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## **Proposed Residential Development Proposals on New Road, Melbourn** **Review of Transport Assessment and associated documents prepared by Richard Jackson** **Engineering Consultants – September 2014**

### **Introduction**

Transport Planning Consultants Ltd (TPC) have been instructed by Melbourn Parish Council (MPC) to carry out a critical review of the documentation submitted with the outline planning application that is associated with and support the transport and highways aspects of the Planning Application for Residential Development Proposals on New Road, Melbourn

TPC have been provided with copies of the transport assessment, travel plan, design & access statement, stage 1 road safety audit of the access design and report, together with, from MPC relevant additional local information. Our brief is to provide a critique of the documents submitted and check that the assumptions and trip/traffic generation made in the transport assessment are reasonable and realistic and that the analysis is made in the appropriate manner in accordance with local/national guidance.

### **The development proposals**

The proposal is for outline consent for a residential development (Class C3) of up to 199 dwellings, together with a residential care home of 75 bedrooms. The site is located on New Road, Melbourn, South Cambridgeshire.

### **Transport Assessment & Stage 1 Safety Audit**

The transport assessment, including traffic survey data, personal injury collision data and numerous junction assessments, the preliminary site access arrangement plans/stage 1 road safety audit and response report have been examined. Prior to the preparation of these documents Richard Jackson Engineering Consultants (RJEC) submitted a scoping report to Cambridgeshire County Council, followed by a scoping meeting to discuss and agree the nature and extent of the assessment required by the highway authority.

Cambridgeshire County Council officers provided a formal response and RJEC have taken this into account in the preparation of the assessment. The transport assessment has followed Department for Transport Guidance on Transport Assessment (March 2007) and the main elements of the Cambridgeshire County Council Transport Assessment Guidance (Dec. 2010).

In general the transport assessment comprises a comprehensive report covering the agreed scope and format required by the highway authority, Cambridgeshire County Council. There are however a number of issues that require further consideration and explanation by the applicant (or their consultant). These are as follows (in the same order as the report):

#### **1 Introduction**

This section is acceptable and follows standard guidance.



## 2 Transport Policy

This section is acceptable and follows standard guidance. The Policies are current and appropriate.

## 3 Existing Conditions

Whilst Section 3 of the Transport Assessment deals comprehensively with the description of the highway network, its connections and usage in terms of traffic flows there is no mention of the other pertinent factors that also influence conditions and route choice in the area around the site. There are, for instance, established rat runs for traffic wishing to avoid the signalled junction at High Street/Mortlock Street and the Melbourn Primary School located close by that has a very significant impact on the area close to the signalled junction in terms of traffic flow and parking.

These factors influence route choice and are relevant to any distribution of predicted traffic generation from the site. The lack of 'local' factors will be discussed in more detail when considering the assignment of development traffic.

The Transport Assessment (TA) states that it has collected traffic data for all relevant junctions and that data is appended to the TA. That data correctly demonstrates that the section of Mortlock Street on the approach to the signals is heavily used in both the AM and PM peaks and that the predominant turning movements at the junction are those right and left turns to the north and the 'straight across' movements between Station Road and Mortlock Street. This is apparent to casual observation and is reflected also by the traffic counts undertaken by the Parish Council in 2013 provided at **Appendix A**. It is important that this local pattern of movement is correctly understood as it results from the traffic generated by the predominantly residential area served by this junction and it is very likely that any traffic generated by a new residential development would reasonably be expected to closely follow the same pattern. Again this will be discussed later in this note when considering the assignment of development traffic.

The TA whilst correctly reflecting the distance to local amenities including schools, shops and medical facilities etc fails to assess their capacities for additional use. Just stating that amenities exist and the distance to them does not mean they are necessarily attractive or useable. This is relevant in respect of the claims made in respect of walking distances and the adequacy of public transport. The claims made are irrelevant if the amenity concerned does not have the capacity to accommodate increased use. There should be further work on this aspect of the TA to demonstrate that what is claimed is robust and relevant.

## 4 Development Proposals

The vehicular site access is proposed to be a conventional priority junction on New Road with an additional emergency access provided by utilising the proposed separate pedestrian and cycle access route to the site. At this outline stage the principle of access is acceptable but will need to be subject to detailed design. The access has been subjected to a Stage 1 Safety Audit and suitable amendments made.

We would also urge the applicant to consider the possible issues around forward visibility for vehicles approaching from the north, the potential conflict with vehicles turning in and out of the committed development on Victoria Way opposite the proposed site.

