



**West Lothian  
Council**

**COUNCIL EXECUTIVE**

**THE NETWORK RAIL KIRKNEWTON LEVEL CROSSING ORDER 2013  
B7031 STATION ROAD, KIRKNEWTON**

**HEAD OF OPERATIONAL SERVICES**

**A. PURPOSE OF REPORT**

The purpose of this report is to:

- update the Council Executive on the status of the ongoing development by Network Rail of measures to improve rail safety at Kirknewton level crossing;
- highlight concerns with regard to the likely impact of the latest proposal on local traffic access, pedestrian movements, emergency service response times, and bus services;
- advise Council Executive of the comments received following consultation with a number of key agencies and Kirknewton Community Council; and
- seek approval to the council position as roads authority regarding the proposed Level Crossing Order.

**B. RECOMMENDATION**

It is recommended that Council Executive approve that:

- the council as roads authority object formally to the current proposals outlined in the Network Rail Kirknewton Level Crossing Order 2013 for the reasons contained in Appendix 1; and
- the Secretary of State for Transport is asked to impose a requirement on Network Rail to mitigate the impact of the proposal on pedestrians by the provision of a grade separated pedestrian crossing.

**C. SUMMARY OF IMPLICATIONS**

**I Council Values**

- Focusing on our customers' needs;
- being honest, open and accountable;
- making best use of our resources; and
- working in partnership.

**II Policy and Legal (including Strategic Environmental Assessment, Equality Issues, Health or Risk Assessment)**

The Level Crossings Act 1983(a).  
The Secretary of State for Transport at the request of Network Rail Infrastructure Ltd and in exercise of his powers under this Act has powers to make a level crossing order.

Policy TRAN 24 of the WLLP supports the removal of the level crossing subject to the retention of two fully operational access points into the village of Kirknewton.

<b>III Implications for Scheme of Delegations to Officers</b>	None.
<b>IV Impact on performance and performance Indicators</b>	None.
<b>V Relevance to Single Outcome Agreement</b>	Outcome 9 - We live our lives free from crime, disorder and danger; Outcome 10 - We live in well-designed, sustainable places where we are able to access the services we need; and Outcome 12. We value and enjoy our built environment and protect it and enhance it for future generations.
<b>VI Resources - (Financial, Staffing and Property)</b>	Future maintenance responsibilities for road traffic signs and markings and road surface will rest with the council.
<b>VII Consideration at PDSP</b>	N/A
<b>VIII Other consultations</b>	Police, Fire, Ambulance, Kirknewton Community Council and bus operators.

## **D. TERMS OF REPORT**

### **D1 Background**

On 26 February 2013 Council Executive considered a report on the initial consultation stage of the proposal by Network Rail Infrastructure Ltd (Network Rail) to replace the current Automatic Half Barrier (AHB) with a Manually Controlled Barrier with Object Detection (MCB-OD). The proposal to install an MCB-OD is likely to have a serious impact on accessibility to Kirknewton and would have a significant adverse impact on public transport and emergency access to the village.

Council Executive agreed that officer's seek views and comments from the emergency services, bus operators and the community council. Officers were also instructed to write to the Network Rail and advise them of a notice of motion approved by council Executive on 26 February 2013. The minute, notice of motion and the letter to Network Rail are background papers to this report. To date there has been no response from Network Rail.

In addition officers have written to the Secretary of State for Transport expressing concern at the proposals and the timing of the works in relation to the Order approval process. (Reference is made to section D9).

Network Rail has applied to the Secretary of State for Transport for an Order at Kirknewton Level Crossing, under Section 1 of the Level Crossing Act 1983. The application was made on 14 March 2013 and this stage of the Order process is for formal representations to be made. The final date for representations to the Secretary of State for Transport is 15 May 2013.

## **D2 Current Proposal - The Network Rail Kirknewton Level Crossing Order 2013**

The Order proposal put to the Secretary of State for Transport is unchanged from that discussed at council executive in February 2013. A MCB-OD is proposed which is a full width barrier arrangement which prevents any access onto the railway line once the gates are lowered and all vehicles and pedestrians must wait until the barrier is raised before they can cross the railway.

