98	103	105
18:00 - 19:00	55	65	42	37	65	58	58	77	77
19:00 - 20:00	52	51	44	23	40	55	53	65	69
20:00 - 21:00	37	32	23	25	33	30	35	43	42
21:00 - 22:00	19	20	16	22	25	28	27	31	31
22:00 - 23:00	21	21	18	5	15	19	16	24	25
23:00 - 0:00	8	15	16	5	2	6	7	10	14
7-19	578	593	477	427	583	590	604	758	777
6-22	689	704	566	499	683	705	723	901	926
6-24	718	740	600	509	700	730	746	935	965
0-24	722	747	617	529	709	734	752	942	975



Daily profile of exiting vehicles.



Daily profile entering vehicles.

3.8 Speed surveys

Castle View route - northbound and southbound results below.

TIME PERIOD	85TH PERCENTILE						
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday
	13/09/2012	14/09/2012	15/09/2012	16/09/2012	17/09/2012	18/09/2012	19/09/2012
0:00 - 1:00	21.0	23.8	23.1	25.3	13.8	18.0	26.0
1:00 - 2:00	16.0	-	22.0	21.1	21.0	-	-
2:00 - 3:00	-	13.0	8.0	22.9	20.8	-	21.4
3:00 - 4:00	-	-	10.0	26.0	-	-	-
4:00 - 5:00	23.0	30.1	23.0	-	14.7	21.2	24.1
5:00 - 6:00	18.4	23.5	25.2	20.0	22.6	16.1	23.8
6:00 - 7:00	25.7	24.4	24.1	23.3	20.7	24.1	24.5
7:00 - 8:00	23.4	23.6	24.9	24.8	22.9	24.0	23.2
8:00 - 9:00	22.0	22.2	21.6	24.8	23.3	22.6	22.4
9:00 - 10:00	24.1	22.4	22.5	22.2	23.2	23.8	22.7
10:00 - 11:00	21.3	23.5	22.5	22.4	24.7	22.9	23.1
11:00 - 12:00	24.9	25.6	23.3	24.1	24.2	22.4	23.2
12:00 - 13:00	23.1	22.9	22.2	22.7	23.3	22.8	23.3
13:00 - 14:00	24.4	22.5	22.9	23.7	24.0	23.1	24.1
14:00 - 15:00	21.7	20.4	24.5	22.3	24.0	19.2	23.3
15:00 - 16:00	22.8	22.3	21.4	22.1	24.3	20.9	23.5
16:00 - 17:00	23.4	20.8	22.4	23.1	23.5	21.8	22.1
17:00 - 18:00	21.8	22.8	22.9	23.6	22.5	23.4	22.4
18:00 - 19:00	23.0	21.2	22.8	21.2	21.7	23.6	22.9
19:00 - 20:00	21.9	19.7	23.3	23.9	20.1	22.3	21.7
20:00 - 21:00	23.4	21.8	25.8	22.4	25.0	23.2	20.5
21:00 - 22:00	21.1	22.4	24.1	22.6	21.1	24.6	22.6
22:00 - 23:00	23.3	23.4	26.9	19.8	23.0	29.0	20.9
23:00 - 0:00	22.1	22.4	24.1	16.0	25.1	24.0	18.5
10-12	23.4	24.8	22.9	23.1	24.4	22.7	23.2
14-16	22.7	21.5	22.7	22.8	24.1	20.2	23.3
0-24	23.0	22.5	23.1	23.0	23.3	22.9	22.8

7 DAY AVERAGE SPEED	18.5
7 DAY AVERAGE 85th PERCENTILE	22.9

TIME PERIOD	85TH PERCENTILE						
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday
	13/09/2012	14/09/2012	15/09/2012	16/09/2012	17/09/2012	18/09/2012	19/09/2012
0:00 - 1:00	21.0	22.0	22.5	25.0	24.3	19.0	25.6
1:00 - 2:00	-	21.4	18.2	20.0	16.4	-	-
2:00 - 3:00	17.0	-	14.6	22.2	18.6	18.0	21.6
3:00 - 4:00	21.0	16.0	17.0	16.0	-	-	-
4:00 - 5:00	20.0	-	22.7	-	14.0	20.0	-
5:00 - 6:00	-	24.2	14.4	21.0	25.0	13.0	31.0
6:00 - 7:00	22.0	23.3	25.1	26.2	25.9	23.8	20.1
7:00 - 8:00	21.2	20.0	27.0	23.1	22.7	22.9	21.4
8:00 - 9:00	23.0	22.9	22.4	25.7	23.8	22.7	21.1
9:00 - 10:00	22.6	22.9	22.0	21.6	23.9	22.8	23.2
10:00 - 11:00	21.0	22.6	21.6	21.2	23.0	22.2	23.4
11:00 - 12:00	23.8	22.7	21.9	22.1	23.8	20.6	21.9
12:00 - 13:00	20.9	22.1	19.5	23.7	22.2	22.4	22.6
13:00 - 14:00	21.9	20.6	21.2	20.4	23.9	19.6	21.8
14:00 - 15:00	22.5	21.1	21.7	21.1	24.3	21.3	24.6
15:00 - 16:00	21.4	20.7	20.3	20.3	21.9	19.2	24.0
16:00 - 17:00	22.7	21.6	22.4	21.9	21.7	20.5	22.2
17:00 - 18:00	22.2	22.6	23.0	21.9	21.9	21.6	21.7
18:00 - 19:00	21.6	20.0	22.2	20.6	22.2	22.4	20.7
19:00 - 20:00	21.1	20.4	21.8	22.2	23.1	20.2	21.0
20:00 - 21:00	22.8	23.0	22.8	21.9	22.4	21.9	20.8
21:00 - 22:00	19.7	22.2	22.4	23.6	20.3	22.3	22.0
22:00 - 23:00	24.0	22.1	24.0	26.9	24.6	25.7	23.6
23:00 - 0:00	25.4	22.7	22.7	25.6	26.9	25.0	22.9
10-12	22.4	22.8	21.7	21.7	23.4	21.6	22.7
14-16	22.2	21.5	21.0	20.9	23.5	20.4	25.1
0-24	22.1	21.8	21.9	22.0	22.8	21.6	22.3

7 DAY AVERAGE SPEED	17.8
7 DAY AVERAGE 85th PERCENTILE	22.1

The results shows the route operates around the posted speed limit of 20mph with no additional traffic calming.

Waddington Road - northbound and southbound results below

TIME PERIOD	85TH PERCENTILE						
	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
	24/08/2012	25/08/2012	26/08/2012	27/08/2012	28/08/2012	29/08/2012	30/08/2012
0:00 - 1:00	42.0	32.7	31.7	34.7	37.6	42.2	34.2
1:00 - 2:00	36.8	30.8	36.5	38.4	35.0	22.4	-
2:00 - 3:00	40.7	34.3	36.3	36.5	29.0	39.8	32.9
3:00 - 4:00	43.9	37.7	38.7	39.5	31.1	19.0	28.4
4:00 - 5:00	15.2	35.5	57.6	37.0	49.6	32.1	18.0
5:00 - 6:00	32.1	27.0	-	33.1	27.0	34.7	41.1
6:00 - 7:00	36.0	37.9	35.8	34.7	35.0	37.3	37.0
7:00 - 8:00	30.0	35.3	35.4	33.0	30.7	29.9	30.4
8:00 - 9:00	27.3	32.1	33.2	32.9	28.5	27.5	29.1
9:00 - 10:00	29.9	29.9	29.8	28.6	27.4	29.0	27.1
10:00 - 11:00	28.9	30.0	29.3	27.0	28.5	28.5	28.8
11:00 - 12:00	28.0	28.4	29.9	27.8	28.8	29.0	29.4
12:00 - 13:00	28.9	30.1	29.2	29.2	29.4	28.2	28.7
13:00 - 14:00	27.9	29.6	29.2	30.2	28.6	28.6	28.3
14:00 - 15:00	28.9	28.3	29.0	28.9	29.0	27.5	27.4
15:00 - 16:00	29.5	29.4	28.9	30.0	27.0	29.0	28.1
16:00 - 17:00	28.0	27.6	30.7	29.4	27.8	30.5	28.5
17:00 - 18:00	28.4	28.3	29.6	30.0	27.4	29.2	-
18:00 - 19:00	28.7	28.3	30.9	30.9	30.2	30.8	30.2
19:00 - 20:00	31.2	25.1	31.4	31.1	30.1	31.1	30.2
20:00 - 21:00	30.2	24.5	31.1	29.2	31.5	30.5	29.3
21:00 - 22:00	29.9	26.4	34.1	33.3	32.7	32.1	32.8
22:00 - 23:00	31.6	26.7	34.9	32.8	32.3	35.3	31.9
23:00 - 0:00	28.7	31.6	35.3	35.1	33.0	32.6	30.7
10-12	28.4	29.0	29.7	27.4	28.7	28.8	29.1
14-16	29.2	30.1	28.9	29.3	28.2	28.7	28.1
0-24	29.2	29.1	30.5	30.1	29.1	29.8	29.2

7 DAY AVERAGE SPEED	23.8
7 DAY AVERAGE 85th PERCENTILE	29.6

TIME PERIOD	85TH PERCENTILE						
	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
	24/08/2012	25/08/2012	26/08/2012	27/08/2012	28/08/2012	29/08/2012	30/08/2012
0:00 - 1:00	36.5	29.8	32.7	38.8	30.0	39.6	28.3
1:00 - 2:00	38.7	29.0	41.8	39.2	26.0	48.0	31.7
2:00 - 3:00	44.7	20.8	41.4	40.6	28.0	-	34.6
3:00 - 4:00	37.1	28.3	24.2	39.0	-	30.8	29.8
4:00 - 5:00	22.5	29.1	16.0	36.9	23.6	29.1	35.7
5:00 - 6:00	33.6	32.4	24.0	32.2	33.7	32.8	33.3
6:00 - 7:00	31.1	29.0	36.2	32.4	31.1	32.9	31.3
7:00 - 8:00	30.8	32.2	31.6	28.7	28.7	30.7	29.9
8:00 - 9:00	27.1	29.1	31.1	29.3	26.3	26.4	27.4
9:00 - 10:00	26.7	28.8	29.1	27.9	26.6	25.0	25.5
10:00 - 11:00	27.6	27.0	26.4	24.7	26.3	26.8	26.2
11:00 - 12:00	25.7	25.9	27.4	25.7	26.6	26.7	26.2
12:00 - 13:00	26.2	27.3	27.4	26.4	27.2	26.7	27.6
13:00 - 14:00	25.5	24.9	25.1	26.8	26.9	26.7	25.7
14:00 - 15:00	24.9	25.8	27.0	26.1	26.3	26.4	25.5
15:00 - 16:00	26.0	25.6	26.0	28.8	24.5	26.4	26.7
16:00 - 17:00	26.0	25.4	25.6	26.5	25.6	28.8	26.8
17:00 - 18:00	26.9	25.8	26.9	27.6	25.7	26.2	-
18:00 - 19:00	26.8	27.3	30.0	29.4	28.4	28.1	27.0
19:00 - 20:00	26.5	21.9	30.1	30.6	28.7	27.7	28.9
20:00 - 21:00	29.1	22.8	28.8	29.3	28.5	28.2	28.8
21:00 - 22:00	26.5	24.4	31.3	30.0	29.2	27.8	27.5
22:00 - 23:00	29.3	26.9	33.6	28.2	30.6	34.4	30.9
23:00 - 0:00	30.0	30.9	34.5	33.2	28.5	32.7	28.5
10-12	26.6	26.5	26.9	25.3	26.4	26.7	26.2
14-16	25.4	26.8	26.7	27.4	25.5	26.6	26.3
0-24	27.1	26.8	28.3	28.0	27.0	27.5	27.3

7 DAY AVERAGE SPEED	21.8
7 DAY AVERAGE 85th PERCENTILE	27.4

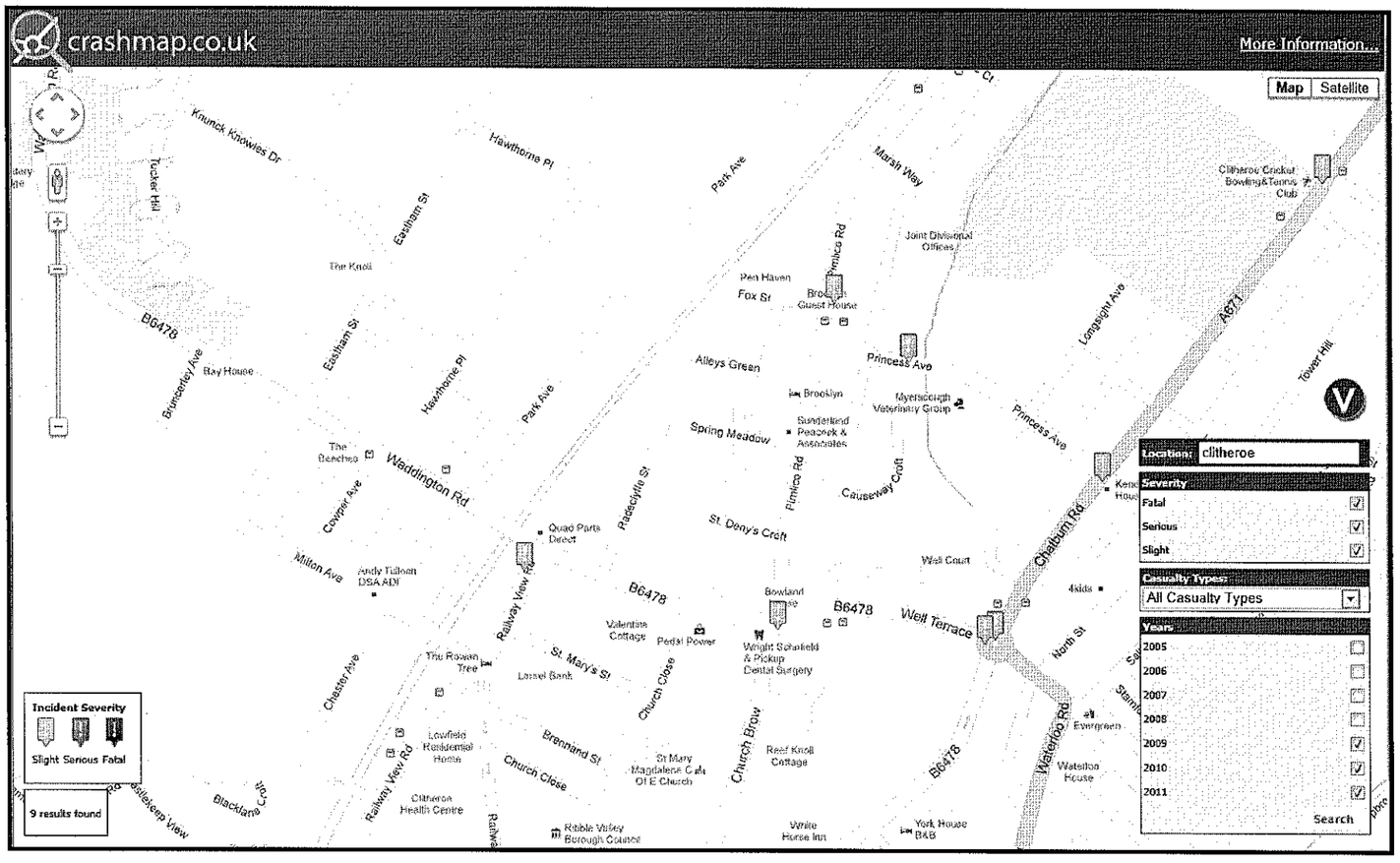
In the past few months the speed limit on Waddington road has been reduced to 20 mph some 85m west of Milton Avenue as shown below. Necessarily at lower speeds driver behaviour and safety levels will be substantially improved.

On its approach to the town entre the route is over 7.8m wide with limited parking at the gateway area thus giving little or no constraint to vehicle speeds.

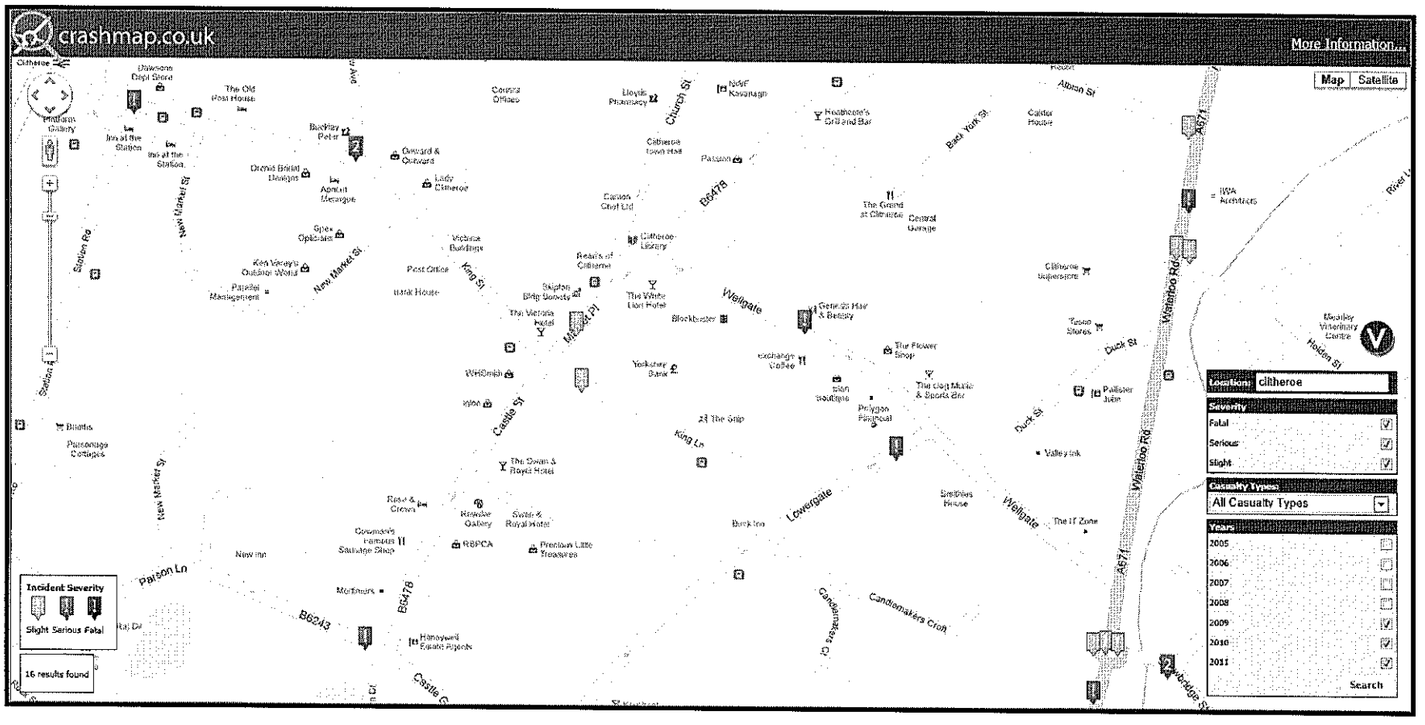
The results show that the speeds are materially below 30 mph which in itself is good for an approach to the urban area but the signage on its own has not resulted in reduction to a 20 mph speed to along the route. Speed has clearly been reduced but further mitigation may be needed to ensure it delivers its full potential.

3.9 Accident review

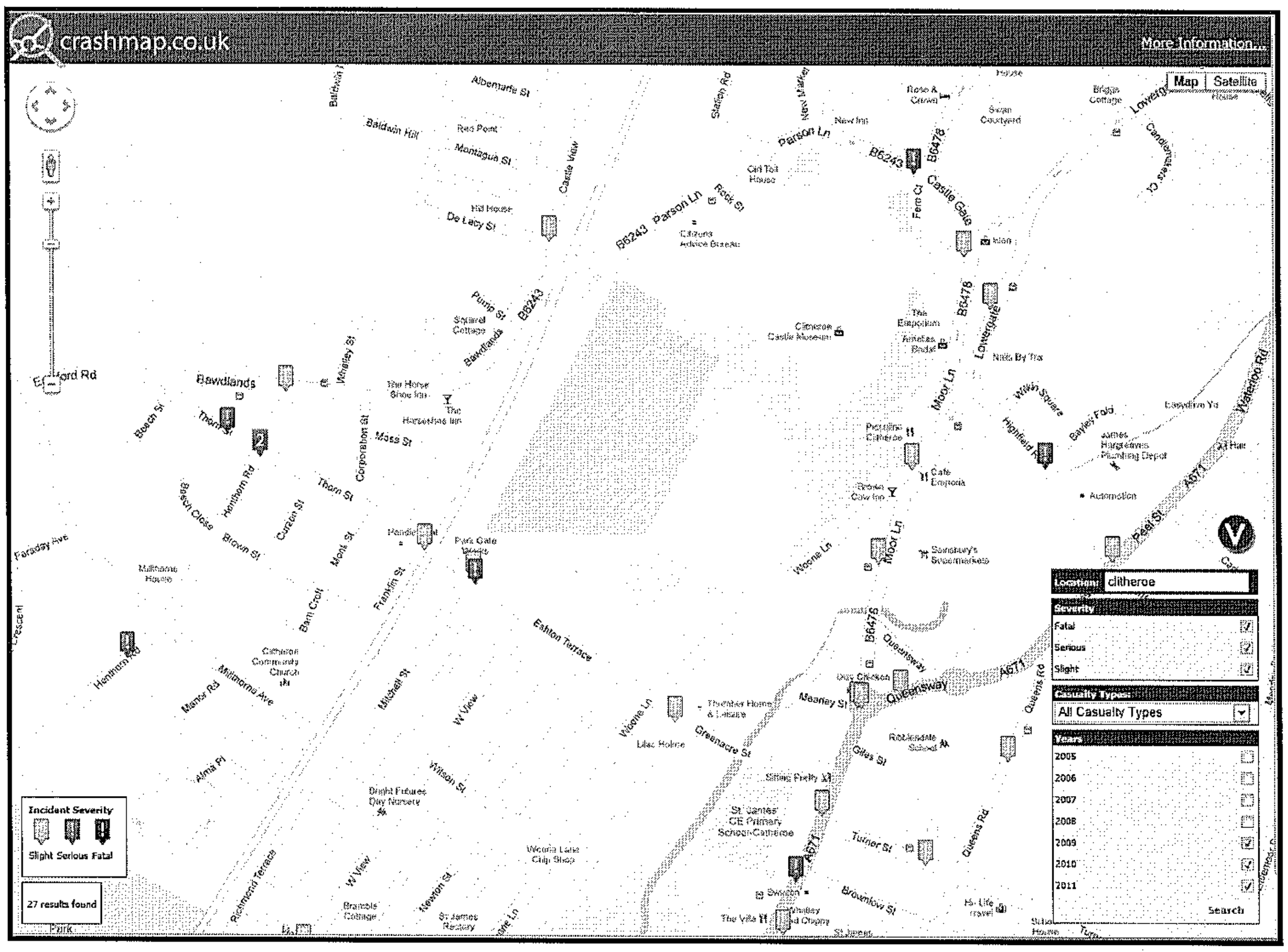
The full accident records for the past 3 years are provided overleaf. The review covers both access corridors.


crashmap.co.uk
More Information...
Map
Satellite
Knuck Knowles Dr
Hawthorne Pl
Park Ave
Marsh Way
Clitheroe Cricket Bowling&Tennis Club
Tucker Hill
Eastham St
The Knoll
Joint Divisional Offices
Pen Haven
Fox St
Brooklyn Guest House
Pimlico Rd
B6478
Bay House
Brunerley Ave
Princess Ave
Longsight Ave
A671
Tower Hill
Alleys Green
Brooklyn
Myerscough Veterinary Group
Spring Meadow
Sunderland Peacock & Associates
The Beeches
Waddington Rd
Cowper Ave
Milton Ave
Andy Tillotson DSA ADI
Quad Parts Direct
Railway View
Peasedyke St
St Deny's Croft
Causeway Croft
Well Court
Chatburn Rd
Kemple House
Location: clitheroe
Severity
Fatal
Serious
Slight
Casualty Types:
All Casualty Types
Years
2005
2006
2007
2008
2009
2010
2011
Search
Bowland Rise
Well Terrace
4kids
Valentine Cottage
Pedal Power
Wright Schofield & Pickup Dental Surgery
The Rowan Tree
St. Mary's St
Laurel Bank
Chester Ave
Church Close
North St
Waterloo Rd
Evergreen
Lowfield Residential Home
Brennand St
St Mary Magdalene C of E Church
Church Brow
Reed Knoll Cottage
Waterloo House
Railway View Rd
Clitheroe Health Centre
Ribble Valley Borough Council
White Horse Inn
York House B&B
Blackamoor
Incident Severity
Slight Serious Fatal
9 results found

The Waddington Road route has no safety record in the past 3 years and the route to the Chatburn Road roundabout has 3 recorded events, 1 per year.