Whilst Cambridgeshire County Council subscribes to the 'Manual for Streets' in its requirements for residential estate design and access, and the proposed development is broadly compliant, the proximity of junctions and speed of approaching vehicles does in our opinion require further scrutiny before being deemed acceptable.

The internal layout is broadly acceptable and appears to accommodate most vehicles that could reasonably be expected to attend the site.

There is little 'permeability' with the surrounding area in terms of pedestrian and cycling links. The main route for both modes into the village centre is via New Road where facilities for both modes are limited in places.

Some of the residential units and in particular those on main access route appear to have limited off street parking for vehicles. Whilst it could be that an integral garage is intended, it still appears that off street parking capacities are very limited and that no set back off street parking is provided. We suggest that further clarification of what levels of parking is to be provided and located is sought from the applicant.

The lack of apparent parking space and the need to demonstrate a reasonable level of parking may have an effect on the achievable number of units on the site. It can be seen that off street parking is shown in some instances but not others where it might reasonably be expected. As this is an outline application (including the Masterplan) the applicant may be in a position to change the layout quite simply but the number of parking spaces provided is a very pertinent issue and must be achievable. In this location there is no rationale for reducing the level of parking from the maximum standard applicable. The levels of public transport accessibility and proximity of local amenities are poor. This factor is relevant to the claims made for the Travel Plan. This will be discussed in a later section.

## 5 Development Trip Assignment

The methodology and selection of Trip Generation examples and Trip Rates is in our opinion robust and reasonable.

The assignment of both predicted development generated traffic and that of the previously consented (committed development) residential site on Victoria Way however, raise a number of issues that are relevant to the modelling undertaken and the conclusions drawn from the results.

We have considered all of the modelling undertaken by RJEC and in all cases except that of the Signalled controlled junction and find them acceptable. There are small instances where we disagree with the methodology or data presentation but correction of these issues will not materially impact on the outcomes.

The issues with the signalled junction we consider to be significant and in particular as this is the most constrained location in terms of the need for potential mitigation against traffic impact.

When considering the assignment of the predicted traffic from any development it is often the case where it is stand alone and remote from other communities that the attractiveness of nearby settlements and amenities are used to determine the most likely demand or traffic flows on the road network surrounding the development proposal.

In this case the proposal is on the edge of a very well established community. The applicant has also gathered a significant amount of existing traffic data where the established pattern of flows is well documented.

In the case of the signalled junction on the High Street the existing traffic flows show significant movements both to the right and ahead on leaving Mortlake Street in the morning peak and a corresponding movement into Mortlake Street in the evening peak. This level of use is supported by the less comprehensive work undertaken by the Parish Council in 2013.

It would be reasonable to expect that the assignment of development flows would reflect this existing use pattern. Instead we note that in the morning the highest number of trips approaching the junction are diverted via Russet Way (28) and that only 15 trips approach the junction. Of those 15 trips all are allocated to the left turn and none to the straight ahead movement to Station Way.

It is not reasonable to assume that none of the development generated traffic does not travel to the station via the signalled junction during the morning peak hour even if other trip destinations are excluded. It also ignores the established travel patterns for all other residential trips in the area.

This omission has the advantageous impact on the junction model of removing a significant increase in the number of right turns at the junction

which will always in these circumstances of constrained space, create very significant delays for the operation of the junction.

There is no reasonable rationale for this in the TA. The situation is just as pronounced in the evening peak where flows are reversed. This alone throws the validity of the signal modelling as it is currently presented into question.

There is then the issue of the committed development. The committed development flows show a reasonable allocation of flows at the junction and a pattern of flows that more reflects those of the existing pattern of flow in the village. We have not been party to all of the discussions that have taken place between the applicant and Cambridgeshire County Council but it could reasonably be asked why if the method of distributing predicted traffic generated by the committed development site was deemed acceptable, why it was not thought acceptable in the case of the current proposal. We presume that like in most dialogues with Highway Authorities in respect of these matters the subject of assignment of flows was discussed and agreed before modelling commenced. If it was we suggest that the RJEC provide clarification on this point. If it wasn't the work should be redone before any planning decision is made.

The allocation of 0% of the right turns at the junction to traffic generated by the site is unrealistic and has the potential to make the junction fail even with the proposed 'adjustments' to its operational aspects.

## **6 Development Impact Assessment**

The conclusions drawn from all of the work undertaken with the exception of the work undertaken in respect of the High Street Signalled junction (discussed in the preceding section) is acceptable.