Five of the twenty-four hourly weekday periods have more than 30 minutes (50%) down-time. The morning peak has the highest hourly down-times with 36 minutes 13 seconds (60%) between 07:00 and 08:00 and 34 minutes 19 seconds (57%) between 08:00 and 09:00. The slow running of some freight trains has been identified as a contributor to some of the hourly down-times including the highest one between 07:00 and 08:00. This will be discussed again later.

The current AHB barrier arrangement is such that when operated by a single train the road is closed to traffic for 31- 34 seconds. There are occasions when the existing AHB stays down to allow a second train to pass and although times vary the down time is still below 1 minute 30 seconds.

It can be confirmed that pedestrian and vehicles counts have now been done for Network Rail to ensure that the data collected conforms to relevant design guidance for level crossing installations. However, based on the information above there remain serious concerns that the impacts of the proposed full barrier on all users of the crossing have not been fully assessed.

Network Rail has made no assessment of queue lengths and delay to traffic using the level crossing or the impact of the proposals on access for emergency services to Kirknewton and the A70. No assessment has been made on the impact of diverted traffic on the existing surrounding road network, junctions and Kirknewton Main Street.

The comments made during the consultation undertaken by council officers are noted below in sections D5 to D8.

## **D3 Assessment of Traffic Impacts**

Network Rail has supplied traffic data in support of the proposed Order. However, there is no information supplied on the length of queuing traffic at the crossing, or the delays to traffic due to the proposals. Furthermore, no attempt has been made to look at the impact of traffic diverting onto alternative routes on the surrounding road network.

Appendix 3 gives a summary of the traffic and pedestrian data collected by Network Rail.

Council officers have taken the train and traffic data supplied by Network Rail and created a vehicle by vehicle traffic simulation model (Paramics Model). The model estimates the impact of the MCB-OD on traffic movements at the level crossing. From the data provided the impact on traffic during the day is split into three distinct time periods.

### **Morning Peak period 7 a.m. to 10 a.m.**

Estimated maximum barrier down time of 11 minutes and 33 seconds.

During the 30 minute period 7:25 till 7:55 there is substantial queuing.

Estimated total downtime in this 30 minute period is 27 minutes and 11 seconds.

Maximum queue length Southbound up to 350 metres. (approximately 44 vehicles).

Maximum queue length Northbound up to 330 metres. (approximately 40 vehicles).

The 11 minute 33 second barrier closure is followed by a 20 second period when the road is open to traffic. During these 20 seconds only 5 vehicles clear the crossing and this compounds the queuing problems during this time period.

Outside of this 30 minute period traffic queues clear when the barrier is next raised so the maximum waiting time will be the time the barrier is down. The range of barrier down time is 50 seconds up to 6 minutes and 23 seconds, with an average of 3 minutes 10 seconds.

### **Evening Peak period 4 p.m. to 7 p.m.**

Estimated maximum down time of 5 minutes 29 seconds.

Maximum queue length Southbound up to 187 metres. (approximately 25 vehicles).

Maximum queue length Northbound up to 126 metres. (approximately 14 vehicles).

During this time period traffic queues clear when the barrier is next raised so the maximum waiting time will be the time the barrier is down. The range of barrier down time is 50 seconds up to 5 minutes and 39 seconds, with an average of 3 minutes 11 seconds.

### **Off Peak periods 10 a.m. to 4 p.m. and 7 p.m. to midnight**

Estimated maximum down time of 3 minutes 55 seconds

Estimated maximum queue up to 25 metres. (approximately 4 vehicles).

During this time period traffic queues clear when the barrier is next raised so the maximum waiting time will be the time the barrier is down. The range of barrier down time is 50 seconds up to 3 minutes and 55 seconds.

## **D4 Kirknewton Community Council**

Following the decision by Network Rail in September 2011 to abandon the bridge and pedestrian underpass option, the details of the proposed MCB-OD were first presented to Kirknewton Community Council (KCC) at their meeting on 12 March 2013. Network Rail presented the barrier downtimes and there were concerns raised by attendees at the community council meeting about the impact on traffic and also the problems created for pedestrian access to the platforms.

KCC have since met with Network Rail indicating that they are "*only looking for a pragmatic, yet effective solution to the likelihood of lengthy closures of the full level-crossing barriers in the morning and evening peak-hour periods, preventing potential passengers from catching their trains and causing parents substantial delay in getting their children to school*".

