



Proposed Magor Station - An estimation of car parking and other issues.

A paper for consideration by the MAGOR group

1. Background

- 1.1. The currently preferred site for a station to serve Magor and Undy is south of the land designated for the community centre (51° 34' 41" N, 2° 49' 24.5" W). It is envisaged that access to the station would be from the north side of the station, from Main Road (B4245), Undy and would share the community centre entrance. Access to the south side, other than by footbridge / ramp / lift from the north side, if it all possible, would only be via a footpath from Whitewall.
- 1.2. The proposal contained in MAGOR's (Magor Action Group on Rail) vision document (see www.magorstation.co.uk) makes clear that this station would be of a 'walkway' nature. That is, it would be designed to serve, in the main, the populations of Magor and Undy who are generally close enough to walk or cycle to the station from their homes. There would be little or no provision for long stay car parking. This is to take advantage of the proximity passengers have to the site, both from an environmental perspective (e.g. reducing car use and local road congestion) and for the obvious health benefits.
- 1.3. Clearly for numerous reasons (e.g. weather, health, lateness) some passengers would wish to be 'dropped off' (and/or 'picked up') at the station either by private vehicle, taxi or bus. Adequate provision will need to be made to accommodate this.
- 1.4. Others, again for various reasons, may try to park as close to the station as possible, whilst trying to minimise costs or cause an obstruction that may result in a fine or some form of penalty. This is believed to be a significant risk that would detract from the overall benefits of having a station.
- 1.5. The scale of the issues in 1.4 is unknown but by using some of the data from a passenger survey carried out at Severn Tunnel Junction (STJ) in December 2012 (Draft Report May 2013, STJ Interchange WelTAG & Demand Forecasting Report by Capita Symonds on behalf of Monmouthshire County Council) an initial estimation of loading can be made. However a full local survey would need to be made as part of the Station Capacity Assessment required for a formal business case.
- 1.6. The WelTAG report identified that there were 188,592 entries and exits from STJ in 2011/12 and has been growing by, on average, about 6% year on year.



- 1.7. This paper aims to make a preliminary estimation of the expected loading on a new station at Magor and identify the scale of any adverse impacts resulting from 'close parking' and other issues and how the risks could be mitigated.
- 1.8. The Group is asked to consider the contents and conclusions and provide feedback.

2. The Survey

- 2.1. The survey was carried out on 2 separate days in December 2012 – a Wednesday (5/12/13) and a Saturday (8/12/13), presumably to show the passenger profile difference between mid week (expected to be largely commuting) and week-end (expected to be largely shopping / leisure). It targeted passengers waiting for and exiting from trains at Severn Tunnel Junction station. The survey was carried out by trained enumerators, and took the form of a structured questionnaire.
- 2.2. There were a total of 84 people consulted on the Wednesday (21 from Magor and Undy) and 110 people consulted on the Saturday (27 from Magor and Undy). Use by gender (Magor and Undy) was about equal on the weekday but there was a slightly higher female use on the weekend. It is uncertain if these totals were absolute or if some passengers were missed (e.g. if they arrived late and boarded a train before being spoken to). Over the 2 days 24.7% of the people travelling to and from Severn Tunnel Junction originated from Magor and Undy. This percentage would be slightly higher if passengers from other villages who might use a station in Magor were included (e.g. Llanmartin and Underwood).

2.3. Destinations are shown in the following table

Destination	Wednesday 5/12/13	Saturday 8/12/13
Bristol	7	3
Filton Abbey Wood	1	0
Bath	1	2
Newport	1	0
Cardiff	10	16
London	1	0
Swansea	0	2
Birmingham	0	2
Other	0	2
Total	21	27

2.4. Reasons for travel are shown in the following table

Reason	Wednesday 5/12/13	Saturday 8/12/13
Commuting	9	2
Business	3	0
Education	2	0
Shopping / Leisure	5	19
Other	2	5
Total	21	26 +

2.5. Passengers' estimations on frequency of use of STJ are shown in the following table

Frequency of Use	Wednesday 5/12/13	Saturday 8/12/13
Use every day	8	4
3 or 4 times per week	3	2
1 or 2 times per week	2	0
1 to 3 times per month	4	10

Less frequently	3	11
Total	20⁺	27

2.6. Passengers means of getting to station

Means	Wednesday 5/12/13	Saturday 8/12/13
Car (parked)	9	7
Car (dropped off)	8	17
Bus	2	0
Cycled	1	0
Walked	0	2
Total	20⁺	26⁺

* NB Some passengers did not give an answer to all questions

2.7. Other significant observations from the survey

2.7.1. Passenger origins (weekday), in percentage terms, - Magor and Undy (25%), Rogiet (23%), Caldicot (12%), Chepstow (7%) 14 other places (33%)

2.7.2. Passenger origins (weekend), in percentage terms, - Magor and Undy (24%), Rogiet (23%), Caldicot (21%), Chepstow (7%) 16 other places (25%)

2.7.3. No passenger admitted to parking on the Community Council field.

2.7.4. If additional parking charges were increased by £1/day, the majority of passengers said they would park in a different location or reduce the number of train journeys.

3. Interpretation of Data

3.1. Estimation of the potential use of Magor station

3.1.1. Based on the latest entry and exit levels at STJ (i.e. 188592 per annum in 2011/12) and assuming people from Magor and Undy could obtain the same service from a new Magor station then the number of 'entries and exits' would be around 130/day (25% of the current STJ load)

3.1.2. In reality this straight transfer of load from STJ to Magor and Undy is unlikely to happen in practice as STJ would, in all probability, offer greater service options (i.e. more trains).