## **7 Sustainable Transport Strategy**

The TA section 7 opens with the statement that 'The promotion and inclusion of sustainable transport options for potential future residents of the development is key to the accessibility of the site'. This is an obvious objective and in line with most current policy but needs to be considered in terms of both realism and practicality.

The first measure mentioned as a way of securing this objective is the use of a residential Travel Plan for the site. (A travel plan for any proposed care home may also be required in these circumstances.) A framework Travel Plan is attached to the TA.

Travel Plans are a common requirement for large developments of any type but can only be effective if the targets set for reducing travel by car are reasonable and most importantly realistic. The Travel Plan proposed does offer a number of short term incentives to encourage increased cycle use

and the TA offers improvements to a short length of footpath on the approach to the local rail station together with a few cycle parking spaces but nothing of any significance. The TA actually quantifies the expected number of cycle trips to work arising from the proposal at just 6 from the 199 dwellings.

Will the measures proposed significantly increase this number of cycle trips to and from work? Realistically in our experience the expectation would be just 5% per annum increase so effectively an imperceptible increase for the first 5 years.

The provision of a full Travel Plan in this respect seems a little extreme and is clearly a device by which claims to be sustainable etc can be justified.

It is also interesting to note that in the trip distributions/assignments previously discussed there were no trips to the station predicted as a result of the development. Perhaps this should be discussed in the Travel Plan?

A further proposal by the applicant is that the possibility of a contribution to a new bus service. This would, if achievable, be a benefit for the village as a whole. This is a possibility but, in practice very difficult to achieve unless a substantial amount of money is provided in advance of providing the service. Most operators will not consider providing a service unless they have a sound business case for doing so with an established passenger loading. Some but by no means all will consider operating a service on the basis that it is fully paid for a limited period. In these cases if after the period of funding has passed and there is not a sustainable passenger uptake, the service is withdrawn.

Whilst this is a possibility the developer is right to explore in most cases in our experience the capital outlay will prohibit full funding for a development of this size. If just a part payment is required this should be secured in a bonded account and time limited. Failure to secure a bus service by contribution within the time limit with others should release that contribution to a s106 fund for highway and safety improvements in the Parish. By this means the Parish retains some benefit from the developers contribution. A series of measures can be drawn up and costed for this eventuality.

Overall the measures proposed by the applicant appear weak and mostly in effective.

## **8 Injury Accident Assessment**

This section is acceptable and follows standard guidance.

### **Framework Travel Plan**

The residential travel plan conforms to DfT and Cambridgeshire County Council guidance and promotes numerous measures to promote and encourage walking, cycling, public transport use, car sharing and home working and confirms the proposed appointment of a developer funded travel plan co-ordinator prior to occupation of the site. The plan also proposes formal monitoring for 5 years following first occupation using the TRICS Standard Assessment Monitoring methodology and to be funded by the developer.

Whilst the Travel Plan will be compliant with current guidance we believe the developer has placed too much emphasis on its ability to reduce travel based impacts. In the proposed location for the development the ability to change travel modes is extremely limited so reliance on the car will remain high with the corresponding impacts on the surrounding road network.

### **Overall Conclusions**

- 1) The transport assessment, travel plan preparation, trip generation and junction capacity assessments have been carried out in accordance with National/County guidance and followed the scope agreed with Cambridgeshire County Council;
- 2) The assignment of generated flows at the junction of Mortlake Street/High Street and the approaches to it is flawed and it follows that the junction modelling must be called into question. This should be reworked prior to any planning decision is taken as the junction is the most significant in respect of the village and its day to day operation, in traffic terms.
- 3) No mention has been made of the impact development generated traffic will have on local conditions outside of the junctions modelled such as increased traffic past the local school at peak times and the demand for parking at local amenities that are already under stress. This should be examined and appropriate measures suggested for dealing with any adverse impacts suggested and secured by agreement.
- 4) The proposed works and measures to mitigate impact are weak and ineffective with no guarantees of either the implementation or success. If consent is granted measures that are self enforcing with guaranteed benefits should be secured through appropriate agreement.