The route towards Shawbridge Street has 4 recorded events near to the Tesco store probably related to turning movements and crossing of the road, this is just over 1 per year not a level that would be considered unsafe and a further 5 at the mini roundabout. The level again is 1 per year with one at the pelican crossing, again seen as a low level of recorded accidents.


crashmap.co.uk
More Information...
Map
Satellite
Location:
clitheroe
Severity
Fatal
Serious
Slight
Casualty Types
All Casualty Types
Years
2005
2006
2007
2008
2009
2010
2011
Search
Incident Severity
Slight Serious Fatal
27 results found
Bawdlands
Parson Ln
B6243
B6478
Castle Gate
Moor Ln
Queensway
A671
Peel St
Waterloo Rd
Eshton Terrace
Corporation St
Thorn St
Pump St
Moss St
Franklin St
Queens Rd
Turner St
Greenacre St
Mearley St
Woone Ln
Lowergate
Highfield Rd
Henthorn Rd
Brown St
Mitchell St
W View
Castle View
Baldwin Hill
De Lacy St
Montague St

The southern section of the town along the main roads has single or two close accidents over the 3 years. The Eshton Terrace route 7 accidents mainly at the junction areas. 3 of which are at the Henthorn junction which is not affected by the site traffic. Again 4 accidents in 3 years is a low level accident rate.

Whilst all accidents are regrettable most often than not they are unique and isolated in terms of causation and characteristics providing no real basis for identifying or requiring accident mitigation measures. The network as a whole has a small number of serious accidents over the three years and a low annual level of slight accidents, this is expected for an urban area.

It is concluded that the proposed development has no material impact on the rate of accidents in the study area and would not suggest the town has a road safety issue. This situation would not be expected to change assuming the site access and junction designs are based on the normal design guidance.

3.10 Summary

The local network review above shows an area with little or no stress on its links and the occasional junction that has a small number of accidents associated with it, these are at a level that would not generally give rise to safety concerns/mitigation schemes.

The parking survey does not support the stance taken by the residents that the area has no parking available overnight and passing cars have difficulties in doing so.

The traffic surveys show the network has significant spare capacity on the links and the stress points are related to a limited number of junctions, these will be assessed in the traffic flow chapter.

4. EXISTING SUSTAINABLE TRAVEL OPTIONS TO THE SITE

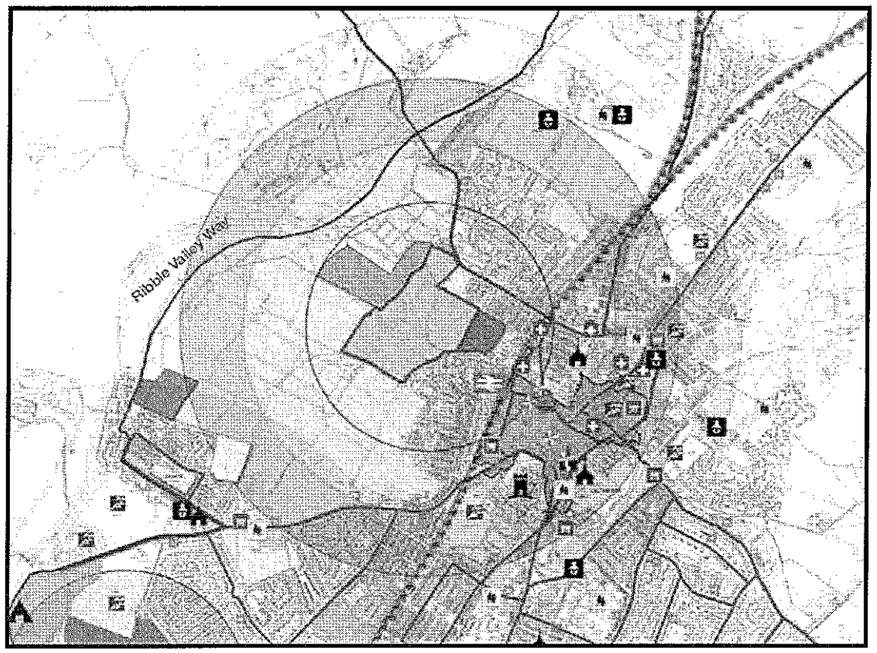
It is important to recognise that national Government guidance encourages accessibility to new developments by non-car travel modes. New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non car modes, thus assisting in meeting the aspirations of current national and local planning policy.

The accessibility of the proposed development sites by the following modes of transport has, therefore, been considered:

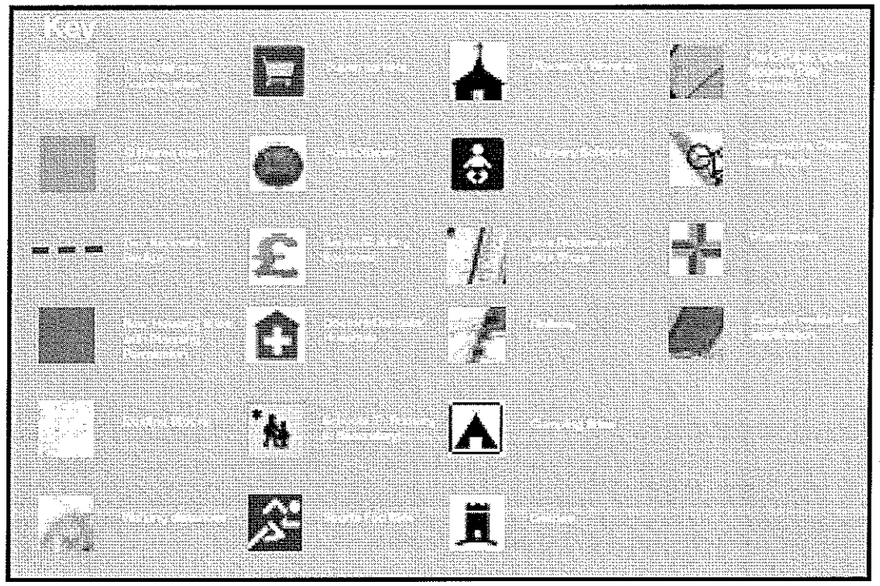
1. Accessibility on foot;
2. Accessibility by cycle;
3. Accessibility by public transport;

4.1 Amenities

In addition to the town centre which is located some 5 minute walk away from the site the area also offers, the following is abstracted from the DAS:



Facilities



4.2 Walking

The proposed development site is located within an existing urban area with a range of local land uses, services and facilities.

The sites highly sustainable location means that the following amenities and places of employment are located within a maximum 30 minute walk from the site as shown on the diagraham.

Zone 1 Green, 400m/5minute walk – this zone has the following attractions bus and rail stations, food store, 2 doctors/dentist/health care and 15% of town centre area.

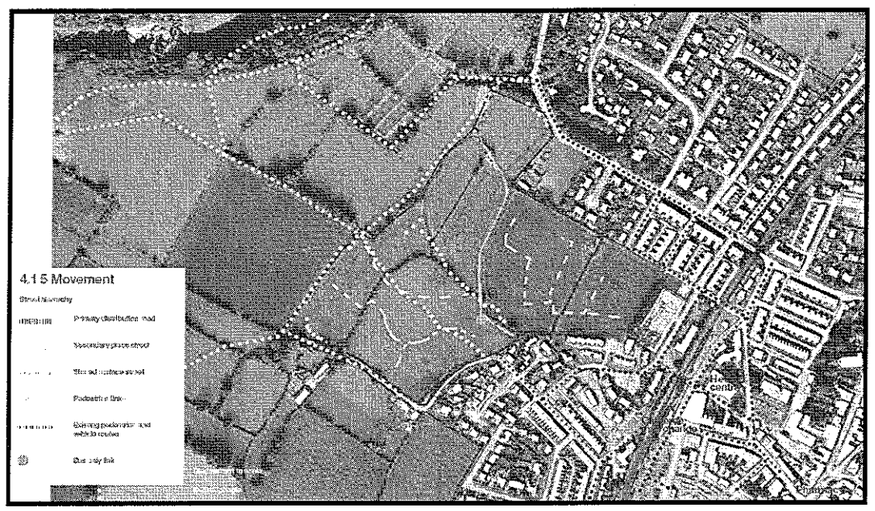
Zone 2 Pink, 600m/7 minute walk – this zone has the additional attractions to zone 1 of the market, post office, 55% more of the town centre, 8 banks/building societies, place of worship, 3 pharmacies, doctor/dentist/health care

Zone 3 Purple, 800/9.5min walk – this zone has the additional attractions to zone 1 and 2 of 3 doctors/dentist/health care, 2 places of worship, 2 nurseries, 4 sports facilities, 3 food stores, 3 primary schools, 1 senior school, the remainder of the town centre.

Zone 4 Orange, 1000m/15minute walk – this zone has the additional attractions to zone 1 to 3 of 4 nurseries, 1 food store, 3 primary schools, place of worship, senior school, 2 sports facilities

Zone 5 White, 2km/30 minute walk – this zone has the additional attractions to zone 1 to 4 i.e. all of Clitheroe including the employment sites.

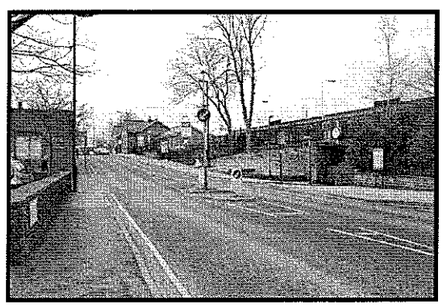
The plan overleaf shows the existing adopted and PROW in dotted routes along with the suggested internal routes to show how they integrate.



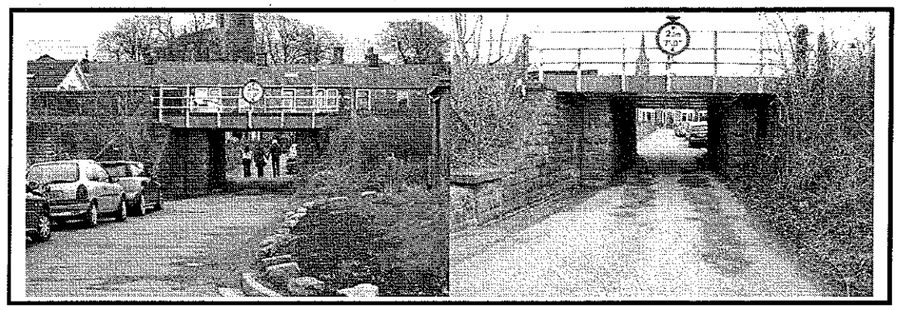
Walking Routes to and from site

Waddington Road side routes into town centre

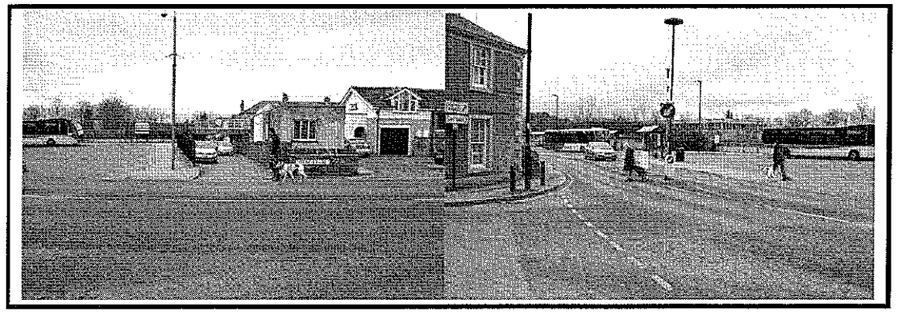
Pedestrian route to/from rail station and town centre



View from Railway View Rd to underpass and refuge



Pedestrian route to bus station, shared area undefined

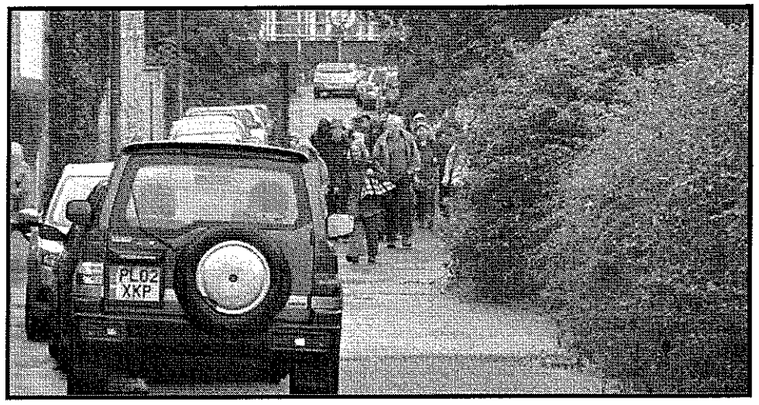


View to underpass and refuge to bus station frontage

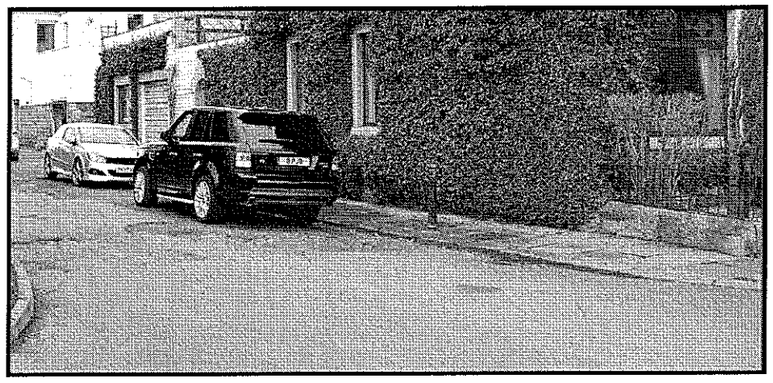
320120913P

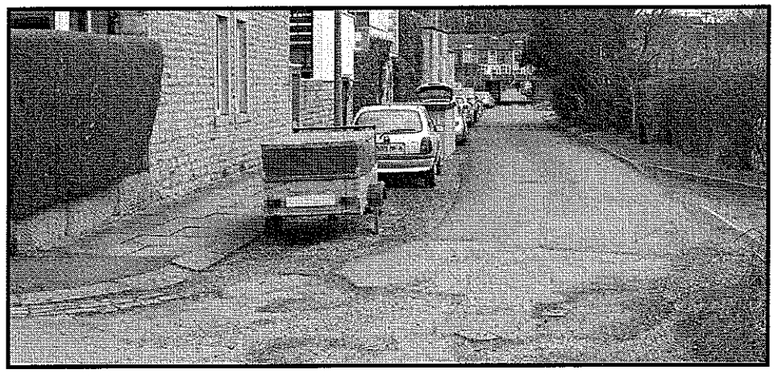
The route along the side of the site towards Chester Road is unadopted but has public rights of way for vehicles, cycles and pedestrians. It has a footpath along the east side along the flank frontage of the houses. This is a flag footpath and is reasonably well maintained.

At a site inspection in August the route was being used by a group of walkers as shown overleaf.



The detailed photos show that the footpath is fit for purpose as a PROW.





Castle View side routes into town centre

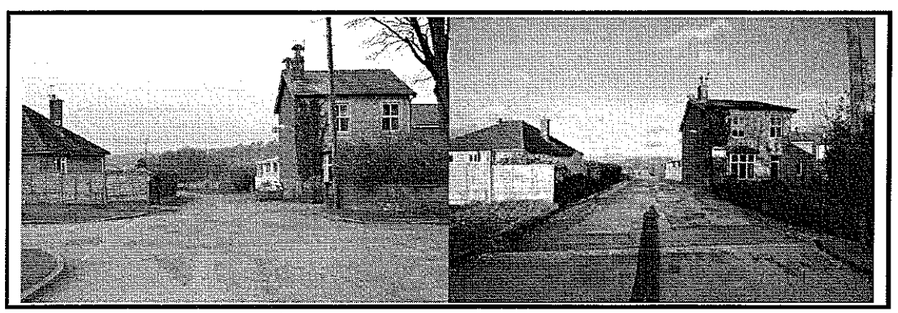
The majority of the Phase 2 areas southerly boundary is along the Back Commons frontage, this is a single track lane with passing areas giving access to a limited number of residential properties.

Back Commons unmade and tarmaced sections

As Back Commons approaches the main residential area it curves to the right. The location has the first field gate which gives access to the site and the start of a definitive footpath route that runs across the site.

Back Commons and field access

The route widens as it forms the flank frontage of two properties, it then joins the adopted highway network.



Back Commons/adopted network connection

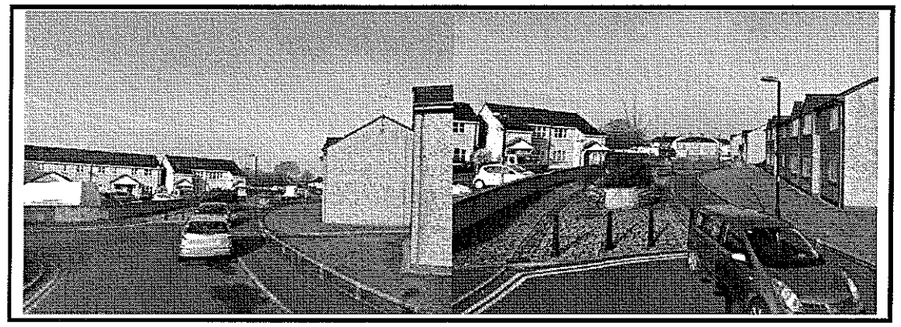
Back Commons leads into Kirkmoor Road. From Kirkmoor Close to Kirkmoor Road the road section is narrower than the majority of the road.

Narrow section

From the limit of the slightly narrow section the road widens and forms a straight length of road leading to a junction with a small un named cul de sac where it turns 90 degrees westward.

Junction with un named cul de sac

Kirkmoor Road leading to Chester Road



Chester Road pedestrian only link

Castle View route to rail station and the town centre underpass.

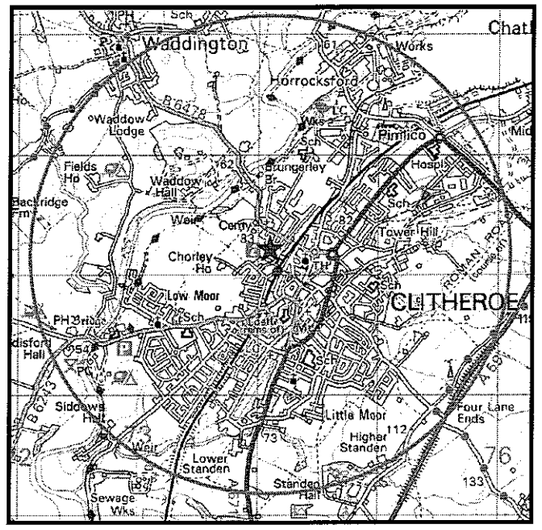
The CIHT report provides guidance about journeys on foot. It does not provide a definitive view on distances, but does suggest a preferred maximum distance of 2000m for walk commuting trips.

This is supported by the now superseded PPG 13 and the National Travel Survey which suggests that most walking distances are within 1.6km thus accepted guidance states that walking is the most important mode of travel at the local level supporting the above statement.

The DfT identify that 78% of walk trips are less than 1km in length, (DfT Transport Statistics GB).

For the key urban areas a 400m desirable distance to bus stops based on urban studies corresponds to a walk time of 5 minutes, based upon typical normal walking speed, the site lies within this distance.

The pedestrian catchment area for the proposed development site extends to cover the neighbouring settlements indicated by the green circle for the 2km distances.



2 km walk catchment

As set out in the amenities section the 0.8 km walk catchment also extends to cover the town centre and employment zone. There are, therefore, significant opportunities for residents to access a range of shopping, employment, leisure, and service facilities on foot.

Additionally the 800m distance covers the full site connecting to the rail station, this gives the residents the best potential to use the rail network for employment trips rather than a car, this supports the local demographics that the town has approx 39% employment to the west/SW and these areas are accessible by train/walk.

Clearly, there is also potential for walking to form part of a longer journey for residents via the bus services. There are existing pedestrian routes in the vicinity of the site that will assist the accessibility of the site for pedestrians.

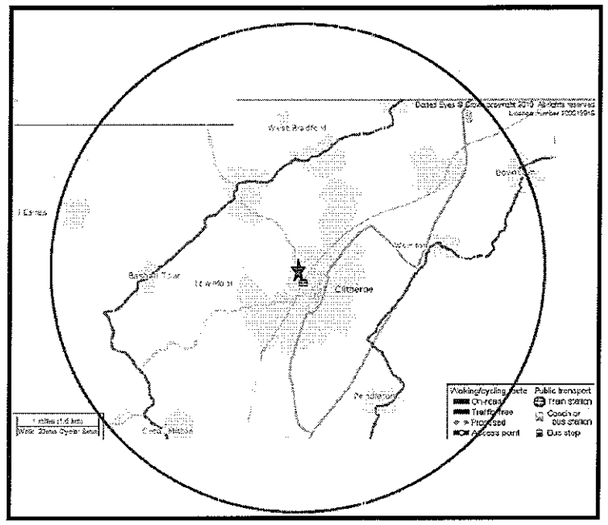
In conclusion, the proposed application site can be considered as being highly accessible on foot.

4.3 Cycling

Historic Guidance and perceived good practice suggests: "Cycling also has potential to substitute for short car trips, particularly those under 5km and to form part of a longer journey by public transport"
The CIHT guidance 'Cycle Friendly Infrastructure' (2004) states that: "Most journeys are short. Three quarters of journeys by all modes are less than five miles (8km) and half under two miles (3.2km) (DOT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person." (para 2.3)

The National Travel Survey NTS (undertaken annually by the DfT) has identified that bicycle use depends on topography, but a mean distance of between 5 – 10 kilometres is considered a reasonable travel distance between home and workplace. For the purposes of this report the national guidance of 5km has been used.

The red circle on the figure below indicates the 5 km distance clearly the 10km distance will cover a substantial area.



5km Cycle Catchment

The plan shows that a number of the smaller adjacent villages are within the 5km cycling distance a journey of around 25 minutes using a leisurely cycle speed of 12 kilometres per hour of the site. The 10km distance would allow cycle connection to the outskirts of Blackburn and Padiham.