KCC consider that the following points emerged from their meeting:

- Network Rail had not really contemplated the likelihood of "trespass" across the railway lines somewhere, caused by passenger frustration, nor the accident risk that follows such behaviour;

- Network Rail had given no thought into pursuing the “pedestrian” element of this new MCB-OD scheme, as no costings could be quoted for this suggestion;
- Network Rail have been relying on traffic data averaged out over a 24 hour period to justify the new MCB-OD level-crossing design’s suitability without really focussing on the peak-hour issues, which of course really define the utility of the Station and the public use of the road;
- There is a sensitivity to resolve the peak-hour problem, but they have no funds to deal with it within the current 5-year Control Period funding arrangement and that no further funding can be contemplated;
- Network Rail had not put their minds to any means of satisfying these sensitivities, and were surprised by some suggestions tabled by KCC, notably a path running along the North side of the track to join up with the road which leads under the bridge towards Kirknewton Mains or a temporary standard height, non-DDA compliant bridge, platform to platform, at the east end of the platforms, where the overhead electric line catenary effect is very modest; and
- the design work on the MCB-OD should have been completed by summer last year and reported back to KCC, a promise, which was not fulfilled, but which, if it had been, would have obtained the responses, now being given, and would have thereby given them the chance of getting something in place co-temperaneously with the installation of the new MCB-OD.

KCC consider that measures are needed as soon as possible to mitigate on a temporary basis the impacts of the MCB-OD but that now is the time to get an assurance from Network Rail and their funders, be it Transport Scotland or Department for Transport that adequate arrangements will be put in place in a timely manner to deal with the peak-hour problem and pedestrian access.

Measures suggested by KCC include the provision of;

- a temporary platform to platform bridge over the electric lines at the east end of the platforms which will prevent trespass and associated accident risk across the rail-tracks;
- a newly created pedestrian path along the northern boundary of the railway line to the Kirknewton Mains Farm existing under-pass would satisfy most passengers from Kirknewton; and
- the proposed pedestrian under-pass element of the discarded plan would serve both of the above, as it would only be used, when the new level-crossing barriers are down and also, when the barriers are up, pedestrians can proceed directly across the level-crossing itself: this arrangement would then enable the removal of the temporary bridge, which therefore need not be made DDA compliant.

## **D5 Police Scotland**

Police Scotland has indicated their concern with the estimated barrier downtimes provided by Network Rail (Appendix 2). A potential closure for 36 minutes per hour during peak morning traffic flows is significant enough however figures suggest a closure of 25 minutes and 26 seconds during a period of 30 minutes 19 seconds from 0725 hours on a Wednesday morning.

Police Response, Community and Safer Neighbourhood Team officers for the Kirknewton area are all based at Broxburn Police Station. As such, the most viable route to the village or on towards the A70 is via the B7031 and through the Kirknewton level crossing. Closures for such a lengthy period of time effectively close this route for most traffic encouraging the use of less suitable rural routes such as the unclassified road from Wilkieston or further east to Linburn Road, both options have their drawbacks, particularly during peak traffic flows on the very busy A71.

As a result of the lengthy safety barrier closures on the B7031 it is anticipated that local commuters will make use of alternative routes. Police Scotland are not aware of this having been modelled and therefore the level of potential displacement of traffic onto narrow rural routes is presumably unknown.

There is also concern regarding the lack of provision for pedestrians using or passing the Kirknewton Railway Station. It seems clear any Kirknewton resident intending to travel to Edinburgh by train or walk to the A71 will have to wait while the barrier is down. There are serious concerns some individuals may cross the tracks out-with the safety barrier and Network Rail do not appear to view this as a risk.

#### **D6 Scottish Fire and Rescue Service**

During a meeting with the Scottish Fire and Rescue Service they expressed general concerns and have sought a separate meeting with Network Rail to discuss this matter. Officers are not aware that this meeting has yet taken place.

#### **D7 Scottish Ambulance Service**

The key points raised in the response from the Scottish Ambulance Service regarding the proposals for a MCB-OD are quoted below.