3.1.3. However, whereas there is significant use of the train service by Caldicot and Rogiet people to travel to Newport (from STJ) there is virtually no use by Magor and Undy people (see tables above) as it is counter-intuitive to travel 2 or 3 miles in the wrong direction, incurring cost, to make an 8 mile journey into an 11 mile journey. This would undoubtedly change if there was a station at Magor that offered a regular Newport service could be something akin to the number of journeys Caldicot and Rogiet users make to Newport from STJ (around 10 journeys a day or 20 entries and exits).

3.1.4. Assuming that an estimate of 130 'entries and exits' a day at Magor station is a reasonable working figure, then some estimations can be made of what the future means of getting to the new station might be. This is by using a combination of what

Magor and Undy users currently do at STJ and what the difference having a station 'on the doorstep' might make. From this, potential impacts and issues can be estimated.

- 3.1.5. In an absolute 'worst case scenario', 130 'entries and exits' could equate to 65 cars being parked for the day somewhere near the station. This is implausible but gives an indicative starting point from which to consider the scenarios. It could also equate to 65 'drop-offs' and 65 'pick-ups' if everyone chose not to walk or cycle (or park).
- 3.1.6. Whilst the new station would be promoted as a 'walkway' and everyone strongly encouraged to use it as such, humans are heavily influenced by factors such as the weather, luggage that needs to be carried, whether they have children with them or even how they are feeling at the time. Therefore some estimation needs to be made of what 'reality' might be (as suggested above). The following table shows how the proportions of 'means of getting to the station' might change from the practices currently employed by Magor and Undy people who use STJ (table 2.6).

Means	Weekday (now STJ) Entries and Exits (%)	Weekday (future Magor) Entries and Exits (%)	Saturday (now STJ) Entries and Exits (%)	Saturday (future Magor) Entries and Exits (%)	Commentary
Car (park)	45%	10% (6 cars parked)	27%	15% (10 cars parked)	Significant reduction but assumes that there will be a continuing car parking pressure for reasons given in 3.1.6. Possibly higher on weekends.
Car (drop off / pick up)	40%	20% (26 cars entering to drop off or pick up through the day – peaking 7-8.30am and 4.30 – 6pm)	65%	30% (40 cars entering to drop off or pick up through the day but spread more evenly)	Assumes that half of the people who are currently 'dropped off' on weekdays would be willing to walk or cycle. This would likely be less on Saturdays if, for example, shopping needs to be carried home or if the trip is for leisure and children are involved
Bus	10%	0 - 10%	0%	0%	Little or no bus use is expected
Cycle	5%	10% (6 cycles parked or taken on train)	0%	10% (6 cycles parked or taken on train)	Could expect double the number of cyclists if the ride is only a mile or so compared with the 3 miles to STJ.
Walk	0%	50% (around 32)	8%	45% (around 30)	These estimates could be considered low but

		passengers making return journeys)		passengers making return journeys)	nevertheless represents a significant reduction in car use
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4. Impacts

4.1. Car parking

4.1.1. If the estimates are correct, 6 to 10 cars being parked somewhere close to the station may be less than expected and may not cause a major problem initially. However with growth in train use and an increasing local population any problem would only increase.

4.1.2. The expected places that people may park (if, as planned, there was no long stay car park for the station) are –

- The community centre - any car parking here would clearly be for users of the centre and as such would lead to conflict
- Along Main Road (B4245) - this would create additional hazards for road users and may impact the local residents who have access to their houses.
- The 'pull in' near to Mayfair Stores - which would impact the business and users of the business
- The lower end of Penny-farthing lane - again causing additional road hazards.

4.2. Drop offs and pickups

4.2.1. If a limited waiting area was built (either within the community centre site or as near as possible to the station) to permit drop offs and pickups, up to 40 entries and exits from the main road could be expected. On average this would only be around 4 an hour but with peaks on weekdays, during the morning and evening 'rush hours', this would undoubtedly be hazardous to users of the station and the users of the B4245.

4.3. Cycle Use

4.3.1. Although cycle use to the station is not expected to be high, cyclists along with foot passengers would be vulnerable to injury from cars using the station.

4.4. 'Walk In' Passengers

4.4.1. Around 60 additional people a day would be using the pavements and crossing the roads around the station area and be vulnerable to injury. This is believed to be a significant area of risk.

5. Mitigations

5.1. Clearly with the estimated load on the station and one that would continue to grow in future years the risks associated with the above, which are largely of a health and safety nature but also of nuisance and inconvenience, would need to be managed from the outset. A full survey and modelling exercise needs to be carried out but it is clear that a number of possible mitigations could be envisaged such as -

- Community centre parking would need to be controlled in some way to limit the length of stay or restrict to legitimate centre users

- Double yellow lines along the B4245 near to the station entrance and possibly at the lower end of Penny-farthing Lane to prevent obstructive parking
- Waiting limited to say 30 minutes at the Mayfair Stores 'pull in'
- Traffic lights to control the entrance and egress from the community centre site (if this is where the drop off / pick up site is situated)
- A cycle way from Sycamore Terrace to the station to limit the need of cyclists from using the main road
- An additional pedestrian crossing across the B4245 near the community centre site may be necessary

6. Conclusions

- 6.1. Although the station would aim to be predominantly of a walkway type, it would be naive to believe that it would be anything close to 'car free'.
- 6.2. The loadings and consequential risks and impacts may not be as high as perhaps envisaged but they would soon become noticeable and should be managed from the outset.
- 6.3. Safety is probably a greater risk than nuisance parking
- 6.4. Making estimates without real 'what if' (there was a station in Magor for you to use) data provides only a very rough and possibly incorrect view.

7. Recommendations

- 7.1. The MAGOR group considers the paper and provides feedback at the next meeting
- 7.2. The Group agrees how and when real data be obtained that could be used as part of the formal station assessment and business case

Paul Turner

11th July 2013