Therefore, there are a wide variety of residential areas, schools, shops, and other leisure and service facilities associated with a rural within the cycle catchment area that can be accessed.

In conclusion, the proposed application site can be considered as being highly accessible by cycle.

4.4 Travel by public transport

An effective public transport system is essential in providing good accessibility for large parts of the population to opportunities for work, education, shopping, leisure and healthcare in the town and beyond.

The CIHT 'Guidelines for Planning for Public Transport in Developments' (March 1999) set out that, in considering public transport provision for development, three questions need to be addressed:

'What is the existing situation with respect to public transport provision in and around the development?

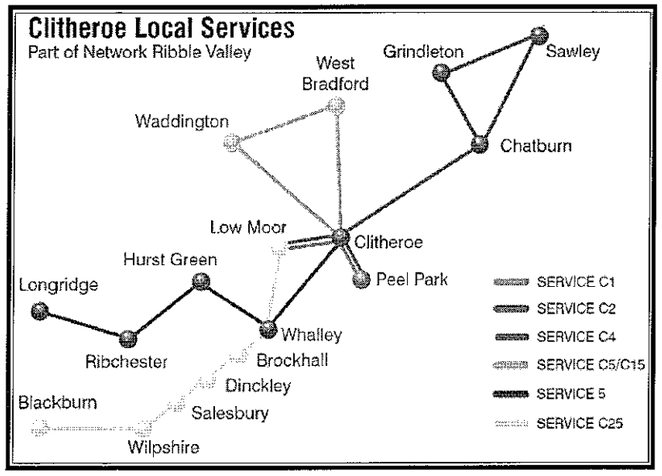
What transport provision is required to ensure that the proposed development meets national and local transport policy objectives?

Are the transport features of the development consistent with the transport policy objectives, and if not, can they be changed to enable the policy objectives to be achieved?" (para 4.18).

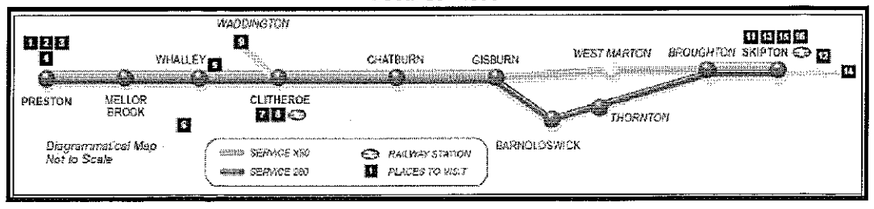
Railway View Road south of the development has the closest bus stops to the site, within the 400m sustainable distances. They have shelters and bus timetable information

Bus station south of the site

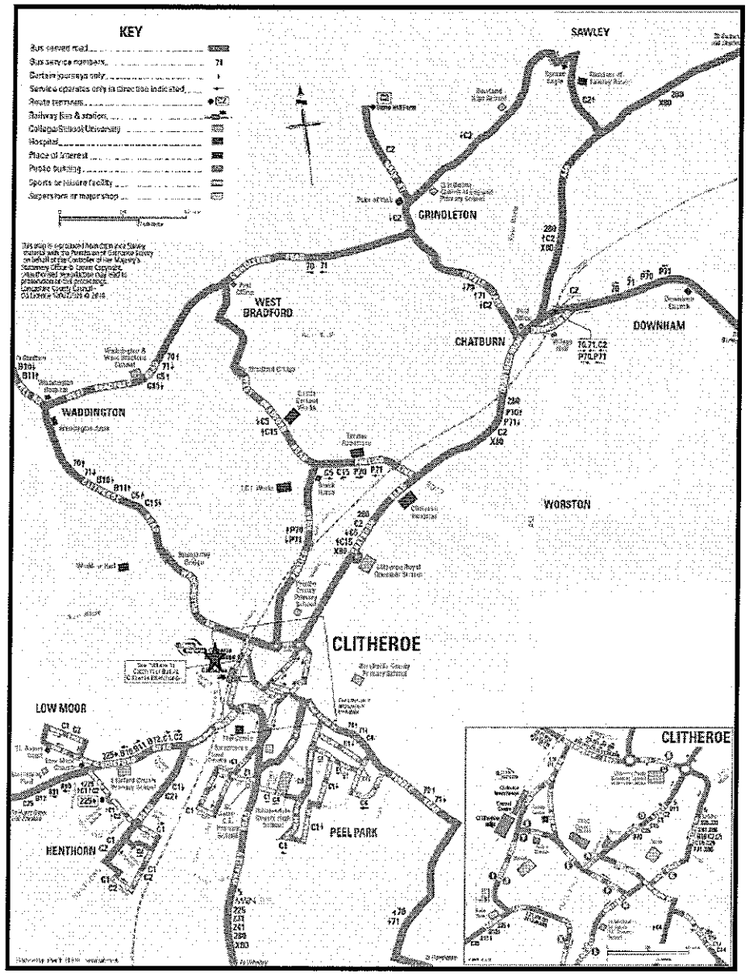
The proposed development site is therefore conveniently located close to bus stops that regularly serve a number of communities in the vicinity of the site. These services provide the opportunity for residents of the proposed development site to travel via public transport.



Local services



East west connections



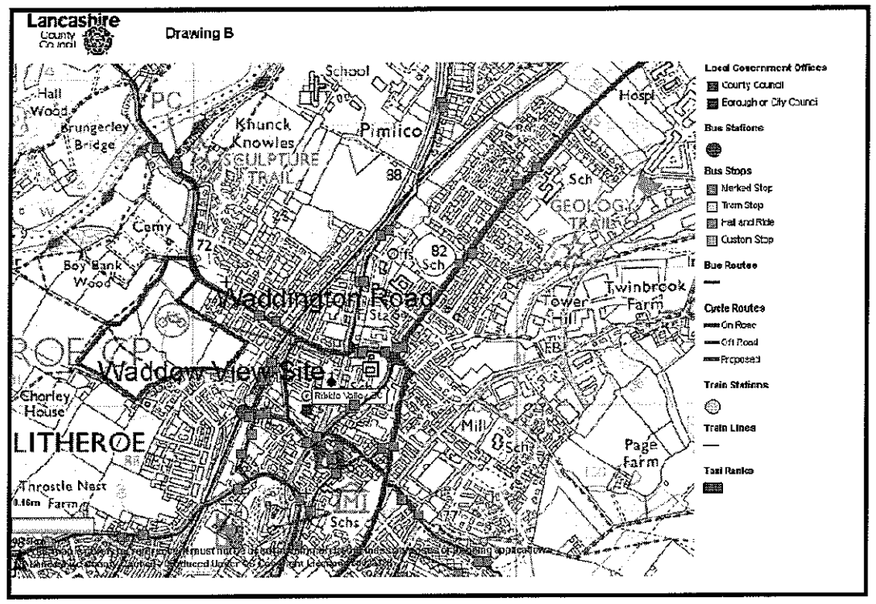
Bus routes

Proposed Buses Only Road for the Waddow View site

A road for buses only is proposed to better connect and integrate the Waddow View site to the public transport network in Clitheroe including the Clitheroe Bus/Rail Interchange and the town centre.

The existing bus and local transport network and its location in relation to the Waddow View site can be seen overleaf. This shows the location of bus stops in Clitheroe and roads that are bus routes such as Waddington Road.

This drawing also shows the close proximity of the Clitheroe Interchange to the Waddow View site.



The north westerly side of the Waddow View site, which adjoins an existing cemetery, provides an opportunity to create a highway connection for a buses only route. This would however be subject to further feasibility work.

Bus Route Option WV1

The suggested route that we have called WV1 would enter the north westerly side of the site via a new junction on Waddington Road, and it would run through the centre of the Waddow View site.

The buses only road would then connect into the existing highway network on Kirkmoor Road which lies on the south easterly side of the Waddow View site. Kirkmoor Road is not currently a bus route however preliminary investigations suggest it is wide enough to accommodate a bus route provided buses operate in one direction only (north to south).

Having left the site the buses could travel along Castle View and then join Parsons Lane, which is an existing bus route. From here the buses could travel directly to Clitheroe Interchange and the Town Centre.

The proposed buses only road through the Waddow View site would create an opportunity to serve the development site and create a bus route that would be located within approximately 250 metres of the residential properties in the Low Hill area of Clitheroe to the south side of the site.

Route Option WV2

An alternative option WV2 for a buses only road would enable buses to enter the site from a new junction off Milton Avenue which is located on the north easterly side of the site and is connected to Waddington Road.

The proposed buses only road route WV2 would connect Milton Avenue with Kirkmoor Road and as per route option WV1 and would connect into the existing highway network Kirkmoor Road.

Route option WV2 would not have as much impact in terms of improving accessibility on the Waddow View site as option WV1 as it only penetrates the south easterly side of the site.

However as with option WV1, option WV2 provides an opportunity for buses to penetrate established residential areas in the Low Hill area of Clitheroe adjoining Kirkmoor Road and Castle View that are not currently bus routes.

Proposed measures to prevent a rat run being created

The introduction of a road through the Waddow View site could create a rat run for local traffic. This would be unacceptable for numerous reasons including environmental and road safety reasons

Therefore it is proposed to introduce appropriate controls that would be designed into the buses only road to ensure it is only used by buses and emergency vehicles.

This would be through the introduction of a bus gate and associated signage and CCTV monitoring equipment.

Discussions and review

Based on the two route options that have been identified preliminary investigations have been undertaken to see what opportunities exist that could enable bus services to be designed and developed to serve the site.

Details of the existing services and network that is currently in operation in Clitheroe can be found in Leaflet 101 which is entitled *Clitheroe Local Services and Pendle Witch Leaflet, Bus Times*. This leaflet is effective from June 2012 and a copy can be found in **Appendix A**.

How the Clitheroe Local Network Is Organised

The network of bus services which exists in Clitheroe has been designed to integrate with Clitheroe interchange. This high quality and award winning facility which is located close to the Waddow View site, was opened in 2002.

The interchange is important and strategic transport hub has been designed in accordance with best practice and like many other similar facilities that have been developed by Lancashire County Council it underpins and promotes integrated and sustainable transport and accords with current central government transport policy and strategies that are being taken forward to promote sustainable transport and Smarter Travel choices.

Tendered Bus Network

The bus services in Leaflet 101 are operated on behalf of Lancashire County Council by three operators; Holmes wood Coaches, Transude Burnley and Pendle and Stagecoach in Lancashire.

What is evident from Leaflet 101 is that the current network of Clitheroe local services are operated under contract by independent bus operators in accordance with service specifications determined by Lancashire County Council.

At this moment in time Holmeswood Coaches operate most of the advertised Clitheroe local services, although this situation is subject to change and depends upon the length of the contracts that have been let by Lancashire Council.

The existence of a subsidised bus network in Clitheroe is not surprising for market town with a predominantly rural hinterland and high levels of private car ownership per head of population.

The situation also provides strong evidence that the provision of bus services that integrate with rail services particularly in medium and small towns like Clitheroe are not commercially viable and rely on subsidy to enable a reasonable and attractive level of service to be provided in the first place.

Informal Consultation with Bus Operators

Holmeswood Coaches, the predominant operator of services at this moment in time, was contacted to canvass the views of this operator in relation to the bus route proposals for the Waddow View site.

Discussions revealed that the operator had no particular views on the proposals for providing a buses only route through the Waddow View site. This is not a surprise in relation to the proposed bus route through the Waddow View site. This is from experience, bus operators work and react to what are essentially short timescales but in this case services operating in Clitheroe are tendered and are determined by Lancashire CC as planning and transport authority.

Opportunities to develop bus services for the Waddow View Site

Based on local knowledge of the site, the surrounding area and the characteristics of the tendered network, consideration of a number of possible opportunities and potential scenarios that could be considered and be developed that could enable regular bus services to serve the Waddow View site using the proposed buses only road.

Presently services 7, 7A and 7B operate along Waddington Road and connect Clitheroe Interchange and Town Centre with the nearby community of Waddington and communities beyond Waddington including Chatburn and Nelson. They are approximately every half hour Monday to Saturday between approximately 06.30 and 19.00.

The current route of services 7, 7A and 7B between Clitheroe and Waddington are as follows:

From Clitheroe Interchange: via Railway Road, Railway View Road, Railway View Avenue, King Street, Market Place, York Street, Well Terrace, ***Waddington Road,*** **WADDINGTON.**

From WADDINGTON: ***Waddington Road,*** Railway View Road, Clitheroe Interchange and Clitheroe Market Place.

Looking at the routeing of these services we believe it is possible to divert in bound buses travelling to Clitheroe from Waddington Road near the cemetery and into the Waddow View site using the proposed buses only road.

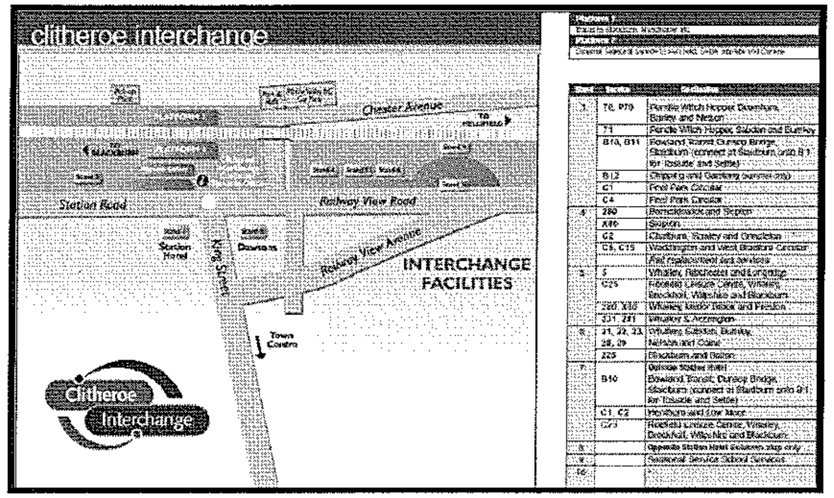
A number of residential development proposals in Clitheroe have received planning approval and also include proposals for bus services and associated infrastructure. For example a proposed development site on land off Henthorn Road to the south west of Clitheroe Town Centre. This could be served by Service 2 which currently operates between Sawley and Low Moor via Clitheroe.

There may be an opportunity to develop a service that could serve both the development site at Henthorn Road and the Waddow View site subject to further bus service planning and associated feasibility work

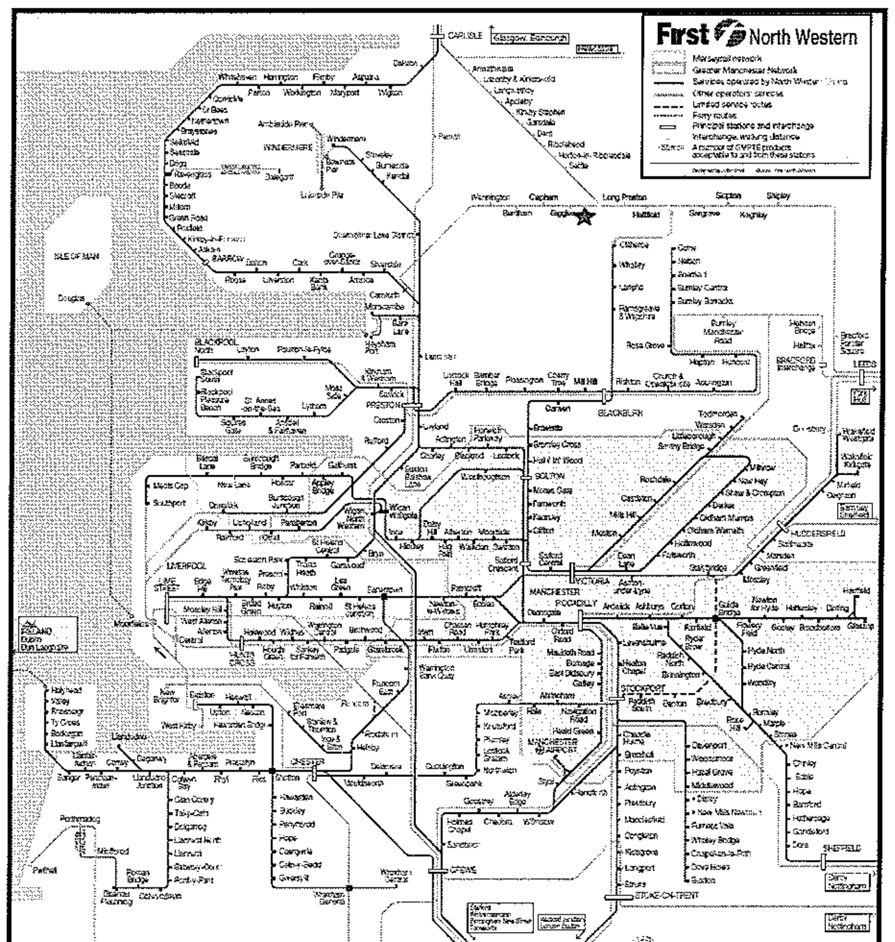
The proposed application site is therefore considered as being highly accessible by bus and there are opportunities to improve the sites bus access credentials.

4.5 Rail

The town has a rail station which provides reasonable connections to the local towns and to the wider NW area.



Interchange details



NW rail map

320120913P

The close proximity of the Waddow View site to the strategically important Clitheroe to Manchester Railway line is of particularly significance in terms of underpinning the attractiveness of this site, its potential for residential development and regeneration, and to help establish a coherent station development zone next to the Clitheroe Interchange.

In the case of railway stations, the LCC design guidelines recommend that a minimum walk distance of 800 metres is generally recognised as being acceptable The PTAL approach however suggests a distance of 960 metres (12 minute walk). The whole site is covered by this distance.

This railway line is the subject of a major investment package tied into a wider economic regeneration strategy for East Lancashire and Greater Manchester as well as parts of West Yorkshire.

A number of enhancements and proposals are proposed for the line that are intended to generate a number of potential impacts with the primary benefits being:

- Improved access to jobs and learning opportunities for local people;
- Employer access to a wider talent pool;
- Tourism uplift; and
- Inward investment.

As part of the strategic Northern Hub rail strategy and initiative it is hoped that the service frequency on this line will be increased in line with the introduction of new rolling stock and other improvements.

Also as part of the proposal to reopen the Todmorden Curve, for which funding has been approved, a new pattern of services is proposed to provide step change access improvements in East Lancashire and Greater Manchester.

The proposed application site is therefore considered as being highly accessible by rail.

Summary

The site is well located in relation to a wide range of local facilities including the Town Centre itself for the walking mode.

The site has easy access to the local network which is a 20mph area and thus safer for cyclist to use, the site has the ability to connect to the two wider cycle routes for work or leisure uses.

It has easy access to bus service that connected it the wider area another employment and leisure opportunities.

It is also in easy walk of the rail station and thus the much wider employment area of Preston, Blackburn, Bolton, Manchester and Burnley.

In summary, therefore, the application site can be considered as being highly accessible by public transport, walking and cycling in accordance with planning policy guidance.

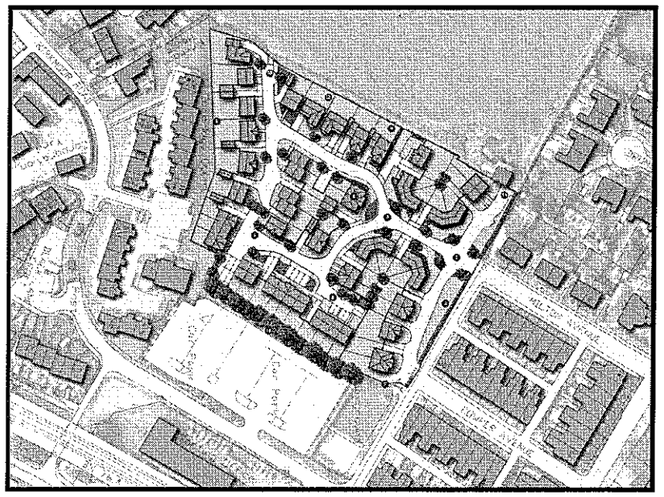
5. MILTON AVENUE DEVELOPMENT

Development Proposals

The scheme is proposed to provide approximately 50 residential units accessed from Milton Avenue using a new link extending the street into the site. This is currently the subject of a planning application and appeal.

Layout

The site layout is illustrated on below (see architect drawing for full details) shows the primary vehicular access to the development will be via a normal priority junction.



PLAN

The layout is in the form of a cul de sac with future extension route preserved for phase 2.

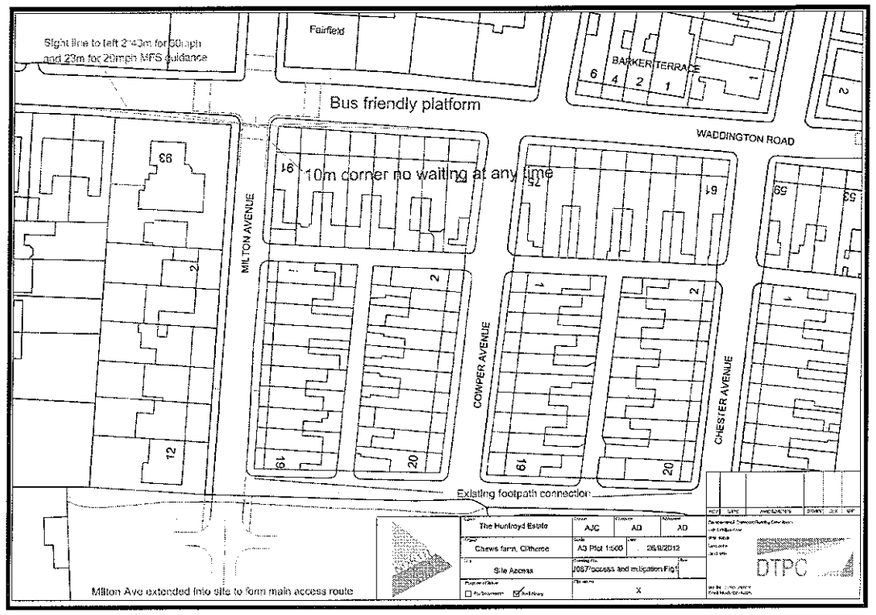
The capacity assessments showed that the site has no issues it is proposed the scheme will provide some mitigation measure which will enhance the local area and assist existing residents in the area to travel by car and non car modes.

Although the capacity assessments show that the site has no issues and the location is highly sustainable it is proposed to provide some mitigation measure which will enhance the local area and assist existing residents in the area to travel by car and non car modes.

The existing site lines can be occasionally constrained by parked cars as such corner protection measures are proposed in order to ensure compliance with the highways code, it is not felt that they are dependent on the scheme but more to rationalise the exiting parking situation.

To assist in the reinforcement of the new 20mph zone a bus friendly platform is suggested again not needed for the scheme but one for wider community benefit that the scheme would derive some benefit from.

These are shown overleaf for completeness.


Sight line to left 2.4m for 30mph and 23m for 20mph MFS guidance
Fairfield
BARKER TERRACE
Bus friendly platform
WADDINGTON ROAD
10m corner no waiting at any time
MILTON AVENUE
COMPER AVENUE
CHESTER AVENUE
Existing footpath connection
Milton Ave extended into site to form main access route
The Hunloyd Estate
Chews farm, Clitheroe
Site Access
AJC
AD
AD
A3 Plot 1:500
26/9/2012
2957access and mitigation Fig1
X
DTPC

6. WADDOW VIEW DEVELOPMENT ACCESS STRATEGY AND PROPOSALS

6.1 Development Proposals and access

The scheme will provide 345 residential units with 220 units and the 50 place nursery accessed from Waddington Road via a new junction and 125 units accessed from Castle View/Kirkmoor Road route via an extended route/road.