*“Notwithstanding the benefits of this upgrade to the safety of the crossing itself, it is very clear that the significantly increased “down time” of this barrier will have a major effect on emergency access to the village of Kirknewton and through to the A70 corridor. For this reason the Scottish Ambulance Service wish to raise an objection to the approval of this upgrade.”*

*“The upgrade of the level crossing on Station Road, Kirknewton to MCB-OD will have a significant detrimental impact on the safety of the residents of Kirknewton village and users of the A70 due to the increase in ambulance response times. Historical data shows that, on average, the response to 120 calls each year from people in need of emergency access to healthcare may be significantly delayed, with one area at particular risk including a church and a primary school. Of those 120 people, 40 will be in immediate danger of losing their life. We consider this risk to be unacceptable and would ask Network Rail to revisit alternative solutions.”*

There are clear concerns from the Scottish Ambulance Service regarding the effect on the services they provided and Scottish Ambulance Service have indicated their intention to write directly to the Secretary of State for Transport with these concerns.

#### **D8 Bus Operators**

The response from First Scotland East regarding the proposals is summarised below;

- the impact of this upgraded level crossing will be to make the operation of a bus service through Kirknewton which adheres to the standards of reliability expected of them by the Scottish Traffic Commissioner impractical. These standards are that 95% of journeys should operate not more than one minute early or five minutes late when checked at any point on the route;

- to accommodate the level crossing upgrade they would need to add significant additional running time to the service;
- on many occasions this would not be required resulting in the bus having to pull in at the side of the road to wait its scheduled time making the service unattractive to the majority of our passengers who are not travelling to or from Kirknewton; and
- in response to the level crossing changes most bus companies would simply submit an application to the Traffic Commissioner's Office to re-route its bus service so that after the statutory notice period it will no longer serve Kirknewton.

For First Scotland East the position is rather more complex as service 28 through Kirknewton is one of several routes subject to undertakings agreed with the Competition Commission. These undertakings apply to routes which run close to railway lines and get a significant proportion of their revenue from passengers making journeys for which rail services offer a reasonable alternative.

The undertakings are intended to prevent changes to services likely to have the effect, intentional or otherwise, of making some passengers transfer from bus to rail. Things controlled include the timings and frequency of buses, the capacity of buses used on the service and the distance of stopping points from railway stations.

First Scotland East indicate that they are currently going through a series of legal steps in an effort to achieve a relaxation to the undertakings which will enable them to vary the route of service 28 so that it operates as service 27 already does through Wilkieston. They are prepared to consider a minor diversion of service 28 via Milrig which would allow buses to stop closer to Kirknewton subject to suitable bus stop locations being agreed. This would, however, be on the far side of the railway from the village and could only be done if the B7031 / A71 junction was improved to allow an acceptable right turn for buses heading towards Edinburgh onto the A71 which would probably require either a roundabout or traffic lights.

The other bus operator in the area, Blue Bus Limited, has indicated their concerns about delays to services at a meeting with council officers but has not formally responded to the council with detailed comments.

It should be noted that the assessment assumes that all freight train paths available on the railway network are always used. This is not the case and therefore, the information presented on the traffic assessment is a worst case scenario. If a freight train does not run this will result in either a shorter down time or an additional period when the barrier is open to traffic. Conversely, the assessment does not assess what happens to the barrier down time pattern as a result of delays to train services.

## **D9 Department for Transport**

Officials from the Department for Transport (DfT) undertook a visit to the site of the level crossing on 18 April 2013. As well as watching the operation of the crossing the officers drove along Leyden Road the most likely diversion route for southbound A70 traffic. A meeting was attended by officers from the DfT, West Lothian Council and Transport Scotland (Technical Services, Rail Delivery) to allow Council officers to advise on the key items of concerns for the local community, the emergency services and the Council.

DfT officers confirmed that the discussions at the meeting will assist them in reviewing the proposed Order within the wider community context and inform their view on impacts of the proposals and the necessary balance between rail safety and the convenience of all users of the level crossing.