# Appendix A

## Melbourn Parish Council Traffic Flow Data 2013



18th March 2013 7.15 - 9.15 a.m.	CYCLES		MOTOR CYCLES		CARS		VANS		LORRIES / BUSES		FARM VEHICLES		TOTALS
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
New Road	2	2	1	1	286	237	38	34	13	15	0	0	629
Primary School	6	6	1	1	404	271	32	23	15	21	0	0	780
In from Shepreth	8	3	1	2	252	324	54	53	18	9	0	0	724
Back Lane	7	11	1	1	471	354	60	68	33	29	0	0	1035
Station Road	17	7	0	1	449	387	53	30	18	9	2	0	973
Old A10 past Co-op	11	6	2	3	238	330	52	70	13	15	0	2	742
<b>TOTAL MOVEMENTS</b>	51	35	6	9	2100	1903	289	278	110	98	2	2	<b>4883</b>
18th March 2013 3.15 - 5.45 p.m.													
New Road	2	1	2	1	222	307	26	36	23	14	1	0	635
Primary School	11	4	0	2	386	357	45	36	30	33	0	2	906
In from Shepreth	7	6	2	2	339	354	45	51	42	45	1	0	894
Back Lane	2	4	1	2	327	374	51	53	19	16	0	0	849
Station Road	7	15	0	3	441	476	66	69	10	10	0	0	1097
Old A10 Past Co-op	11	6	3	2	290	576	45	84	12	9	0	1	1039
<b>TOTAL MOVEMENTS</b>	40	36	8	12	2005	2444	278	329	136	127	2	3	<b>5420</b>
20th March 2013 7.15 - 9.15 a.m.													
New Road	0	1	1	0	285	237	25	32	10	15	0	0	606
Primary School	4	6	2	0	347	191	41	50	10	10	0	1	662
In from Shepreth	7	11	0	4	303	346	50	51	24	19	1	0	816
Back Lane	8	7	2	0	465	375	69	77	23	34	0	0	1060
Station Road	17	15	0	0	456	390	48	41	24	25	0	0	1016
Old A10 past Co-op	14	18	1	5	272	499	51	73	21	18	1	0	973
<b>TOTAL MOVEMENTS</b>	50	58	6	9	2128	2038	284	324	112	121	2	1	<b>5133</b>

20th March 2013 3.15 - 5.45 p.m.	CYCLES		MOTOR CYCLES		CARS		VANS		LORRIES/BUSES		FARM VEHICLES		TOTALS
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	
New Road	5	6	0	6	257	361	49	40	12	8	0	0	744
Primary School	4	7	0	1	446	420	56	54	18	9	0	0	1015
In from Shepreth	11	5	6	0	822	451	81	56	34	23	0	0	1489
Back Lane	3	10	1	1	368	522	54	79	24	18	0	0	1080
Station Road	10	15	0	1	466	582	57	36	23	36	0	0	1226
Old A10 past Co-op	4	6	1	0	373	650	63	86	27	18	0	0	1228
<b>TOTAL MOVEMENTS</b>	<b>37</b>	<b>49</b>	<b>8</b>	<b>9</b>	<b>2732</b>	<b>2986</b>	<b>360</b>	<b>351</b>	<b>138</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>6782</b>
<b>22nd March 2013 7.15 - 9.15</b>													
New Road	1	2	1	1	302	241	35	44	19	15	0	0	661
Primary School	9	4	2	0	425	238	38	45	16	13	0	0	790
In from Shepreth	3	6	1	3	323	328	39	44	20	18	0	0	785
Back Lane	9	7	3	1	482	326	51	57	42	34	0	0	1012
Station Road	15	10	1	1	425	387	58	52	19	12	0	0	980
Old A10 past Co-op	8	12	2	4	250	478	45	59	17	18	0	0	893
<b>TOTAL MOVEMENTS</b>	<b>45</b>	<b>41</b>	<b>10</b>	<b>10</b>	<b>2207</b>	<b>1998</b>	<b>266</b>	<b>301</b>	<b>133</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>5121</b>
<b>22nd March 2013 3.15 - 5.45 p.m.</b>													
New Road	1	1	2	1	238	208	31	29	12	13	0	0	536
Primary School	1	2	3	1	436	426	66	45	15	21	0	0	1016
In from Shepreth	6	5	3	0	479	420	37	52	49	42	1	0	1094
Back Lane	4	7	0	3	431	522	64	51	18	22	0	0	1122
Station Road	7	14	1	3	451	424	31	44	17	20	0	0	1012
Old A10 past Co-op	8	12	2	5	324	598	38	72	8	13	0	0	1080
<b>TOTAL MOVEMENTS</b>	<b>27</b>	<b>41</b>	<b>11</b>	<b>13</b>	<b>2359</b>	<b>2598</b>	<b>267</b>	<b>293</b>	<b>119</b>	<b>131</b>	<b>1</b>	<b>0</b>	<b>5860</b>