The site will also connect to the proposed 50 unit site accessed from Milton Avenue using a new link extending the street into the site.

The rational for the access strategy is based on the review of the local routes and the emerging masterplan to provide an integrated site.

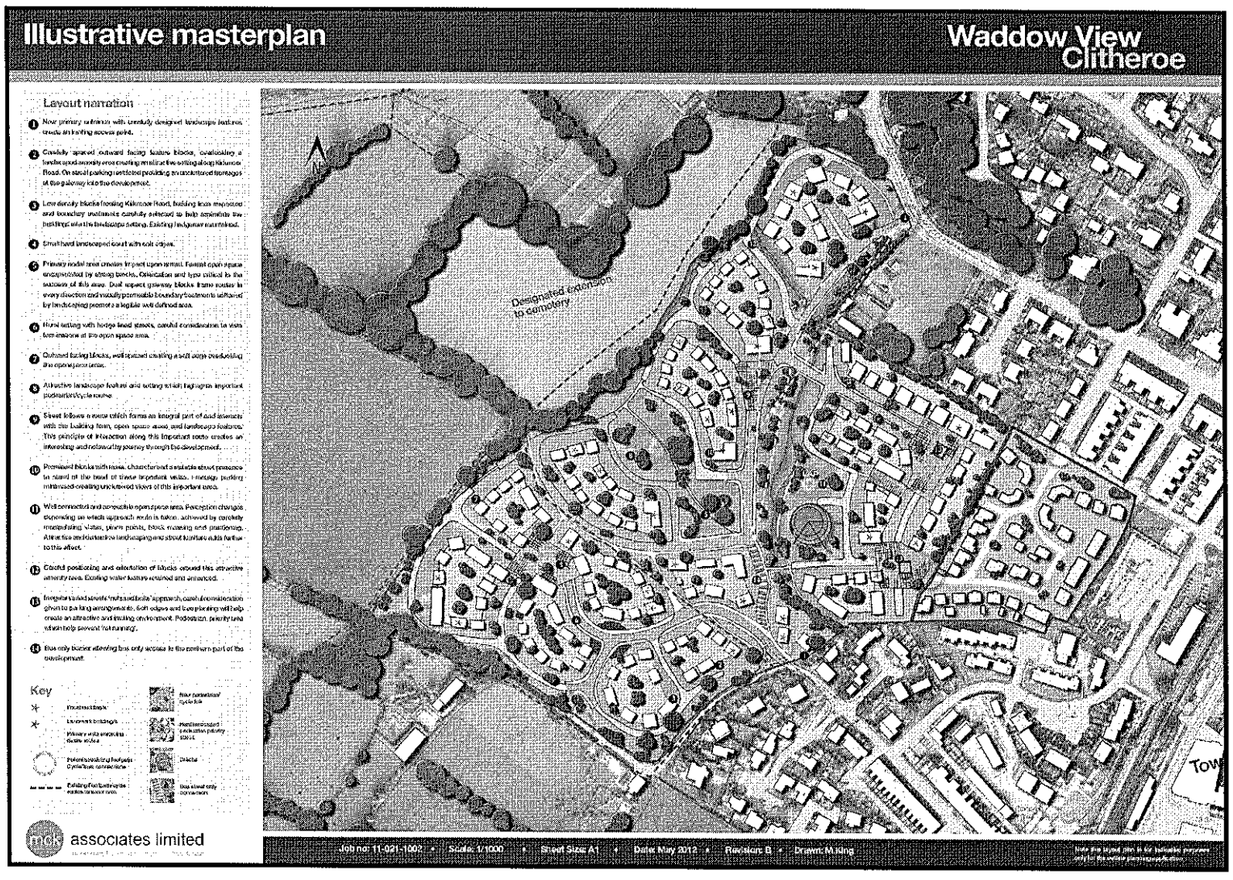
The key principles are to access the majority of the site from Waddington road as part of the main road network, reduce/deter access onto Milton Avenue by designing a longer more tortuous route with urban squires and homezone, access a third of the site off Kirkmoor Road.

The proposed bus gate also forms a key route for emergency services, walking and cycling to integrate the site for non car modes and thus provide a level of control over the car movements.

Non car modes are catered for the new routes and in addition separate routes into the town centre.

The illustrative masterplan set out overleaf and in the figures section is based on the context above.

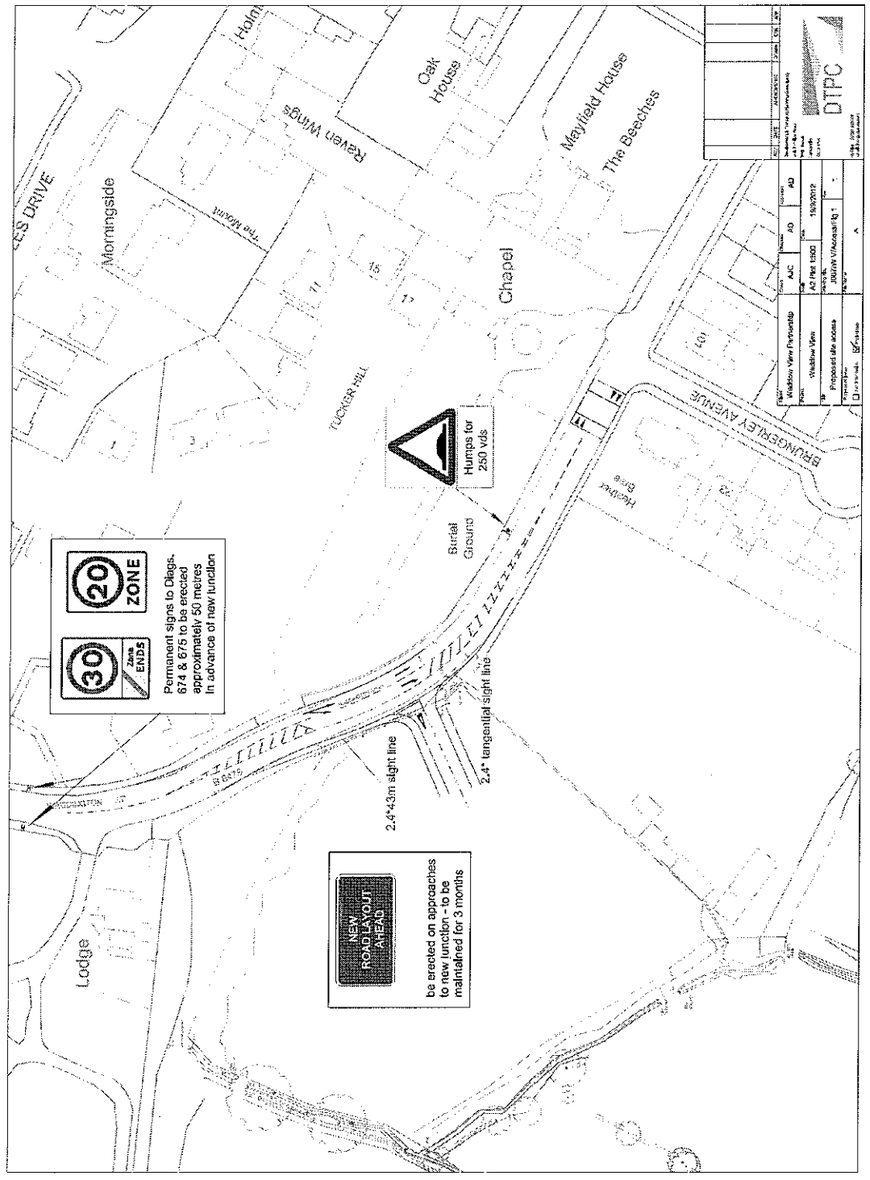
The two site access points are also provided for reference.



6.2 Waddington road

The access will take the form of a priority junction with right turn ghost island to form a gateway into the town.

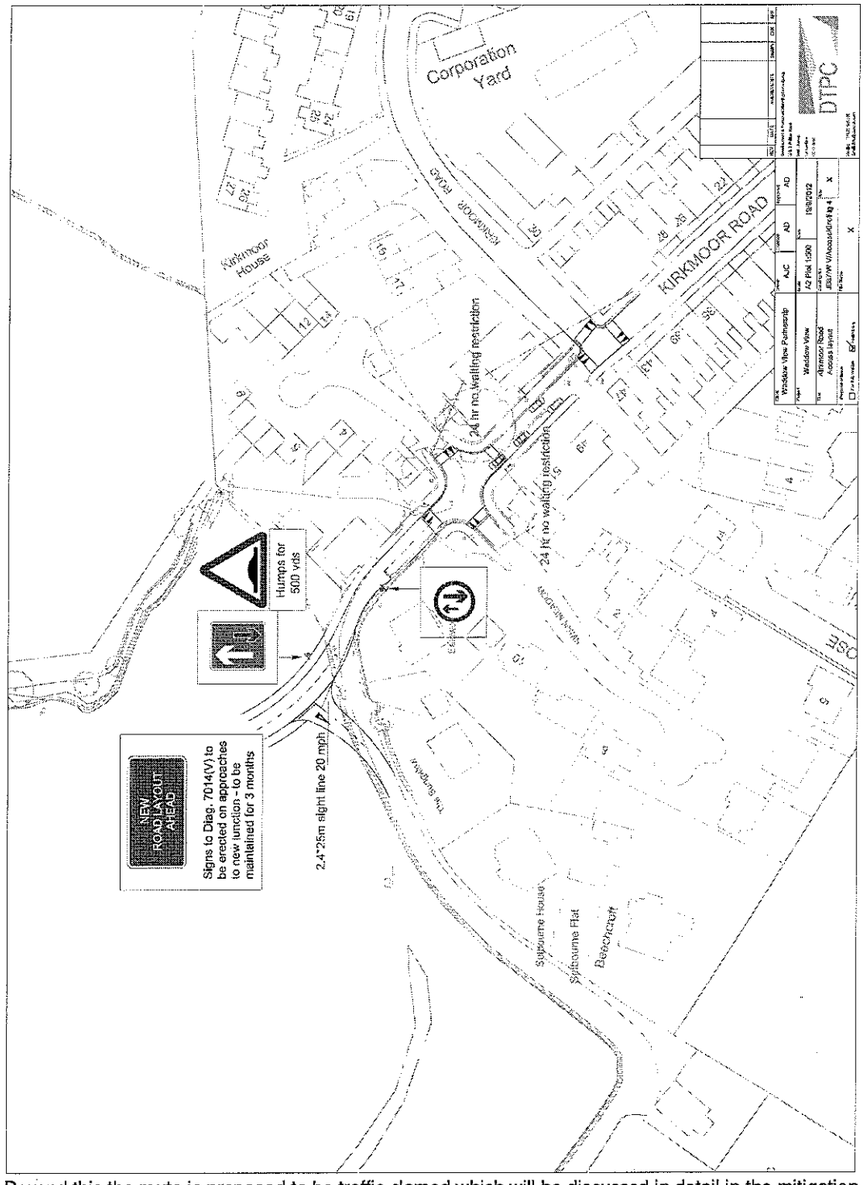
The 20mph zone will be extended passed the access to cover the cemetery area as well. Sight lines are set out for a 20mph road but the 43m needed for a 30mph speed can also be easily achieved.



The route will also be calmed by the provision of cycle/bus friendly humps/platforms to reinforce the 20mph speed limit to the benefit of the wider community.

6.3 Kirkmoor Road

The connection into the site would be along the narrow section of the route. A shuttle arrangement with the exiting vehicles having priority has been designed; this enables a footpath to be provided on the east side for the full length of the route. The unmade track is connected by an improved junction arrangement with sight lines accommodating the 20 mph local speed.



Beyond this the route is proposed to be traffic clamed which will be discussed in detail in the mitigation section.

7. TRIP GENERATION, TRAFFIC FLOWS AND ASSESSMENTS

Introduction

The Waddow View development consists of 335 residential dwellings and a 50 place nursery. It is likely that the 220 residential dwellings and the 50 place Nursery will be accessed from Waddington Road i.e. to the west of the Milton Road / Waddington Road crossroad junction via a new ghost island T junction.

The remaining 125 residential dwellings will be accessed via Castle View which is located to the south.

A sensitivity test of accommodating 75 dwellings at the Milton Avenue access i.e. Phase 1 instead of the Waddington Road access has also been undertaken below.

In consultation with the Highway Authority a study network has been defined as well as committed development, which has been taken account of in assessment work below. The study network will be assessed in 2012, i.e. the application year and 2017, i.e. 5 years post application year which is in line with the Department for Transport's guidance on assessing new development.

7.1 Background

In August 2010 Ashley Helme Associates (AHA) produced a Transport Assessment which promoted the development of 270 residential dwellings on vacant land located off Henthorn Road. This site is located to the south west of the town centre. Following an Appeal this development site and the supporting Transport Assessment was accepted and approved. The Highway Authority have requested that key junctions that formed part of this review, as well as other junctions not assessed / reviewed by AHA, form the basis of the study network being considered. The study network is as follows:

The junctions that have been identified from the above report are as follow:

Junction	Name	Type of Junction
1.	Corporation Street / Bawdlands	Priority T
2.	Thorn Street / Corporation Street / Eshton Terrace	Priority T
3.	Eshton Terrace / Woone Lane / Greenacre Street	Crossroad
4.	Whalley Road / Greenacre Street	Priority T
5.	Whalley Road / Queensway	Mini Roundabout
6.	Woone Lane / Whalley Road / Moor Lane	Mini Roundabout

In addition to the above junctions the additional junctions also form part of the study network:

7.	Castle View / Bawdlands / Parsons Lane	Priority T
8.	Waterloo Road / Shawbridge Street	Mini Roundabout
9.	Well Terrace / Chatburn Road / Waterloo Road	Roundabout
10.	Railway View Road / Waddington Road	Priority T
11.	Chester Avenue / Park Avenue / Waddington Road	Crossroad
12.	Milton Avenue / Eastham Street / Waddington Road	Crossroad
13.	Waddington Road / Site Access	Ghost Island

These junctions are detailed on Figure 0 for reference purposes. These and subsequently derived traffic flows figures are contained in Appendix B

The Highway Authority has requested that the traffic flows for junctions 3 through to 7 be taken from the AHA Transport Assessment. Junctions 1 and 2 were not directly surveyed by the AHA report however it has been possible to define traffic flows for these junctions through interpolation of the AHA data.

The Milton Avenue development, i.e. 50 residential dwellings located off Milton Avenue, reviewed junctions 10, 11 and 12 therefore the agreed surveyed flows for these junctions are known. Flows for junction 13 can be derived utilising flows to and from junction 12. The remaining junctions, i.e. 7, 8 and 9, were surveyed in September and October 2012. Appendix C contains the surveyed flows, i.e. an extract from the AHA Transport Assessment, an extract from the Phase 1 Residential Development Transport Assessment and the survey data for junctions 7,8 and 9.

7.2 Determining Base Flows

Commonality between the source survey data is required to establish base flows. The AHA survey data is dated 2010 and was recorded in passenger Car Units (PCUs). The DTPC data previously used, as part of the Phase 1 development, was defined in vehicles and percentage of HGVs. These flows were accepted by the Highway Authority as being representative of 2012 surveyed flows on the study network.

Figures 1 and 2 detail the Milton Avenue accepted 2012 flows for the AM and PM peaks respectively. Figures 3 and 4 detail the recently (September and October 2012) surveyed flows for three junctions on the study network for the AM and PM peaks respectively. Figures 5 and 6 detail the AHA 2010 surveyed flows for the remainder of the study network for the AM and PM peaks respectively. All of these flows are in PCUs.

Figures 7 and 8 detail the AHA flows factored to 2012 using Tempro growth factors (detailed later in this report) for the AM and PM peaks respectively. Figures 9 and 10 detail 2012 flows on the network for the AM and PM peaks respectively.

Please note that a section on growth factors and distribution is provided later within this report.

The above flows do not at this stage represent the base flows for the study network as the Highway Authority have requested that the following committed development be taken account of:

- The 270 unit residential dwellings as promoted within the AHA report – Figures 13 and 14
- The 170 unit residential development located off Primrose Avenue as noted within the AHA report as committed – Figures 15 and 16
- A recently approved (Ref 320120014P) 30 unit residential development located off Union Street, to the west of the town centre – Figures 17 and 18.

With regard to the Union Street development, no traffic data is available for these dwellings therefore an assessment of the likely trips that would be generated and there assignment onto the study network has been undertaken.

In addition it has also been considered that the Milton Avenue, i.e. 50 unit residential development, located off Milton Avenue is committed and therefore needs to be taken account of to form the base flows for the study network. It should be noted that these flows have been assessed from first principles, in terms of traffic generation and distribution, in line with the Union Street, Henthorn Road and Phase 2 developments.

Appendix C contains figure extracts from the AHA report detailing the Primrose Avenue and Henthorn Road trip generation.

7.3 Trip Rates and Distribution

The AHA promoted the following trip rates within their report to define the trip generation for the 270 unit residential dwelling development located off Henthorn Road.

The trip rates as promoted by the Milton Avenue development were similar.

However given that the trip rates in Table 1 have been accepted by the Local Planning and Highway Authorities as being representative and accepted at inquiry, these have been used to define the Milton Avenue, Waddow View and the Union Street development trips.

Peak Period	Arr	Dep	Tot
AM	0.14 (0.173)	0 445 (0.331)	0.585 (0.504)
PM	0.437 (0.363)	0 226 (0.261)	0.663 (0.624)

Table 1: Agreed Trip Rates

As a secondary check on the trip rates the Castle View Survey has ben used to provide the figures in red.

These clearly show that the agreed rates are higher than the locally dervived trip rates and thus the reviewed based on the higher trip rates can be considered robust.

The proposed development also includes a Nursery. The TRICs database has been interrogated to obtain representative Nursery trip rates. Table 2 summarises the Nursery trip rates. Appendix D contains the TRICs output plus an extract from the AHA report detailing the agreed residential trip rates.

Give the access strategy highlighted at the beginning of the chapter, the number of trips to and from each access is details in Table 2 below.

Development	Access	Trips			
		AM Peak		PM Peak	
		Arr	Dep	Arr	Dep
125 Residential Dwellings	Castle View	18	56	55	28
220 Residential Dwellings	Waddington Road	31	98	96	50
50 Place Nursery	Waddington Road	14	12	11	12

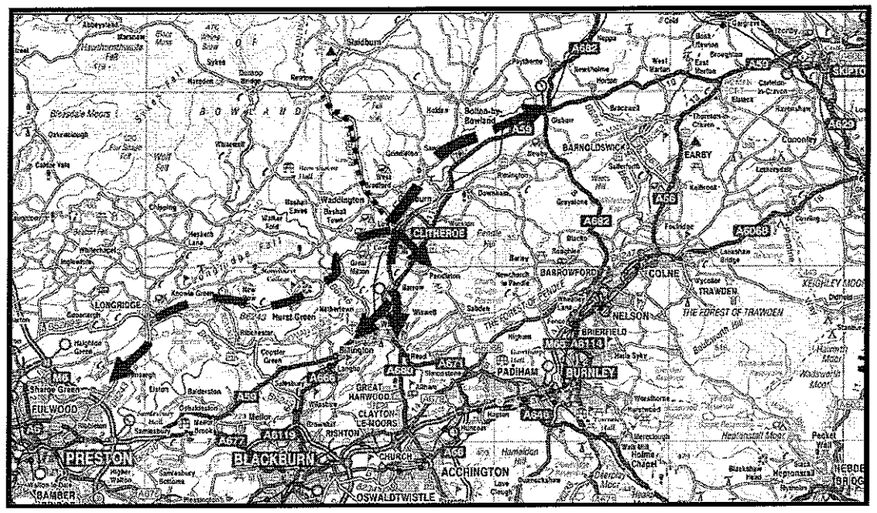
Table 2: Development Trips

The committed development trips, i.e. Milton Avenue 50 residential dwellings located off Milton Avenue and the 30 residential dwellings located of Union Street are detailed in Table 3 below.

Development	Access	Trips			
		AM Peak		PM Peak	
		Arr	Dep	Arr	Dep
50 Residential Dwellings	Milton Avenue	7	22	22	11
30 Residential Dwellings	Union Street	4	13	13	7

Table 3: Committed Development Trips

In order to estimate the likely distribution of traffic to and from the development sites an understanding of the total Clitheroe inbound and outbound flows has been undertaken.



The main attractions and routes are shown above for the review which are summarised in Table 4 below.

Direction	Cordon Point	AM	PM	AM	PM
Outbound from Clitheroe	Waddington Road	135	291	7.1%	13.8%
	A671 Chatburn Road Out	501	536	26.4%	25.4%
	Shawbridge Road	357	401	18.8%	19.0%
	A671 Whalley Road	635	601	33.5%	28.5%
	Bawdlands Out*	269	282	14.2%	13.4%
	Total Out	1897	2111	100%	100%
Inbound to Clitheroe	Waddington Road	216	242	10.3%	10.8%
	A671 Chatburn Road Out	515	503	24.6%	22.3%
	Shawbridge Road	382	350	18.3%	15.5%
	A671 Whalley Road	729	902	34.9%	40.1%
	Bawdlands Out*	248	254	11.9%	11.3%
	Total in	2090	2251	100%	100%

*Taken from AHA Report

Table 4: Clitheroe Inbound and Outbound Flows

Utilising the percentage distribution above an assignment model was created and depicted by the summary provided in the Tables 5 and 6 below.

	Origin / Destination	AM	PM	Comment
Depart	Waddington Road	7%	14%	Via Parson Road, Station Road, Railway View Road Waddington View Road
	Chatburn Road via Town Centre	13%	13%	50% of the Distribution for Chatburn Road is taken via Parson Road Station Road, Railway View Road, Well Terrace
	Chat Burn Road via Eshton Terrace	13%	13%	50% of the Distribution for Chatburn Road is taken via Eshton Terrace, Woone Lane, Moor Lane, Queensway, Waterloo Road
	Shawbridge Road	19%	19%	Via Eshton Terrace, Woone Lane, Moor Lane, Queensway
	A671 Whalley Road	34%	29%	Via Corporation Street, Eshton Terrace then split at Primrose Ave Woone Lane Jnt with existing movements
	Bawdlands	14%	13%	Right out of Castle View

Arrive	Waddington Road	10%	11%	Via Parson Road Station Road, Railway View Road, Waddington View Road
	Chatburn Road	25%	22%	Split in accordance with Movements from A671 Chatburn North Those turning right will travel via Railway View Road, Station Road Parsons Lane. The remainder will travel via Waterloo Road, Queensway. At the junction of Queensway 25% of the remainder will travel south to the Greenacre Road / Whalley Road jnt where it will travel via Eshton Terrace, Corporation Street to turn left into Castle View. The 75% remainder will turn right to Moor Lane and eventually turn right into Castle View from Parsons Lane
	Shawbridge Road	18%	16%	At the junction of Queensway 25% of the traffic will travel south to the Greenacre Road / Whalley Road junction where it will travel via Eshton Terrace to turn left into Castle View. The 75% remainder will turn right to Moor Lane and eventually turn right into Castle View from Parson Lane
	A671 Whalley Road	35%	40%	Via Eshton Terrace to turn Left in Castle view
	Bawdlands	12%	11%	Left into Castle View

Table 3: Castle View Access Development Traffic Routing

	Origin / Destination	AM	PM	Comment
Depart	Waddington Road	7%	14%	Left out of the Site
	Chatburn Road	26%	25%	Via Well Terrace
	Shawbridge Road	19%	19%	Via Well Terrace, Waterloo Road
	A671 Whalley Road	34%	29%	80% travels via Well Terrace, Waterloo Road, Queensway, Whalley Road The remainder travels via Railway View Road, Parson Lane corporation Street, Eshton Terrace and Primrose Avenue.
	Bawdlands	14%	13%	Via Railway View Road, Parsons Lane
Arrive	Waddington Road	10.3%	10.8%	Right Into the site
	Chatburn Road	24.6%	22.3%	Via Well Terrace
	Shawbridge Road	18.3%	15.5%	Via Well Terrace, Waterloo Road
	A671 Whalley Road	34 9%	40.1%	Split in accordance with existing movements at the Queensway / Moor Lane junction. Ahead movement via Parson Lane, Station Road, Railway View Road Waddington Road. Right Movements via Queensway, Waterloo Road, Waddington Road
	Bawdlands	11.9%	11.3%	Via Station Road, Railway View Road, Waddington Road

Table 4: Waddington Road Access Development Traffic Routing

Utilising the above routing methodology, Figures 25 and 26 detail the Castle View distribution for the AM and PM peaks respectively, whilst the Waddington Road AM and PM peaks distribution is detailed on Figures 27 and 28.