Council officers made a number of points about issues of concern including:

- the timing of the Level Crossing Order process and the timing of the proposed implementation of the physical works;
- the delays at the longest down times to pedestrians and vehicle queue lengths;
- a lack of mitigation for delays to pedestrians and vehicles to prevent trespass onto the railway;
- a risk of tailgating across the level crossing because of extended delays at the worst traffic queuing times;
- the limited alternative access routes to and around Kirknewton and the A70;
- the suitability of potential alternatives routes should traffic divert; and
- the impact on emergency services.

In addition council officers outlined the KCC views on mitigation and the need for providing a grade separated pedestrian crossing facility across the line at this location.

The potential provision of a “countdown clock” was raised by officers since driver behaviour is managed better when they can make informed decisions based on how long they will have to wait.

On the matter of emergency service access DfT did say that the emergency telephone lines are used elsewhere by emergency services to seek a priority crossing of the railway and Network Rail signallers have the ability to deal with these requests. However, the usefulness of this tool is dependent on train arrival patterns.

Council officers stressed that if DfT were minded to recommend mitigation measures, such as a grade separated crossing of the railway, then funding and timescale for completion should be clearly identified to guarantee delivery of the measures.

Finally, council officers advised that following their modelling work and assessment of the submission by Network Rail their recommendation would be to object to the Order.

During their visit DfT officers were also having discussions with Network Rail and Transport Scotland as part of their process to gather sufficient information to take a balanced view on the proposal in terms of rail safety and convenience of all users of the crossing.

## **E. CONCLUSION**

The proposal to install an MCB-OD has a serious impact on accessibility to Kirknewton and would have a significant adverse impact on public transport and emergency access to the village.

These impacts will depend on the pattern of train movements and increases in the volume of train using the line will result in greater delays for traffic on the B7031.

The timing of the consultation and the proposed delivery programme for the works do not allow a reasonable timescale for matters raised to have been resolved in advance of a decision being made by the Secretary of State for Transport.

KCC and Police Scotland have raised the issue of the risk of pedestrians crossing the railway when the barrier is closed because of the length of the waiting time and KCC support the provision of a temporary pedestrian bridge to reduce the risk of misuse of the crossing.

Without suitable mitigation in place to provide pedestrian platform access the council consider that there is a risk of pedestrians crossing the railway and that the Secretary of State for Transport should be asked to impose a requirement on Network Rail to provide suitable temporary and long term access for rail passengers.



## **F. BACKGROUND REFERENCES**

Minute of Council Executive meeting of 26 February 2013.  
Notice of Motion approved at Council Executive on 26 February 2103.  
Letter to Network Rail dated 05 March 2013.  
Letter to Secretary of State for Transport 21 March 2013.  
Letter 14 March 2013 from Network Rail (and enclosures).  
The Draft Network Rail Kirknewton Level Crossing Order 2013.  
Kirknewton Level Crossing Down-Time Estimation Report by Network Rail.  
E-mail from the Chair of Kirknewton Community Council dated 9 April 2013.  
E-mail from Scottish Police Service dated 14 April 2013.  
E-mail from Scottish Fire and Rescue Service dated 4 April 2013.  
Letter from Scottish Ambulance Service dated 3 April 2013.  
E-mail from First Bus dated 5 April 2013.

Appendices/Attachments: Three

Appendix 1 : Summary of reasons for objection.  
Appendix 2 : Summary of barrier down times in 24 hour assessment period.  
Appendix 3 : Summary Traffic Survey Data.

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Jim Jack, Head of Operational Services.

23 April 2013



West Lothian  
Council

## APPENDIX 1

### THE NETWORK RAIL KIRKNEWTON LEVEL CROSSING ORDER 2013

#### GROUNDNS FOR OBJECTION TO THE PROPOSED MCB-OD

- The proposals make no allowance for pedestrian platform access during the substantial down time and provide no mitigation to discourage pedestrians from taking a risk and crossing the railway.
- The level of queuing traffic in the morning peak period is substantial and will lead to traffic diverting onto less suitable local roads.
- The proposal will lead to a reduced level of access to Kirknewton and the A70 for fire and ambulance services in particular.
- The proposals will lead to a reduced level of bus service to Kirknewton.
- The timing of the works and the commencement of the Order by Network Rail has not allowed a reasonable time for any matters of concern to be raised and resolved in advance of the Secretary of State's formal consideration of the order.
- The council consider that Network Rail should have consulted on a wider basis with emergency services and the community councils prior to commencing the Order process.