The distributions in these figure combined with the trips in Tables 2 and 3 above have been used as the basis of the aforementioned Figures 17 and 18, i.e. Union Street committed development trips and Figures 19 and 20 – Milton Avenue committed development trips for the AM and PM peaks respectively.

7.4 Growth Rates

In order to growth 2010 survey data to 2012 and to assess the capacity of the junctions in a future year 2017, i.e. 5 years post application year, growth rates for the weekday AM and PM Peaks have been obtained from the TEMPRO V6.2 program. TEMPRO utilises National Trip End Model (NTEM) 6.2 dataset and National Trip Model (NTM) Annual Forecasts (AF) 09

As of the 19 July 2011 the Department of Transport reaffirmed the use of the aforementioned dataset and AF09 in a circular email update.

Level Area		2010 to 2012		2012 to 2017	
		AM	PM	AM	PM
Region	NW	1.0081	1.0089	1.0445	1.0446
County	Lancashire	1.0072	1.0080	1.0394	1.0398
Authority	Ribble Valley	1.0113	1.0125	1.0455	1.0473
30UL2	Clitheroe	1.0108	1.0122	1.0450	1.0468

Table 5: Tempro Growth Rates

Clitheroe growth rates have been used in the assessment work undertaken.

Utilising the above growth rates the 2012 surveyed flows as shown in Figures 9 and 10 have been growthed to represent a future year of 2017. Figures 11 and 12 detail 2017 representative survey flows for the AM and PM peaks respectively.

7.5 Base Flows

Figures 21 and 22 detail the 2012 base flows for the AM and PM peaks respectively. These have been derived by combining Figures 9,15,17 & 19 together and 10, 16, 18 & 20 together. Similarly the 2017 base flows i.e. Figures 23 and 24, have been derived by substituting Figure 9 with 11 and Figure 10 with 12.

7.6 Development Flows

Utilising Figures 25, 26, 27 and 28 and the trips in Table 2 the development flows have been assigned to the study network. Figures 29 and 30 detail the Waddow View development trips on the study network for the AM and PM peaks respectively.

2012 & 2017 Base Plus Development Flows

Figures 33 and 34 detail the 2012 base plus development flows for the AM and PM peaks respectively. These have been derived by combining Figures 21 & 29 together and Figure 22 and 30 together. Similarly the 2017 base plus development flows i.e. Figures 34 and 35, have been derived by substituting Figure 21 with 23 and Figure 22 with 24.

Sensitivity Flows

A sensitivity test will be undertaken at the Milton Avenue Crossroad junction where it is proposed to accommodate an addition 75 residential dwellings from Milton Avenue. The sensitivity flows are detailed on Figures 37 and 38

7.7 Traffic Analysis

The Transport Research Laboratory modelling software PICADY, ARCADY and OSCADY Pro has been used to assess the operation of the junctions on the study network.

For PICADY and ARCADY RFC values between 0.00 and 0.85 are generally accepted as representing stable operating conditions, values between 0.85 and unity represent variable operation (i.e., possible queue building up at the junction during the period under consideration and increases in vehicle delay moving through the junction). RFC values in excess of unity can represent overloaded conditions (i.e., congested conditions).

In the case of Traffic Signals, the OSCADY program the ratio of flow to capacity is expressed in degrees of saturation (DoS) in percentage units. An acceptable threshold at Traffic Signal junctions is normally taken to be 90% wit figures over 100% reflecting congested conditions and unstable flows.

Generally the aim will be to test all junctions utilising the 2012 & 2017 base flows and the 2012 & 2017 base + development flows. However if a junction is predicted to operated with an RFC of 0.5 or lower when the 2017 base + development flows are used to assess the junction then only these results will be reported as it is considered that the fluctuation in the performance of the junction will be minimal.

It will be demonstrated within this section of work that Junction 7 - Castle View / Bawdlands / Parsons Lane priority T junction can accommodate the proposed development traffic with ample spare capacity however this junction will be upgraded to a signalised junction which will remove turning movement conflicts at the compact junction which is a safety enhancement. Given this, only the 2017 base + development flows will be tested using PICADY.

OSCADY Pro will be used to test all flow scenarios at the junction. Drawing J087/WV/Bawdlands/Fig 6 details the proposed junction improvement and is provide in the figures section.

To accommodate development traffic Junction 5 – Whalley Road/Queensway minroundabout junction will be improved to 2 lane entries. The junction will be tested using ARCADY with all flow scenarios 2017 base + development flows. Drawing J087/WV/WhalleyQueen/Fig 10 details the proposed junction improvement.

It will be demonstrated that Junction 8 - Waterloo Road / Shawbridge Street mini roundabout will require improvement to accommodate 2017 base traffic flows, which should have been provided by approved committed developments in the area. This notwithstanding a signalisation scheme at the junction has been shown to accommodate the base flows and the proposed development. The scheme also incorporates a signalised crossing point located to the south of the mini roundabout. Drawing J087/WV/ShawOptions/Fig 9 details the proposed junction improvement.

To accommodate development traffic Junction 11 - Railway View Road / Waddington Roadpriority T junction will be improved to a mini roundabout. The junction will be tested using PICADY with all flow scenarios and as a mini roundabout using ARCADY and 2017 base + development flows. Drawing J087/WV/Waddrd-RailV/Fig 7 details the proposed junction improvement.

As noted in the introduction of this chapter a sensitivity test will be undertaken on Junction 12 - Milton Avenue / Eastham Street / Waddington Road crossroad junction to determine if it could accommodate an additional 75 residential dwellings on top of the 50 residential dwellings. The additional dwellings would be transferred from new Waddington Road ghost island junction. Given this only the crossroad junction will be subject to the sensitivity test as upstream and downstream junctions will have already been tested either robustly or with the correct quantum of development trip travelling through it.

All PICADY outputs are contained in Appendix E all ARCADY outputs are contained in Appendix F and all OSCADY Pro outputs are contained in Appendix 6 **G**

Junction 1 Corporation Street / Bawdlands Priority T Junction

Table 6 summarises the PICADY results for the Corporation Street / Bawdlands Priority T Junction. Arm A is Bawdlands E, Arm B is Corporation Street and Arm C is Bawdlands W.

Movement	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-AC	0.5	1	0.32	1
C-AB	0.02	0	0.02	0

Table 6: Corporation Street / Bawdlands Priority T Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Junction 2 - Thorn Street / Corporation Street / Eshton Terrace Priority T Junction

Table 7 summarises the PICADY results for the Thorn Street / Corporation Street / Eshton Terrace priority T junction. Arm A is Thorn Street, Arm B is Corporation Street and Arm C Eshton Terrace.

Movement	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-AC	0.18	0	0.31	0
C-AB	0.31	1	0.18	0

Table 7: Thorn Street / Corporation Street / Eshton Terrace Priority T Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Junction 3 - Eshton Terrace / Woone Lane / Greenacre Street Crossroad Junction

Table 8 summarises the PICADY results for the Eshton Terrace / Woone Lane / Greenacre Street crossroad junction. Arm A is Greenacre Street, Arm B is Primrose Avenue, Arm C Eshton Terrace and Arm D Is Woone Lane.

Movement	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-ACD	0.263	0	0.226	0
A-D	0.139	0	0.089	0
D-ABC	0.056	0	0.179	0
C-B	0.227	0	0.201	0

Table 8: Eshton Terrace / Woone Lane / Greenacre Street Crossroad Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Junction 4 - Whalley Road / Greenacre Street Priority T Junction

Table 9 summarises the PICADY results for the Whalley Road / Woone Lane priority T junction. Arm A is Whalley Road S, Arm B is Greenacre Street and Arm C Whalley Road N.

Movement	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-ACD	0.263	0	0.226	0
A-D	0.139	0	0.089	0
D-ABC	0.056	0	0.179	0
C-B	0.227	0	0.201	0

Table 9: Whalley Road / Greenacre Street Priority T Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Junction 5 - Whalley Road / Queensway Mini Roundabout Junction

Table 10 summarises the ARCADY results for the Whalley Road / Queensway mini roundabout junction. Arm A is Whalley Road N, Arm B is Queensway and Arm C is Whaley Road S.

Arm	2012 AM Base		2012 PM Base		2017 AM Base		2017 PM Base	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.775	3	0.746	3	0.815	4	0.785	4
B	0.59	1	0.874	6	0.627	2	0.933	10
C	0.513	1	0.498	1	0.536	1	0.521	1

Arm	2012 AM Base + Dev		2012 PM Base + Dev		2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.828	4	0.776	3	0.869	6	0.816	4
B	0.66	2	0.929	10	0.7	2	0.989	17
C	0.53	1	0.549	1	0.553	1	0.572	1

Table 10: Whalley Road / Queensway Mini Roundabout Junction ARCADY Results

As it can be seen from the above table the junction is predicted to operate with an RFC of 0.989 on Queensway with a corresponding queue of 17 vehicles. A proposal to widen the entries onto the mini roundabout to improve its capacity is being promoted. Table 11 details the ARCADY results for these improvements.

Arm	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
A	0.704	2	0.654	2
B	0.521	1	0.734	3
C	0.431	1	0.439	1

Table 11: Whalley Road / Queensway Mini Roundabout Junction with Improvements ARCADY Results

As it can be seen from the above table the proposed junction improvements will be able to accommodate the proposed development with spare capacity.

Junction 6 - Woone Lane / Whalley Road / Moor Lane Mini Roundabout Junction

Table 12 summarises the ARCADY results for the Woone Lane / Whalley Road / Moor Lane mini roundabout junction. Arm A is Moor Lane / Lowergate, Arm B is Moor Lane and Arm C is Woone Lane

Arm	2012 AM Base		2012 PM Base		2017 AM Base		2017 PM Base	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.525	1	0.497	1	0.556	1	0.526	1
B	0.490	1	0.579	1	0.513	1	0.607	2
C	0.715	2	0.583	1	0.760	3	0.624	2

Arm	2012 AM Base + Dev		2012 PM Base + Dev		2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.543	1	0.504	1	0.576	1	0.534	1
B	0.508	1	0.639	2	0.531	1	0.667	2
C	0.778	3	0.640	2	0.825	4	0.686	2

Table 12: Woone Lane / Whalley Road / Moor Lane Mini Roundabout Junction ARCADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with spare capacity.

Junction 7 - Castle View / Bawdlands / Parsons Lane Priority T Junction

Table 13 summarises the PICADY results for the Castle View / Bawdlands / Parsons Lane priority T junction. Arm A is Bawdlands, Arm B is Castle View and Arm C is Parsons Lanes.

Movement	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-AC	0.451	1	0.330	1
C-AB	0.091	0	0.236	0

Table 13: Castle View / Bawdlands / Parsons Lane Priority T Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity. However as noted at the start of this section, this junction will be signalised for safety reasons, i.e. removal of conflicting movements.

Table 14 details the OSCADY Pro Results for the proposed signalled junction. It is proposed to allow the main arm movement to run together with the side arm in a separate stage.

Arm	2012 AM Base		2012 PM Base		2017 AM Base		2017 PM Base	
	DoS %	Q	DoS %	Q	DoS %	Q	DoS %	Q
Parsons Lane	82.77	5.74	88.66	10.42	86.4	6.8	87.7	10.5
Castle View	27.62	0.9	27.14	0.91	28.84	0.94	29.97	1.03
Bawdlands	85.32	7.37	86.08	7.71	88.69	8.77	87.08	8.48
Cycle Time	41		49		41		52	

Arm	2012 AM Base + Dev		2012 PM Base + Dev		2017 AM Base + Dev		2017 PM Base + Dev	
	DoS %	Q	DoS %	Q	DoS %	Q	DoS %	Q
1	83.24	6.18	89.36	11.43	88.63	8.07	88.9	11.73
2	45.89	1.66	40.08	1.45	48.27	1.79	43.63	1.63
3	88.41	8.64	86.16	8.13	85.88	7.93	87.42	9.01
Cycle Time	42		52		43		55	

Table 14: Castle View / Bawdlands / Parsons Lane Signalised Junction OSCADY Pro Results

Given that a cycle time of 120 seconds should not be exceeded, it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with little or no change to the capacity or queues from the base case.

Junction 8 - Waterloo Road / Shawbridge Street Mini Roundabout Junction

Table 15 summarises the ARCADY results for the Waterloo Road / Shawbridge Street mini roundabout junction. Arm A is Shawbridge Street, Arm B is Queensway S and Arm C is Queensway N.

Arm	2012 AM Base			2012 PM Base			2017 AM Base			2017 PM Base		
	RFC	Q	Delay	RFC	Q	Delay	RFC	Q	Delay	RFC	Q	Delay
A	0.808	4	0.574	0.874	6	0.915	0.858	5	0.747	0.917	8	1.179
B	0.313	1	0.066	0.291	0	0.06	0.331	1	0.069	0.307	0	0.062
C	0.906	8	0.658	1.061	38	2.419	0.948	12	0.931	1.112	58	3.442

Arm	2012 AM Base + Dev			2012 PM Base + Dev			2017 AM Base + Dev			2017 PM Base + Dev		
	RFC	Q	Delay	RFC	Q	Delay	RFC	Q	Delay	RFC	Q	Delay
A	0.857	5	0.747	0.95	10	1.455	0.9	7	0.967	0.99	14	1.9
B	0.338	1	0.069	0.318	1	0.064	0.356	1	0.072	0.335	1	0.066
C	0.994	19	1.389	1.114	59	3.492	1.036	30	1.994	1.166	81	4.68

Table 15: Waterloo Road / Shawbridge Street Mini Roundabout Junction ARCADY Results

The above junction is predicted to operate with increasing capacity issues with base flows and significant queues with development traffic.

However the main road is disadvantaged by the Shawbridge route, as such an improved mini roundabout has been tested.

Arm	2017 AM Base + Dev With Improvements			2017 PM Base + Dev with Improvements		
	RFC	Q	Delay	RFC	Q	Delay
A	0.75	3	0.4	0.76	3	0.42
B	0.42	1	0.09	0.39	1	0.08
C	0.93	10	0.72	1.05	38	2.15

Table 15A: Waterloo Road / Shawbridge Street Improved Mini Roundabout Junction ARCADY Results

Even though the RFC in the peak period exceeds 1 the improvements clearly accommodate the development flows and reduce the queues on the northerly arm to less than the 2017 base with committed.

In order to balance the queues it is proposed to test a signalise this junction, this is for information only. It is proposed to allow the main arm movement to run together with the side arm in a separate stage.

A third stage will be incorporated to allow pedestrians to cross the road. This stage incorporates the signalised crossing that currently exists to the south of the junction.

Arm	2017 AM Base + Dev		2017 PM Base + Dev	
	DoS %	Q	DoS %	Q
Shawbridge Street	88.41	13.97	89.66	15.14
Waterloo Road N	76.8	13.88	83.37	17.53
Waterloo Road N	87.27	14.12	86.81	15.27
Cycle Time Secs	102		111	

Table 16: Waterloo Road / Shawbridge Street signalised Junction OSCADY Pro Results

Given that a cycle time of 120 seconds should not be exceeded, it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with additional time that can be used accommodate additional traffic.

In reality the junction should operate with greater efficiency as the pedestrian stage will only be used if demanded on site by pedestrians being present. Table 16A shows the best case with no pedestrian calls.

Arm	2017 AM Base + Dev Without Ped Stage		2017 PM Base + Dev Without Ped Stage	
	DoS %	Q	DoS %	Q
Shawbridge Street	88.41	7.6	85.62	7.23
Waterloo Road N	78.19	6.23	83.05	8.57
Waterloo Road N	89.17	8.44	82.21	7.14
Cycle Time Secs	34		42	

Table 16A: Waterloo Road / Shawbridge Street signalised Junction OSCADY Pro Results

The queues would clearly be between the two outputs in terms of queues, in any event the signals fully balance the junction demands, however this would form the basis of a contribution rather than a condition as for the mini roundabout improvement.

Junction 9 - Well Terrace / Chatburn Road / Waterloo Road Roundabout Junction

Table 17 summarises the ARCADY results for the Well Terrace / Chatburn Road / Waterloo Road roundabout junction. Arm A is Chatburn Road, Arm B is Waterloo Road, Arm C is B6748 and Arm D is Well Terrace.

Arm	2012 AM Base		2012 PM Base		2017 AM Base		2017 PM Base	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.308	0	0.307	0	0.325	1	0.323	1
B	0.338	1	0.393	1	0.347	1	0.413	1
C	0.265	0	0.32	1	0.28	0	0.343	1
D	0.462	1	0.412	1	0.483	1	0.435	1

Arm	2012 AM Base + Dev		2012 PM Base + Dev		2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.325	1	0.332	1	0.342	1	0.349	1
B	0.349	1	0.426	1	0.373	1	0.447	1
C	0.27	0	0.335	1	0.288	0	0.36	1
D	0.528	1	0.449	1	0.555	1	0.472	1

Table 17: Well Terrace / Chatburn Road / Waterloo Road Roundabout Junction ARCADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Junction 10 - Railway View Road / Waddington Road Priority T Junction

Table 18 summarises the PICADY results for the Railway View Road / Waddington Road priority T junction. Arm A is Railway View Road S, Arm B is Waddington Road and Arm C is Railway View Road N.

Movement	2012 AM Base		2012 PM Base		2017 AM Base		2017 PM Base	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
B-AC	0.712	2	0.821	4	0.750	3	0.869	6
C-AB	0.362	0	0.528	2	0.381	1	0.559	2

Movement	2012 AM Base + Dev		2012 PM Base + Dev		2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue	0.688	Queue	RFC	Queue
B-AC	0.918	8	0.982	14	0.959	12	1.036	21
C-AB	0.418	1	0.657	3	0.438	1	0.690	3

Table 18: Railway View Road / Waddington Road Priority T Junction PICADY Results

The above junction is predicted to operate with increasing capacity issues with base flows and significant queues with development traffic. It is proposed to upgrade the junction into a mini roundabout. Table 19 summarises the ARCADY results for the proposed improvement.

Arm	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
A	0.717	3	0.935	10
B	0.792	4	0.778	3
C	0.728	3	0.957	13

Table 19: Railway View Road / Waddington Road Mini Roundabout Junction ARCADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development, alleviating the operational issues of the priority T junction and whilst maximising the ability to accommodate fluctuating demand patterns.

It should also be noted that this junction is likely to operate better than predicted since the proposed development sites are located in very close proximity to the railway station and town centre which will maximise the likelihood that persons will walk instead of using their cars.

In addition the development will be supported by a Travel Plan which will actively promote sustainable modes of transport and seek a reduction of single occupancy cars entering and leaving the site.

Junction 11 - Chester Avenue / Park Avenue / Waddington Road Crossroad Junction

Table 20 summarises the PICADY results for the Chester Avenue / Park Avenue / Waddington Road crossroad junction. Arm A is Waddington Road E, Arm B is Chester Avenue, Arm C is Waddington Road W and Arm D is Park Avenue.

Movement	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-ACD	0.058	0	0.076	0
A-BCD	0.007	0	0.039	0
D-ABC	0.043	0	0.051	0
C-ABD	0.040	0	0.044	0

Table 20: Chester Avenue / Park Avenue / Waddington Road Crossroad Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Junction 12 - Milton Avenue / Eastham Street / Waddington Road Crossroad Junction

Table 21 summarises the PICADY results for the Milton Avenue / Eastham Street / Waddington Road crossroad junction. Arm A is Waddington Road E, Arm B is Milton Avenue, Arm C is Waddington Road W and Arm D is Eastham Street.

Movement	2017 AM Base + Dev		2017 PM Base + Dev		2017 AM Base + Dev + Sensitivity Test		2017 AM Base + Dev + Sensitivity Test	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
B-ACD	0.071	0	0.05	0	0.158	0	0.099	0
A-BCD	0.236	0	0.239	0	0.233	0	0.238	0
D-ABC	0.21	0	0.18	0	0.207	0	0.179	0
C-ABD	0.004	0	0.005	0	0.006	0	0.014	0

Table 21: Milton Avenue / Eastham Street / Waddington Road Crossroad Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

It should also be noted that the junction can also accommodate, with ample spare capacity, an additional 75 residential dwellings from Milton Avenue.

Junction 13 - Waddington Road / Site Access Ghost Island Junction

Table 22 summarises the PICADY results for the Waddington Road / Site Access Ghost Island junction. Arm A is Waddington Road E, Arm B is Site Access, Arm C is Waddington Road W and Arm D is Eastham Street.

Arm	2017 AM Base + Dev		2017 PM Base + Dev	
	RFC	Queue	RFC	Queue
B-AC	0.286	0	0.18	0
C-B	0.009	0	0.023	0

Table 22: Waddington Road / Site Access Ghost Island Junction PICADY Results

As it can be seen from the above table the junction is predicted to be able to accommodate the proposed development with ample spare capacity.

Assessment Summary

The study network has been robustly assessed with and without the development. Four Junctions have been highlighted as requiring improvement. These junctions are:

Junction	Name	Type of Junction
5	Whalley Road / Queensway	Mini Roundabout Junction
7	Castle View / Bawdlands / Parsons Lane	Priority T
8	Waterloo Road / Shawbridge Street	Mini Roundabout
11	Railway View Road / Waddington Road	Priority T

Junction 7 will be improved to reduce conflict movements at the junction and not on capacity grounds.

Junction 5, 8 and 11 will improved to accommodate the proposed development traffic.

Impact During Construction

The development of the site will provide an element of HGV traffic during construction. Whilst this is unavoidable, movements will be restricted, where appropriate, to hours that would not cause undue disturbance to the local area.

The Waddington Road route is constrained by the railway bridge height, loads will therefore either be split to reduce the height or be delivered from the northerly direction. These can be detailed and agreed as part of the Construction Management plan.

During the day time the Castle View route if necessary can be the subject of a temporary day time only parking restriction on one side that will accommodate the local parking needs and low construction traffic to be accommodated more easily.

8. MITIGATION MEASURES

8.1 Introduction

The previous chapters and assessment have set out the specific access arrangements for the two sides of the development for car borne needs.

The following details the suggested mitigation/improvements for the Waddington Road and Castle View routes.

In addition the pedestrian route from the easterly side via the PROW across Chester Street will be discussed and the possible parking amendments on the Castle View wider area.

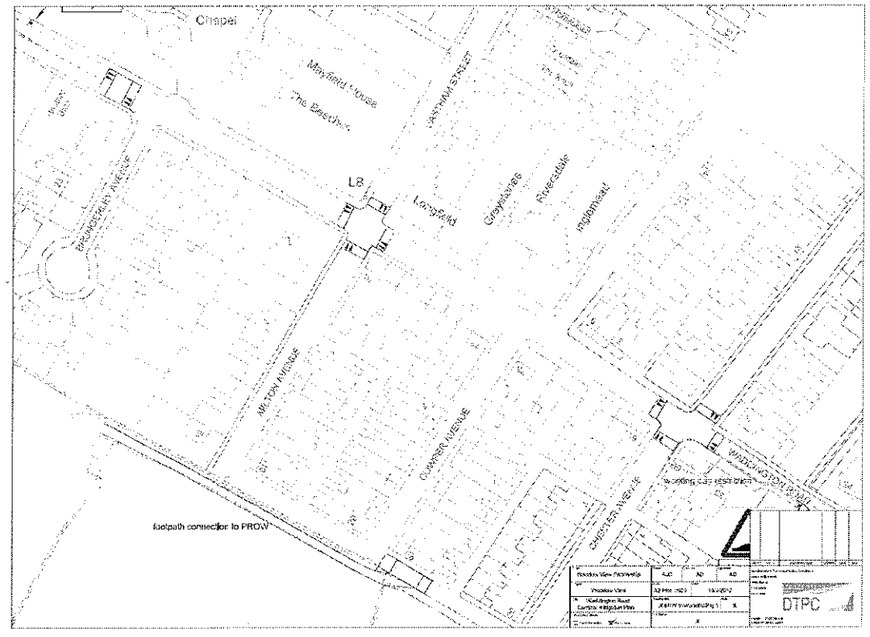
The proposed layouts are provided in abstract here and in the figures section in full.

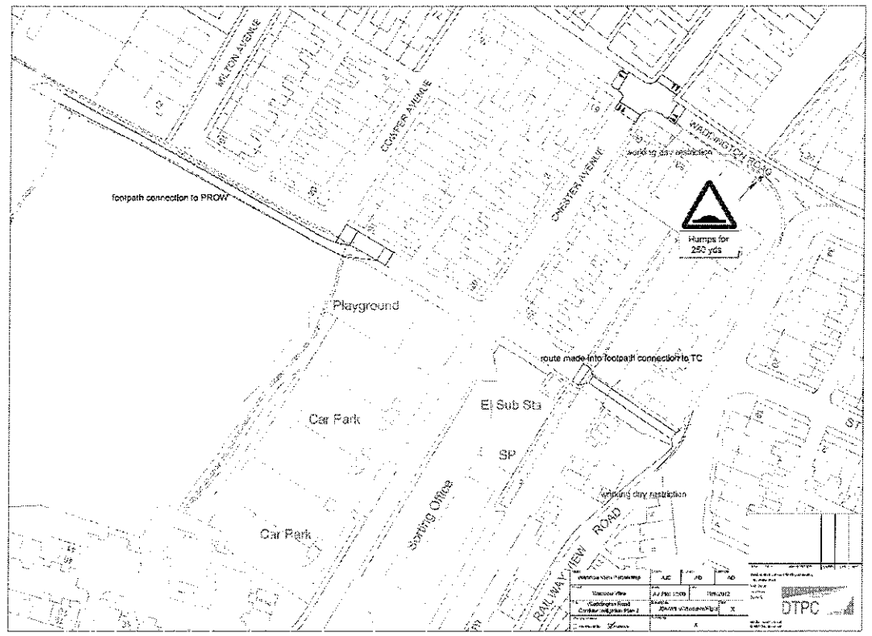
8.2 Waddington Road

This route is currently a 30mph road across the site frontage which changes as it approaches the town centre to 20mph. As stated for the access design the 20mph section is intended to be extended across the site frontage and beyond the cemetery access.

The surveys show that the speeds have reduced which is to the benefit of the area, the extension will further reduce speeds in the main urban area.

By the addition of the three proposed junction platforms/road humps (bus and cycle friendly) the route will be further calmed as normal practice for 20 mph zones.





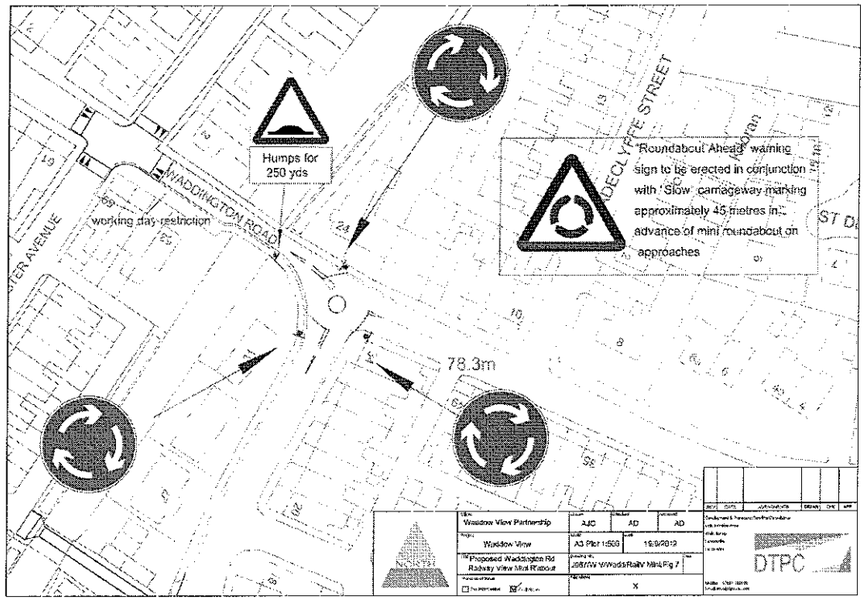
This will have substantial benefits for non car modes and further improve the safety setting of the area.

In addition to the calming features a working day restriction is suggested on the westerly side of the road under the bridge to Chester Road, this would prevent cars from parking on the approach creating a hazard for pedestrians and vehicles alike.

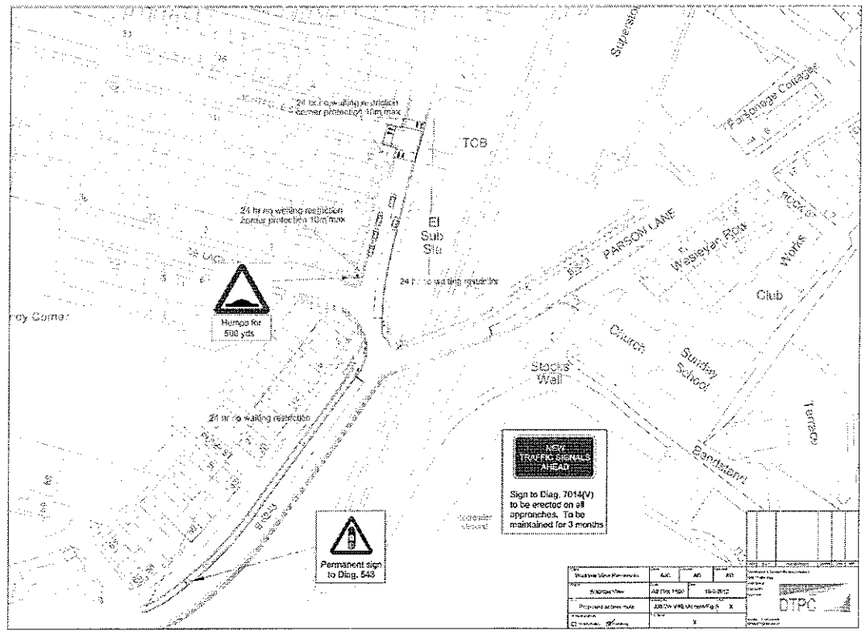
A footpath is shown connecting the site to the PROW near to Cowper Street to increase the pedestrian access in the event that the Milton Avenue scheme does not gain approval.

A further enhancement to the walking route would be the creation of a pedestrian only link under the rail bridge

Finally for capacity purposes the Waddington Road/Railway View junction has been improved with a mini roundabout arrangement.



8.3 Castle View/Kirkmoor Road route

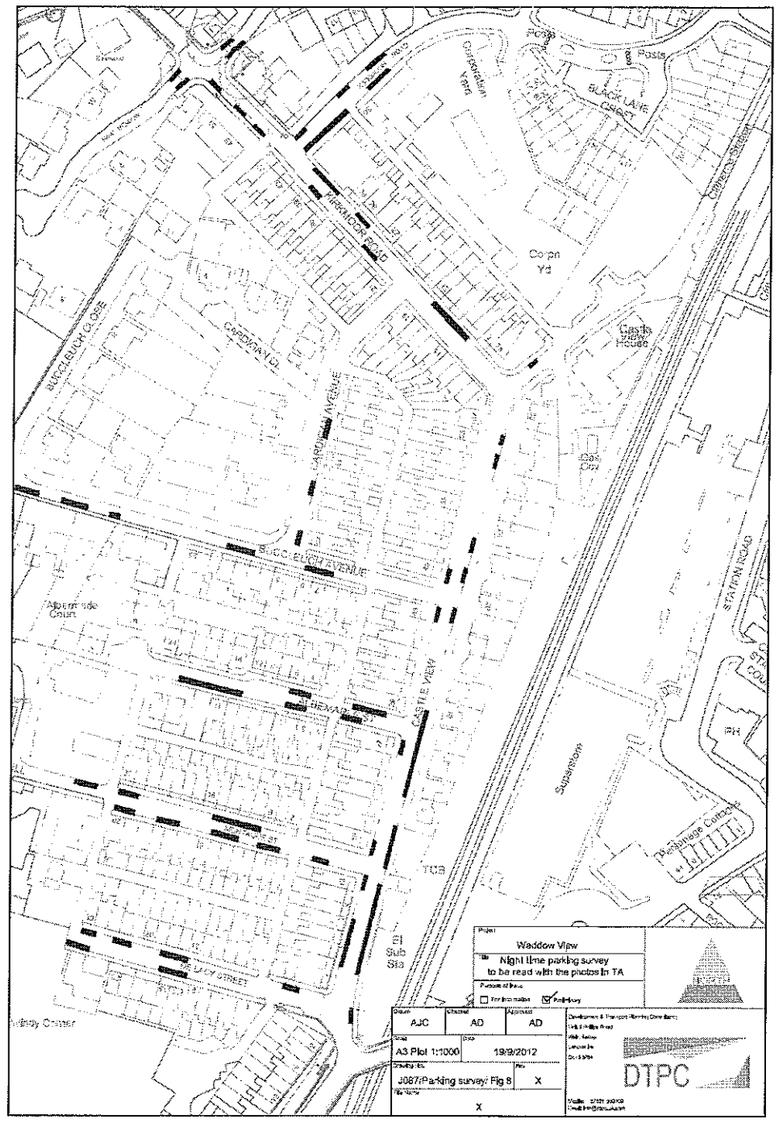


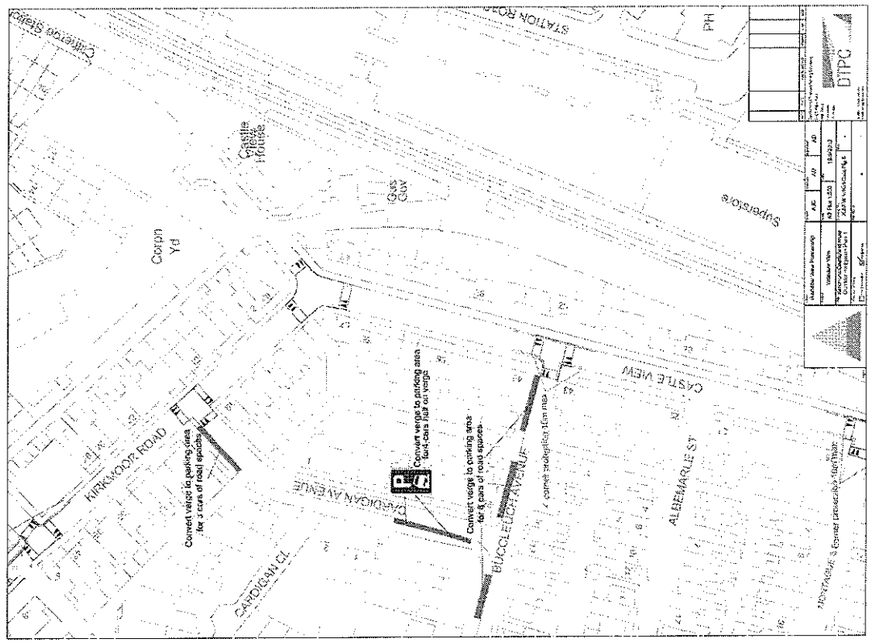
As described previously the signals are not needed for capacity purposes but to remove or reduce the turning vehicle conflicts.

The junction area would be protected by 24 hr no waiting restrictions that accord with good practice by limiting the corner protection needed to fit the highway code guidance.

The Castle View section up to the Montague Street junction is wide enough to accommodate waiting cars in the queues, although the assessment shows limited queuing of less than 3 vehicles and the parking needs of residents to the house frontage. The parking survey highlight significant gaps in the parking that would enable the restrictions to be put forward with minimal impact on residents.

Again the corner protection as per the highway code is provided at the Montague Street junction in combination with the junction platform to reinforce the 20 mph zone. This will so provide a passing area for through movements.





From the junction moving along the route the Buccleuch Avenue junction has a proposed junction platform and the minimal corner protection measures to create a safe area to exit etc and also double up as a passing space.

The existing bend protection measures allow passing to take place.

Along Kirkmoor Road at the Cardigan Avenue will have a junction platform proposal. As there is clear intervisibility between the bend and the top section of Kirkmoor road the corner protection measures are not included, the route also has access to the Buccleuch Avenue junction to exit safely.

The plan also shows the possible conversion of the verges to a reinforce grass area by using plastic cells to allow vehicle overrun with little or no damage. This will allow parking to take place with little or no effect.

This can either be by fully parking on the verge or part parking in accordance with guidance providing some additional 15 parking spaces, more than the proposed restrictions would displace.

For reference the following abstracts are provided for road widths and passing areas etc.

A 3m width is capable of accommodating a car, van or refuse type vehicle, this can easily be provided along any of the routes in the area.

The following abstract from MFS show that 3m exceeds the guidance for one lane working of 2.75m

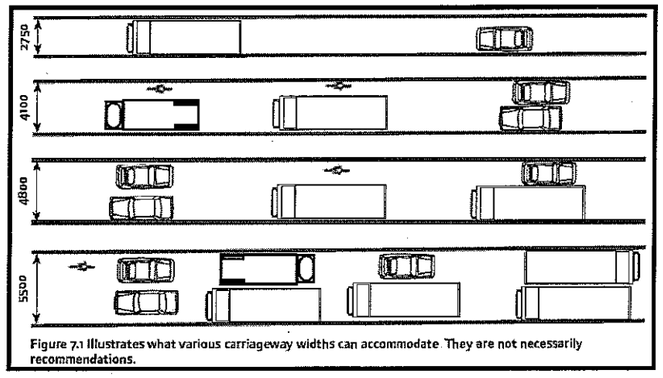
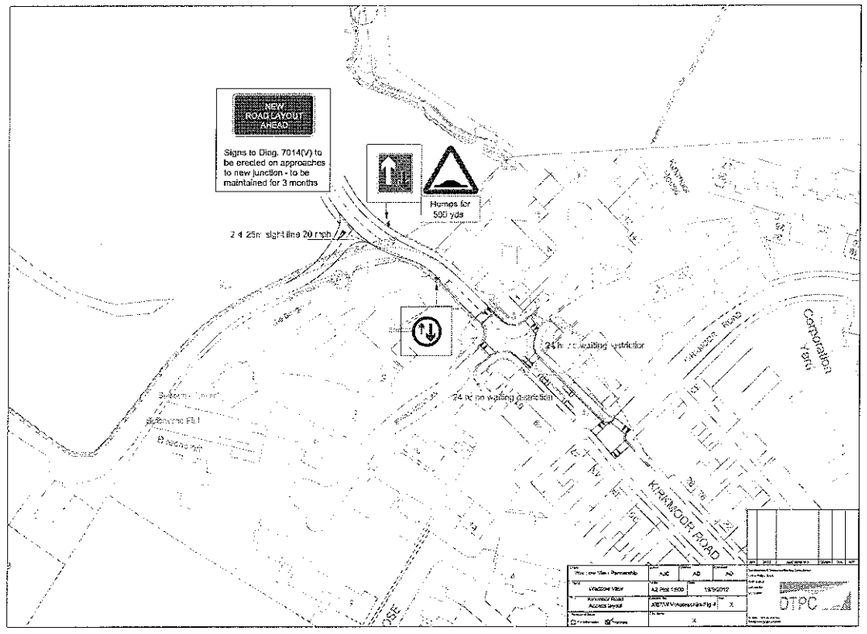


Figure 7.1 Illustrates what various carriageway widths can accommodate. They are not necessarily recommendations.

Although totally banned in London parking on the footpath or verge is allowed elsewhere subject agreement with the LHA using the necessary signage i.e.

Diagram No.667



The final section heading to the development has junction platforms proposed and no waiting restrictions along the narrow section between Kirkmoor Road (east) and Swan Meadow. There is little observed parking in this section thus the impact would be minimal.

9. SUMMARY

Policy

The overriding theme of national policy is approval other than if the **residual impacts are deemed severe.**

That developments must be accessible by sustainable means of transport and accessible to all members of the local community. Local policy echoes the sustainability sentiment of national policy and provides more detail in terms of deliverables.

The proposed development will incorporate uses with good linkages to local facilities and infrastructure which will promote sustainability by reducing the number of car trips to local facilities.

Furthermore there are:

Pedestrian and cycle linkages to a number of locations and facilities are available, frequent public transport services to other major centres and interchanges, and agreed parking provision all ensure that this development is as sustainable, as required in local and national policy.

The assessment shows that the scheme clearly does not give rise to any issues that can be deemed severe and from a transport point of view be approved.

Existing network review

The assessment of the existing situation shows that the local network functions well within any capacity constraints, no inherent safety issues are present, indeed the area has a low accent record of less than 1 per year.

Parking does occur as would be expected for an area with terraced properties but observations show that on a random inspection basis that there are gaps along the road to allow passing of vehicles or even accommodate additional parking as needed.

The only areas of concern are the abuse of the parking near junctions as set out in the highway code and the higher speeds recorded for a new 20 mph route although they are less than 30mph which for an urban area is still more than acceptable.

Sustainability

The site is well located in relation to a wide range of local facilities including the Town Centre itself for the walking mode.

The site has easy access to the local network which is a 20mph area and thus safer for cyclist to use, the site has the ability to connect to the two wider cycle routes for work or leisure uses.

It has easy access to bus service that connected it the wider area another employment and leisure opportunities.

It is also in easy walk of the rail station and thus the much wider employment area of Preston, Blackburn and Burnley.

In summary, therefore, the application site can be considered as being highly accessible by public transport, walking and cycling in accordance with planning policy guidance.

Assessment Summary

The network has been robustly assessed with and without the development and has been shown to operate with spare capacity at all junctions assessed across the network with the mitigation proposed.

Private house ownership has the potential for reduced car dependency if walking and public transport modes are accessible from day one.

Mitigation

The capacity assessments show that the site access have no capacity issues and the location is highly sustainable it is proposed to provide some mitigation measure which will enhance the local area and assist existing residents in the area to travel by car and non car modes.

The wider network assessment shows some need for minor scale improvements to accommodate the development flows but these are also able to accommodate the exiting committed and approved schemes that have not considered or offered any mitigation.

Congestion

The mitigation either provides a status quo or reduces the queues on the local network thus it is considered that there are no congestion issues on the local network

Safety

The local network has no trends or local safety concerns that would require mitigation as part of a local safety scheme.

The new 20 mph change has improved the safety aspects of the local network and will be extended to the benefit of the wider area.

The flows from the new development are can be accommodated on the network.

There are pedestrian routes to the town centre that are along routes with low flows and have good crossing provision

The area locally has low speeds that are conducive to cycle uses.

There are no impacts that would give rise to safety concerns.

As such it is considered that there are no reasons why the scheme should not be approved from a transportation point of view.