THE DATA BELOW IS EXTRACTED FROM INFORMATION SUPPLIED BY NETWORK RAIL

HOUR	Closure Starts (Traffic should not cross the stop line)	Open To Traffic	More than one train	BARRIER DOWN ROAD CLOSED TO TRAFFIC (hr:min:sec)	BARRIER UP ROAD OPEN TO TRAFFIC (hr:min:sec)
00:00 - 01:00	0:06:01	0:09:44		0:03:43	1:21:23
01:00 - 02:00	1:31:07	1:33:18		0:02:11	2:04:23
02:00 - 03:00	n/a	n/a		n/a	n/a
03:00 - 04:00	3:37:41	3:41:20		0:03:39	1:09:10
04:00 - 05:00	4:50:30	4:52:17		0:01:47	0:02:05
	4:54:22	4:57:13		0:02:51	0:53:18
05:00 - 06:00	5:50:31	5:52:16		0:01:45	0:05:07
	5:57:23	6:00:43		0:03:20	0:02:29
06:00 - 07:00	6:03:12	6:05:54		0:02:42	0:07:13
	6:13:07	6:17:00	2 trains	0:03:53	0:02:30
	6:19:30	6:23:25		0:03:55	0:02:31
	6:25:56	6:28:31		0:02:35	0:06:30
	6:35:01	6:36:48		0:01:47	0:02:17
	6:39:05	6:42:09		0:03:04	0:03:10
07:00 - 08:00	6:45:19	6:57:01	4 trains	0:11:42	0:06:33
	7:03:34	7:06:00	2 trains	0:02:26	0:09:49
	7:15:49	7:19:32		0:03:43	0:01:08
	7:20:40	7:21:30		0:00:50	0:03:27
	7:24:57	7:31:52	2 trains	0:06:55	0:00:42
	7:32:34	7:36:22		0:03:48	0:01:18
	7:37:40	7:49:13	3 trains	0:11:33	0:00:20
	7:49:33	7:52:43		0:03:10	0:00:48
08:00 - 09:00	7:53:31	7:55:16		0:01:45	0:03:01
	7:58:17	8:01:49		0:03:32	0:00:33
	8:02:22	8:06:03		0:03:41	0:03:01
	8:09:04	8:10:46		0:01:42	0:02:55
	8:13:41	8:16:37		0:02:56	0:00:42
	8:17:19	8:21:02		0:03:43	0:00:53
	8:21:55	8:26:48		0:04:53	0:02:17
	8:29:05	8:32:09		0:03:04	0:00:51
	8:33:00	8:35:11		0:02:11	0:02:25
	8:37:36	8:43:57	2 trains	0:06:21	0:05:44
09:00 - 10:00	8:49:41	8:52:50		0:03:09	0:01:50
	8:54:40	8:55:30		0:00:50	0:04:35
	9:00:05	9:03:18		0:03:13	0:00:43
	9:04:01	9:05:48		0:01:47	0:04:54
	9:10:42	9:13:31		0:02:49	0:02:48
	9:16:19	9:20:02		0:03:43	0:01:44
	9:21:46	9:28:09		0:06:23	0:03:52
	9:32:01	9:33:48		0:01:47	0:02:47
	9:36:35	9:39:39		0:03:04	0:03:52
	9:43:31	9:47:09		0:03:38	0:02:31
9:49:40	9:52:49		0:03:09	0:03:28	
9:56:17	9:57:07		0:00:50	0:03:28	