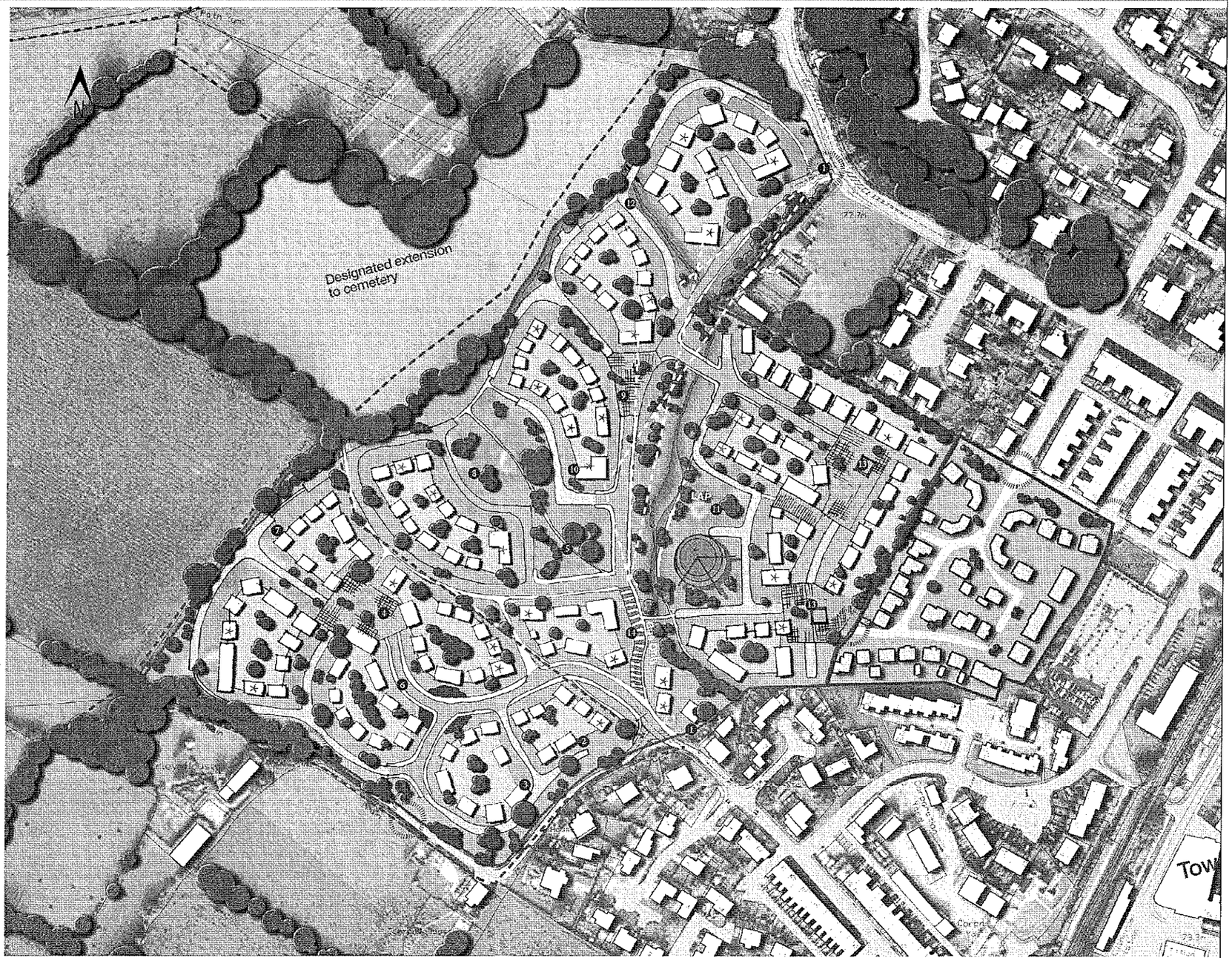
Figures

Illustrative masterplan

Waddow View
Clitheroe

Layout narration

1. New primary entrance with carefully designed landscape features create an inviting access point
2. Carefully spaced outward facing feature blocks, overlooking a landscaped amenity area creating an attractive setting along Kirkmoor Road. On street parking restricted providing an uncluttered frontages at the gateway into the development
3. Low density blocks fronting Kirkmoor Road, building lines respected and boundary treatments carefully selected to help assimilate the buildings into the landscape setting. Existing hedgerow maintained.
4. Small hard landscaped court with soft edges
5. Primary nodal area creates impact upon arrival. Formal open space encapsulated by strong blocks. Orientation and type critical to the success of this area. Dual aspect gateway blocks frame routes in every direction and visually permeable boundary treatments softened by landscaping promote a legible well defined area.
6. Rural setting with hedge lined streets, careful consideration to vista terminations at the open space area.
7. Outward facing blocks, well spaced creating a soft edge overlooking the openspace areas.
8. Attractive landscape feature and setting which highlights important pedestrian/cycle routes
9. Street follows a route which forms an integral part of and interacts with the building form, open space areas and landscape features. This principle of interaction along this important route creates an interesting and noteworthy journey through the development
10. Prominent blocks with mass, character and a suitable street presence to stand at the head of these important vistas. Frontage parking minimised creating uncluttered views of this important area.
11. Well connected and accessible open space area. Perception changes depending on which approach route is taken, achieved by carefully manipulating vistas, pinch points, block massing and positioning. Attractive and distinctive landscaping and street furniture adds further to this effect
12. Careful positioning and orientation of blocks around this attractive amenity area. Existing water feature retained and enhanced
13. Irregular varied streets 'nuts and bolts' approach, careful consideration given to parking arrangements. Soft edges and tree planting will help create an attractive and inviting environment. Pedestrian, priority area which help prevent 'rat running'
14. Bus only barrier allowing bus only access to the northern part of the development



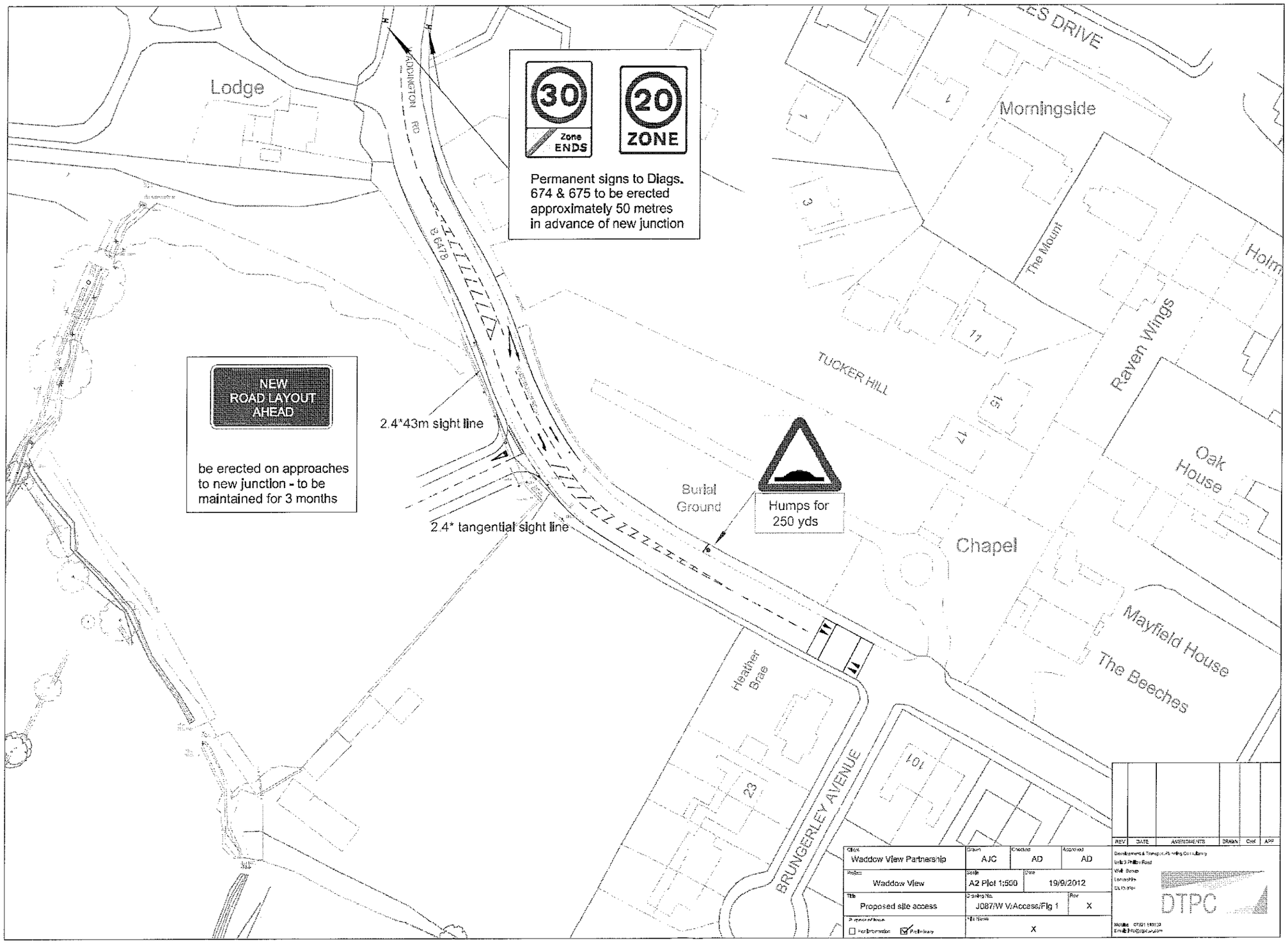
Key

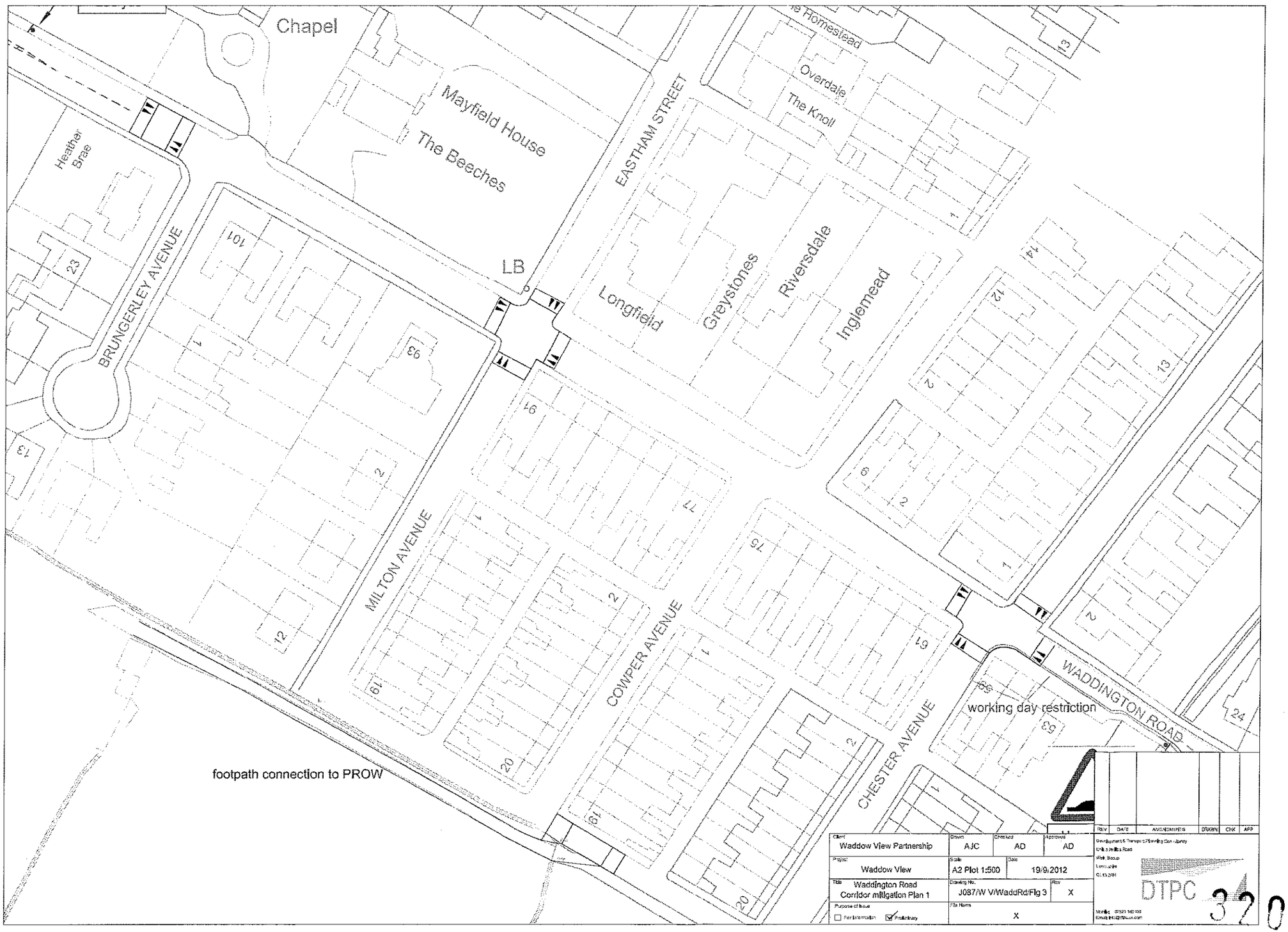
- Focal building/s
- Landmark building/s
- Primary vista enforcing desire routes
- Potential/existing footpath Cycle/links connections
- Existing Footpath/cycle routes to wider area
- New pedestrian/ cycle link
- Hard landscaped pedestrian priority street.
- Crèche
- Bus street only connection.

mck associates limited

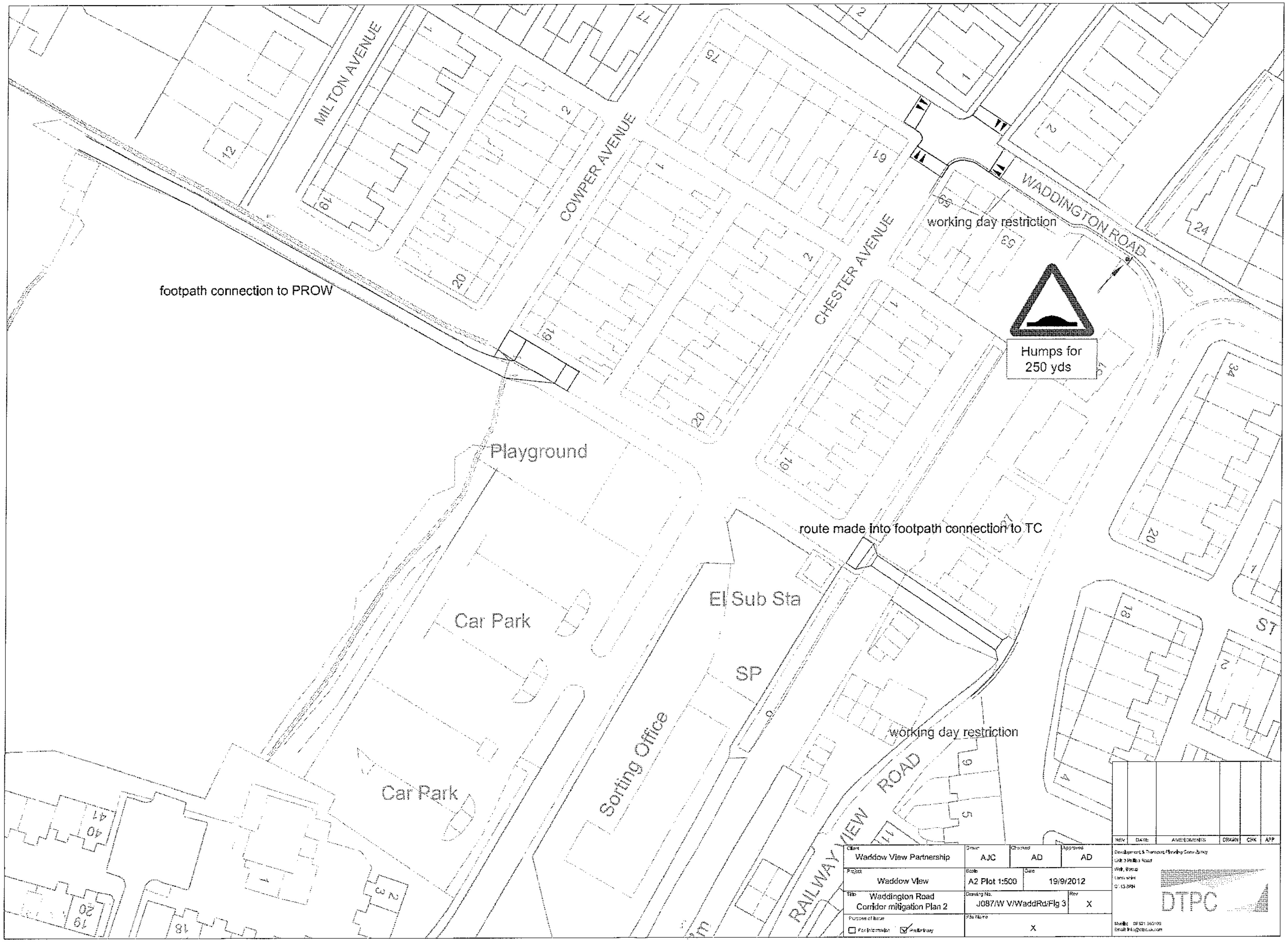
Job no: 11-021-1002 • Scale: 1/1000 • Sheet Size: A1 • Date: May 2012 • Revision: B • Drawn: M.King

Note this layout plan is for indicative purposes only for the outline planning application


Lodge
ADDINGTON RD
6478
30
Zone ENDS
20
ZONE
Permanent signs to Diags. 674 & 675 to be erected approximately 50 metres in advance of new junction
NEW ROAD LAYOUT AHEAD
be erected on approaches to new junction - to be maintained for 3 months
2.4*43m sight line
2.4* tangential sight line
Burial Ground
Humps for 250 yds
Morningside
The Mount
Holm
Raven Wings
TUCKER HILL
11
15
17
Oak House
Chapel
Mayfield House
The Beeches
Heather Brae
23
BRUNGERLEY AVENUE
101
Waddow View Partnership
AJC
AD
AD
Waddow View
A2 Plot 1:500
19/9/2012
Proposed site access
J087/W V:Access/Fig 1
X
X
REV
DATE
AMENDMENTS
DRAWN
CHK
APP
DTPC


Chapel
Mayfield House
The Beeches
Heather Brae
BRUNGERLEY AVENUE
EASTHAM STREET
LB
Homestead
Overdale
The Knoll
Longfield
Greystones
Riversdale
Inglemead
MILTON AVENUE
COWPER AVENUE
CHESTER AVENUE
WADDINGTON ROAD
working day restriction
footpath connection to PROW
Waddow View Partnership
AJC
AD
AD
Waddow View
A2 Plot 1:500
19/9/2012
Waddington Road
Corridor mitigation Plan 1
J087/W V/WaddRd/Fig 3
X
X
DTPC

3201209 13 P



MILTON AVENUE
COWPER AVENUE
CHESTER AVENUE
WADDINGTON ROAD
working day restriction
footpath connection to PROW
Humps for 250 yds
Playground
route made into footpath connection to TC
El Sub Sta
Car Park
SP
Sorting Office
Car Park
working day restriction
RAILWAY VIEW ROAD
REV
DATE
AMENDMENTS
DRAWN
CHK
APP
Client
Waddow View Partnership
Drawn
AJC
Checked
AD
Approved
AD
Project
Waddow View
Scale
A2 Plot 1:500
Date
19/9/2012
Title
Waddington Road Corridor mitigation Plan 2
Drawing No.
J087/W V/WaddRd/Fig 3
Rev
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Purpose of Issue
File Name
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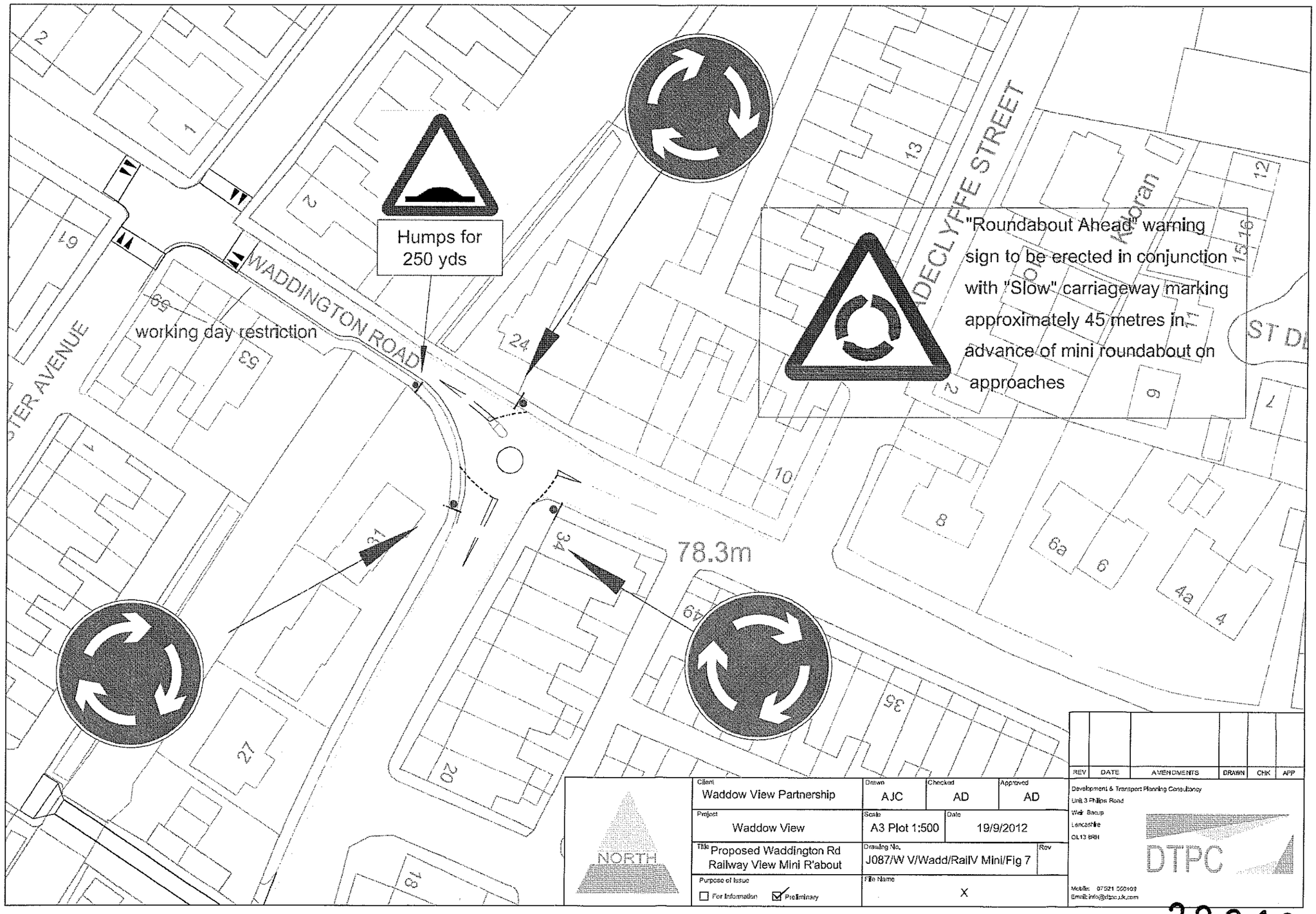

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Client: Waddow View Partnership
Drawn: AJC | Checked: AD | Approved: AD
Project: Waddow View
Scale: A3 Plot 1:500 | Date: 19/9/2012
Title: Proposed Waddington Rd Railway View Mini R'about
Drawing No.: J087/W V/Wadd/RailV Mini/Fig 7 | Rev:
Purpose of Issue: ☐ For Information ☑ Preliminary
File Name: X

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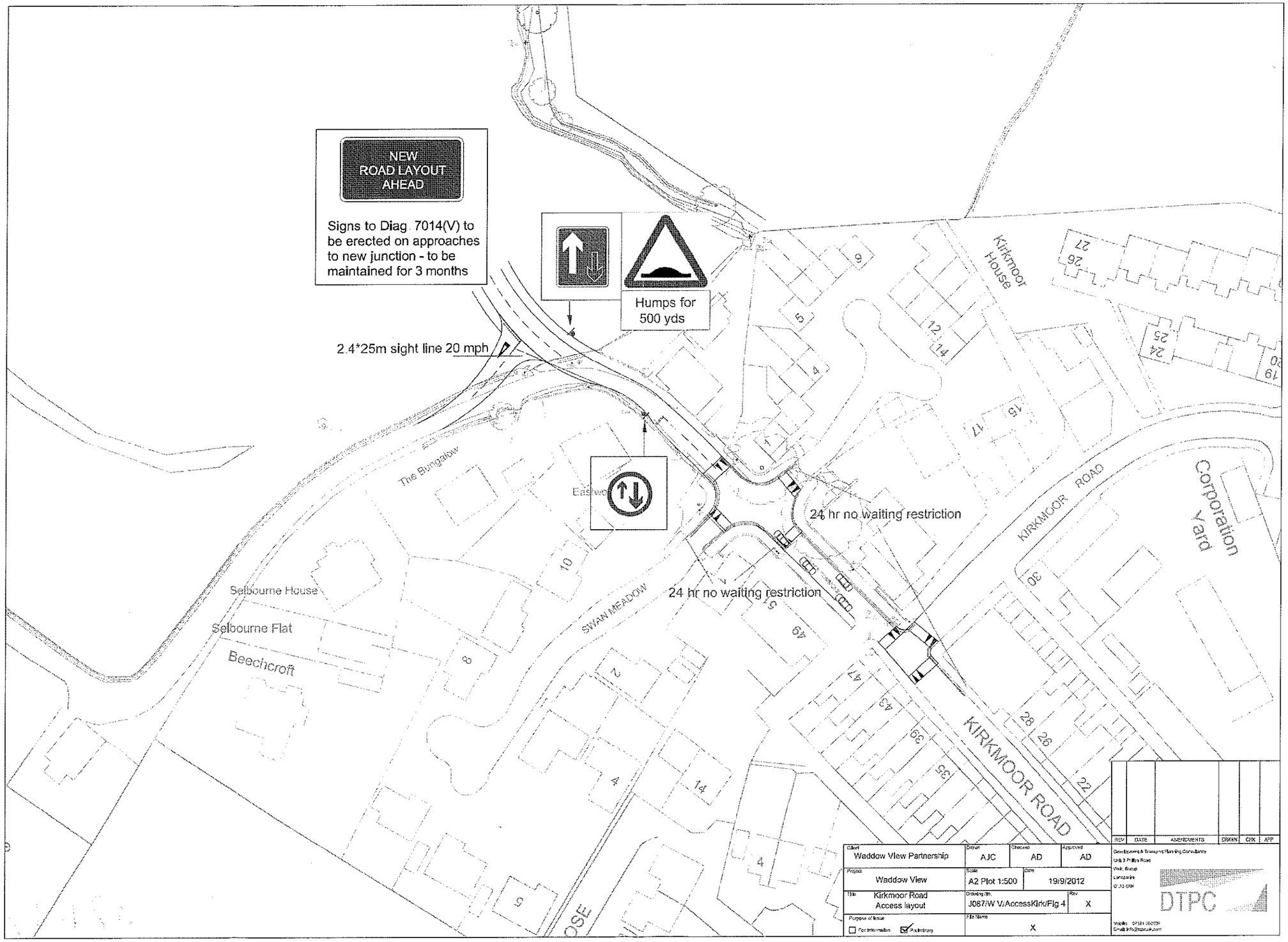
NEW ROAD LAYOUT AHEAD
Signs to Diag. 7014(V) to be erected on approaches to new junction - to be maintained for 3 months
Humps for 500 yds
2.4*25m sight line 20 mph
24 hr no waiting restriction
24 hr no waiting restriction
KIRKMOOR ROAD
Kirkmoor House
Corporation Yard
The Bungalow
Selbourne House
Selbourne Flat
Beechcroft
SWAN MEADOW
KIRKMOOR ROAD
Client Waddow View Partnership
Drawn AJC
Checked AD
Approved AD
Project Waddow View
Scale A2 Plot 1:500
Date 19/9/2012
Title Kirkmoor Road Access layout
Drawing No. J087/W V/AccessKirk/Fig 4
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Purpose of Issue For information Preliminary
File Name X
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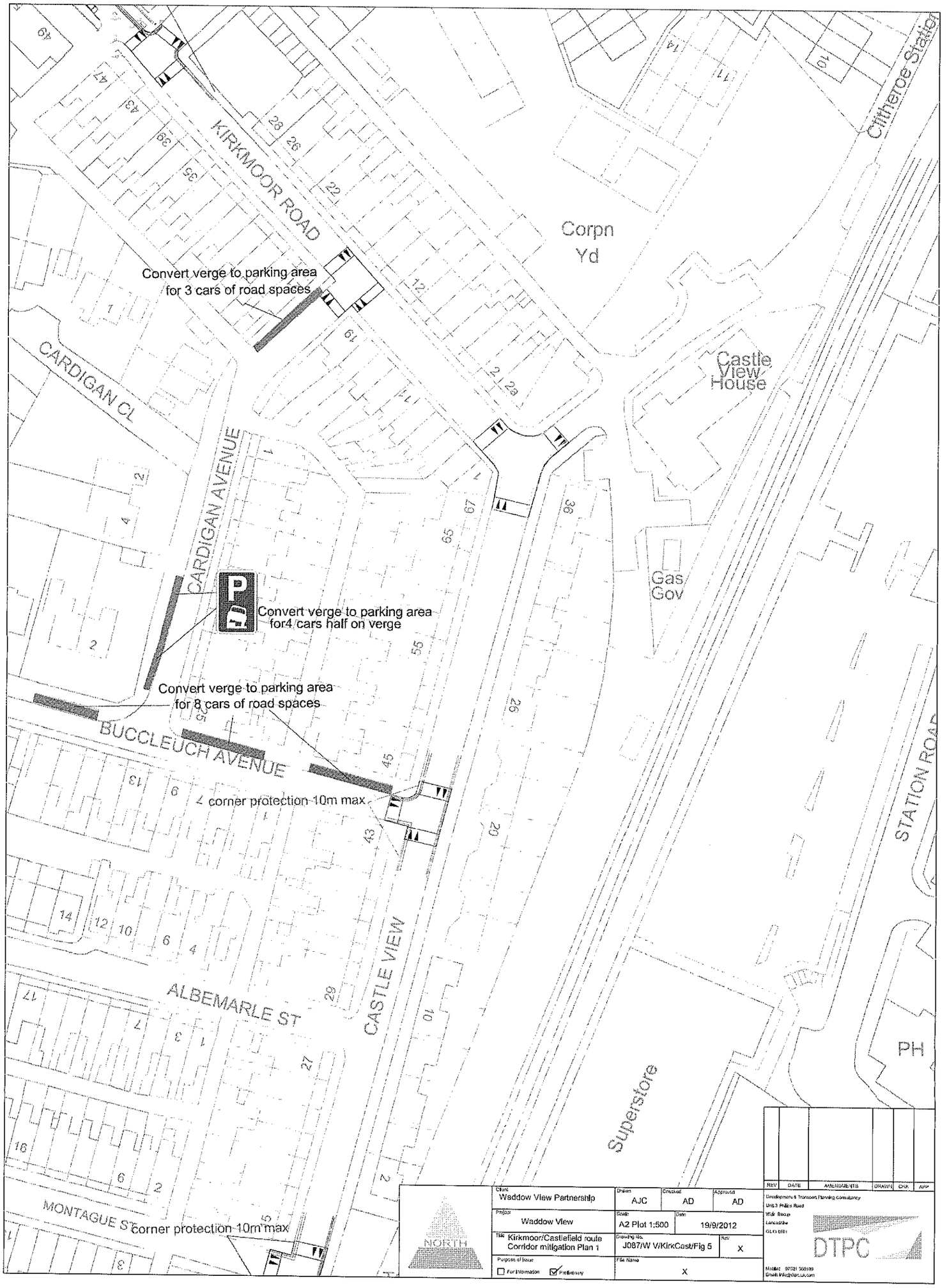
KIRKMOOR ROAD
Convert verge to parking area
for 3 cars of road spaces
CARDIGAN CL
CARDIGAN AVENUE
Convert verge to parking area
for4 cars half on verge
Convert verge to parking area
for 8 cars of road spaces
BUCCLEUCH AVENUE
corner protection 10m max
ALBEMARLE ST
CASTLE VIEW
MONTAGUE ST
corner protection 10m max
Corpn
Yd
Castle
View
House
Gas
Gov
Clitheroe Station
STATION ROAD
Superstore
PH
NORTH
Client
Waddow View Partnership
Drawn
AJC
Checked
AD
Approved
AD
Project
Waddow View
Scale
A2 Plot 1:500
Date
19/9/2012
Title
Kirkmoor/Castlefield route
Corridor mitigation Plan 1
Drawing No.
J087/W V/KirkCast/Fig 5
Rev
X
Purpose of Issue
For Information
Preliminary
File Name
X
REV
DATE
AMENDMENTS
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APP
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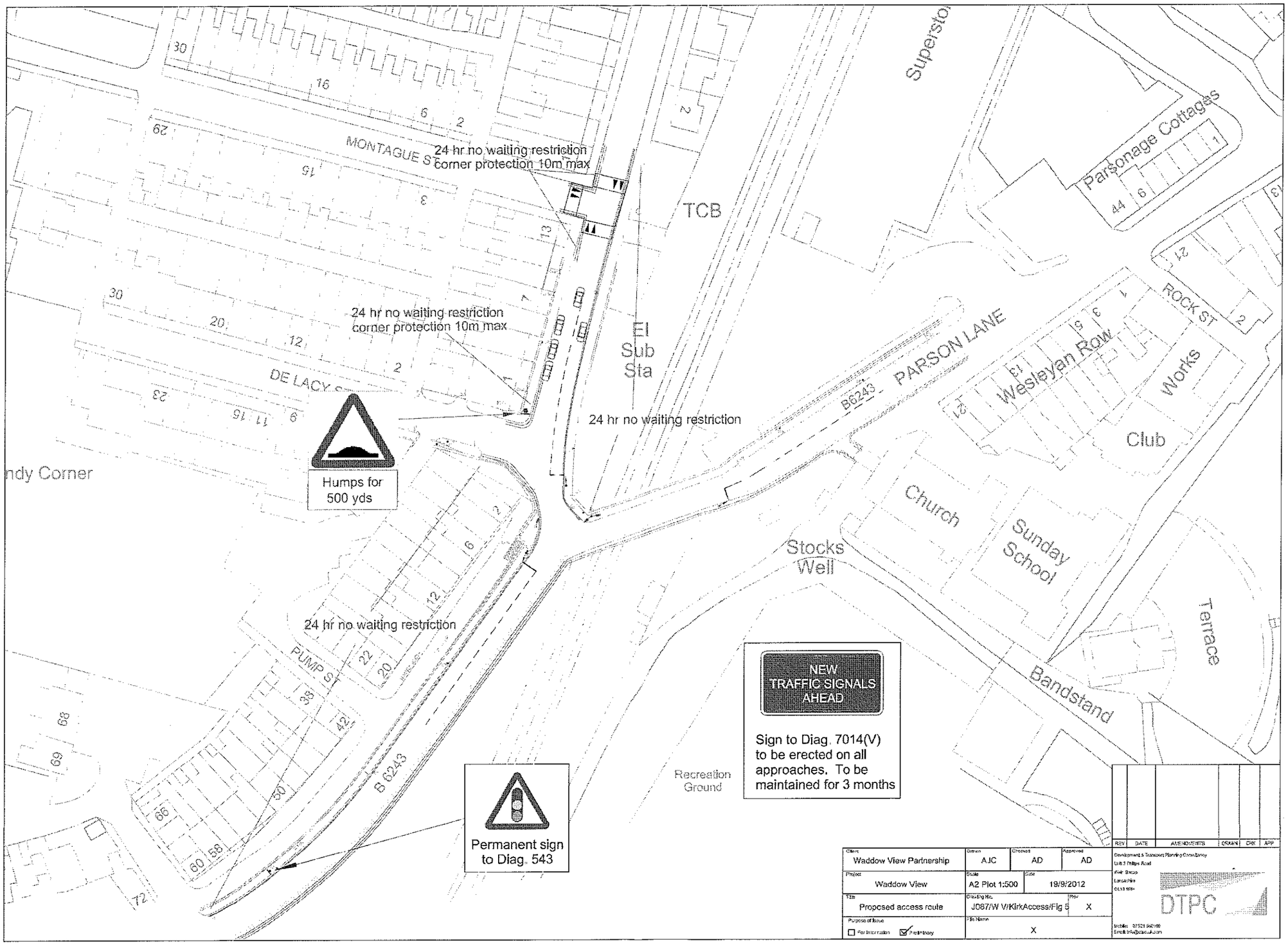
32012091 3P


24 hr no waiting restriction
corner protection 10m max
24 hr no waiting restriction
corner protection 10m max
24 hr no waiting restriction
24 hr no waiting restriction
Humps for
500 yds
Permanent sign
to Diag. 543
NEW
TRAFFIC SIGNALS
AHEAD
Sign to Diag. 7014(V)
to be erected on all
approaches. To be
maintained for 3 months
MONTAGUE ST
DE LACY ST
PUMP ST
PARSON LANE
B6243
B 6243
TCB
El
Sub
Sta
Parsonage Cottages
Wesleyan Row
ROCK ST
Works
Club
Church
Sunday
School
Stocks
Well
Terrace
Bandstand
Recreation
Ground
ndy Corner
Waddow View Partnership
AJC
AD
AD
Waddow View
A2 Plot 1:500
19/9/2012
Proposed access route
J087/W V/KirkAccess/Fig 5
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X
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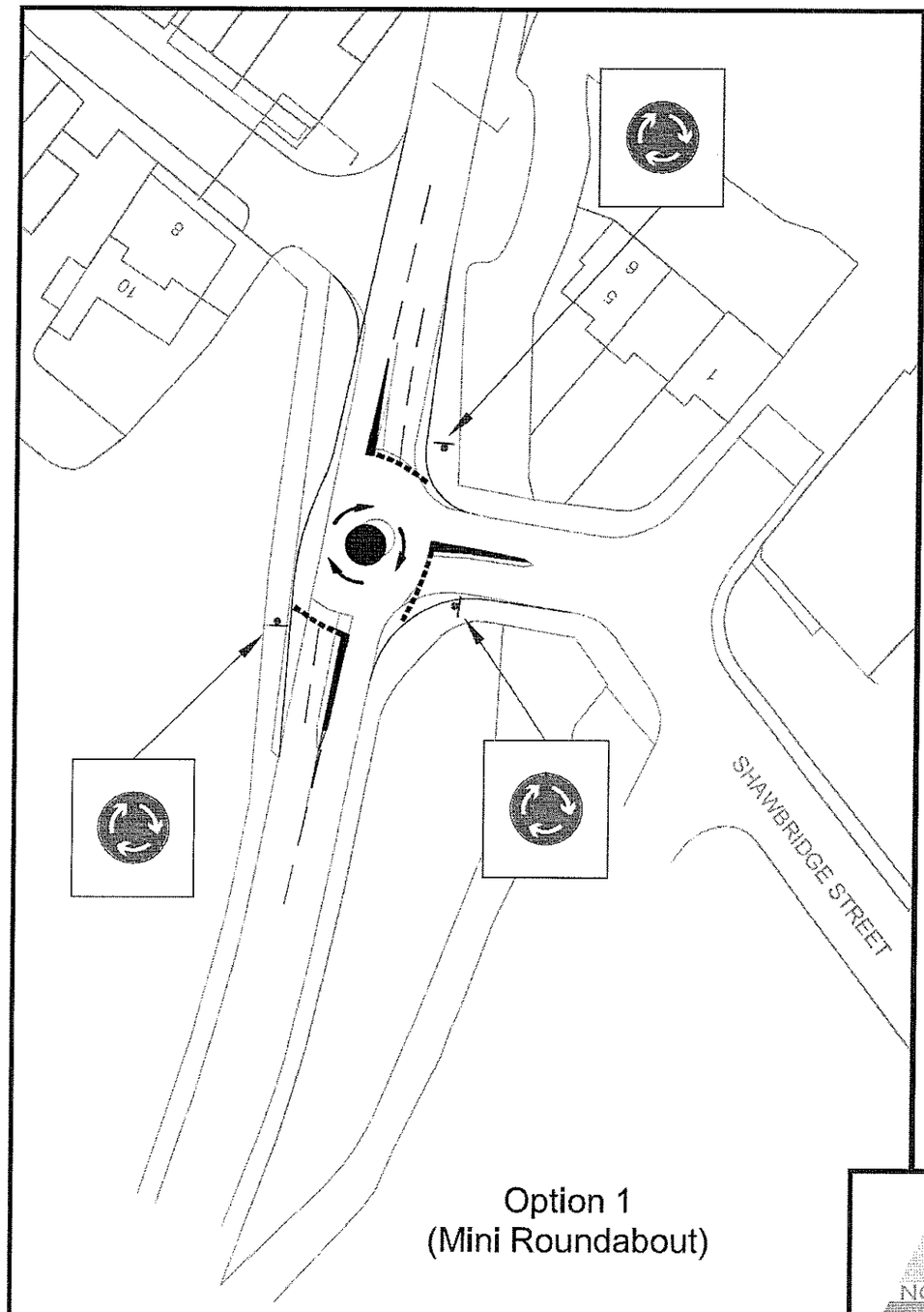
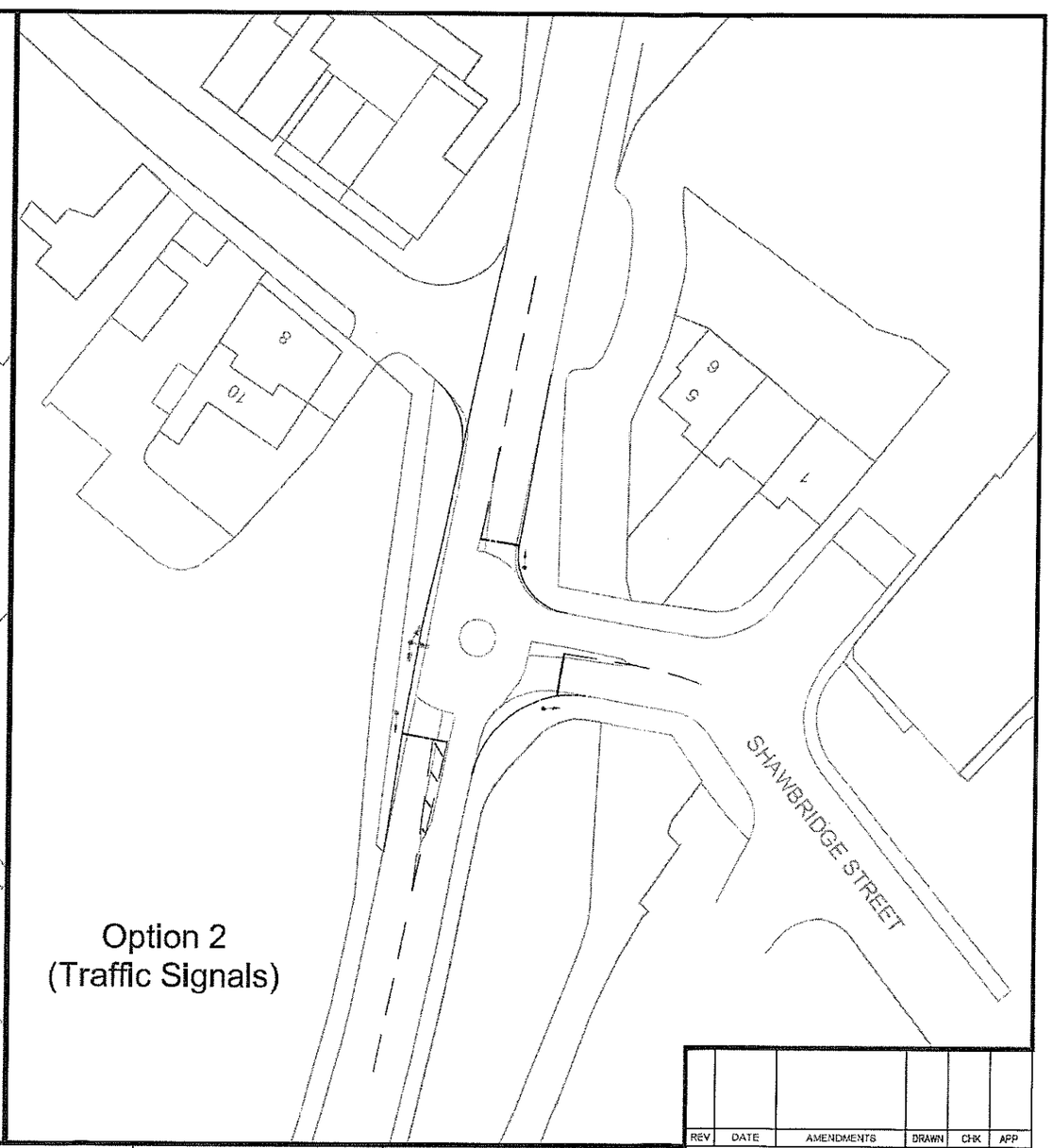


Option 1
(Mini Roundabout)



Option 2
(Traffic Signals)

NORTH

Client: Waddow View Partnership	Drawn: AJC	Checked: AD	Approved: AD
Project: Waddow View	Scale: A3 Plot 1:500	Date: 7/10/2012	
Title: Proposed Shawbridge options	Drawing No.: J087/W V/ShawOptions/Fig 9		Rev:
Purpose of Issue: ☐ For Information ☑ Preliminary	File Name: X		

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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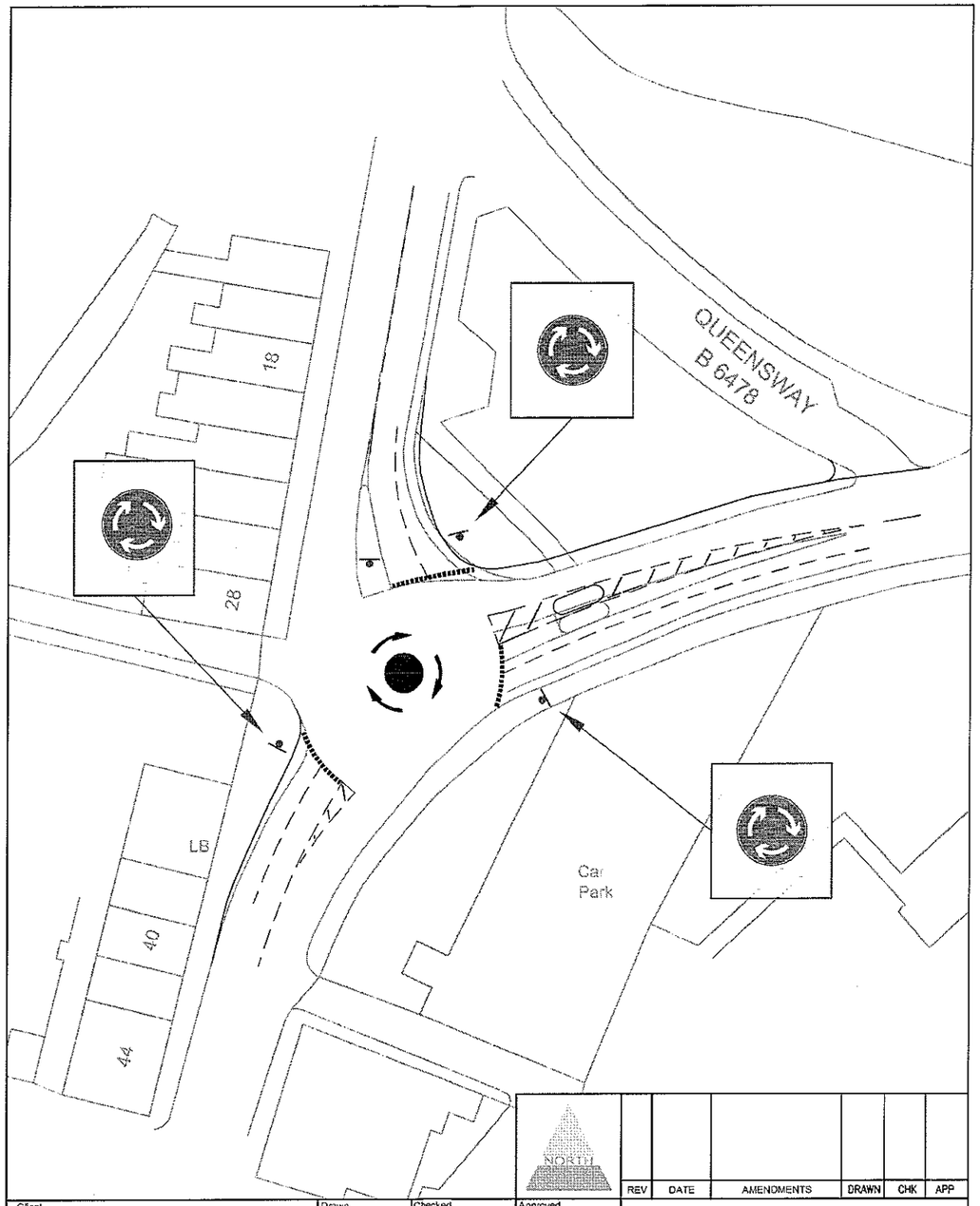

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

Client: Waddow View Partnership	Drawn: AJC	Checked: AD	Approved: AD
Project: Waddow View	Scale: A4 Plot 1:500	Date: 7/10/2012	
Title: Proposed Whalley Road/Queensway junction improvement	Drawing No.: J087/W V/WhalleyQueen/Fig 10		Rev
Purpose of Issue: ☐ For Information ☑ Preliminary	File Name: X		

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