THE DATA BELOW IS EXTRACTED FROM INFORMATION SUPPLIED BY NETWORK RAIL

HOUR	Closure Starts (Traffic should not cross the stop line)	Open To Traffic	More than one train	BARRIER DOWN ROAD CLOSED TO TRAFFIC (hr:min:sec)	BARRIER UP ROAD OPEN TO TRAFFIC (hr:min:sec)
<b>10:00 - 11:00</b>	10:00:35	10:05:16	2 trains	0:04:41	0:04:56
	10:10:12	10:13:01		0:02:49	0:03:18
	10:16:19	10:21:40	2 trains	0:05:21	0:03:02
	10:24:42	10:27:31		0:02:49	0:06:07
	10:33:38	10:36:38		0:03:00	0:05:57
	10:42:35	10:45:48		0:03:13	0:03:52
	10:49:40	10:53:30	2 trains	0:03:50	0:10:31
<b>11:00 - 12:00</b>	11:04:01	11:05:48		0:01:47	0:03:54
	11:09:42	11:12:31		0:02:49	0:02:48
	11:15:19	11:19:41	2 trains	0:04:22	0:03:50
	11:23:31	11:25:18		0:01:47	0:13:17
	11:38:35	11:41:39		0:03:04	0:08:01
	11:49:40	11:53:30	2 trains	0:03:50	0:08:04
<b>12:00 - 13:00</b>	12:01:34	12:03:39	2 trains	0:02:05	0:06:03
	12:09:42	12:12:31		0:02:49	0:04:48
	12:17:19	12:21:02		0:03:43	0:00:29
	12:21:31	12:25:15		0:03:44	0:10:10
	12:35:25	12:38:40		0:03:15	0:06:28
	12:45:08	12:48:08		0:03:00	0:01:32
	12:49:40	12:53:30	2 trains	0:03:50	0:10:31
<b>13:00 - 14:00</b>	13:04:01	13:05:48		0:01:47	0:04:54
	13:10:42	13:13:31		0:02:49	0:01:04
	13:14:35	13:17:48		0:03:13	0:00:31
	13:18:19	13:22:02		0:03:43	0:00:59
	13:23:01	13:24:48		0:01:47	0:04:09
	13:28:57	13:32:06		0:03:09	0:05:29
	13:37:35	13:40:39		0:03:04	0:09:01
	13:49:40	13:53:30		0:03:50	0:06:05
<b>14:00 - 15:00</b>	13:59:35	14:02:39		0:03:04	0:02:55
	14:05:34	14:07:16		0:01:42	0:03:25
	14:10:41	14:13:37		0:02:56	0:04:54
	14:18:31	14:20:32	2 trains	0:02:01	0:00:55
	14:21:27	14:26:00		0:04:33	0:02:19
	14:28:19	14:31:57		0:03:38	0:17:43
	14:49:40	14:53:30	2 trains	0:03:50	0:01:30
<b>15:00 - 16:00</b>	14:55:00	14:58:45		0:03:45	0:05:16
	15:04:01	15:05:48		0:01:47	0:04:54
	15:10:42	15:13:31		0:02:49	0:01:04
	15:14:35	15:17:48		0:03:13	0:00:31
	15:18:19	15:22:02		0:03:43	0:00:29
	15:22:31	15:24:18		0:01:47	0:08:39
	15:32:57	15:37:05		0:04:08	0:01:30
	15:38:35	15:41:09		0:02:34	0:01:26
	15:42:35	15:45:39		0:03:04	0:04:31
15:50:10	15:54:00	3 trains	0:03:50	0:07:34	

THE DATA BELOW IS EXTRACTED FROM INFORMATION SUPPLIED BY NETWORK RAIL

HOUR	Closure Starts (Traffic should not cross the stop line)	Open To Traffic	More than one train	BARRIER DOWN ROAD CLOSED TO TRAFFIC (hr:min:sec)	BARRIER UP ROAD OPEN TO TRAFFIC (hr:min:sec)
<b>16:00 - 17:00</b>	16:01:34	16:04:39	2 trains	00:03:05	00:02:27
	16:07:06	16:12:31	2 trains	00:05:25	00:05:49
	16:18:20	16:22:03		00:03:43	00:00:28
	16:22:31	16:24:16		00:01:45	00:05:09
	16:29:25	16:31:38		00:02:13	00:03:47
	16:35:25	16:38:40		00:03:15	00:00:39
	16:39:19	16:43:25		00:04:06	00:03:43
	16:47:08	16:50:08		00:03:00	00:01:32
	16:51:40	16:56:29	2 trains	00:04:49	00:02:37
16:59:06	17:02:04		00:02:58	00:01:57	
<b>17:00 - 18:00</b>	17:04:01	17:06:22	2 trains	00:02:21	00:03:20
	17:09:42	17:12:31		00:02:49	00:02:04
	17:14:35	17:17:48		00:03:13	00:00:31
	17:18:19	17:23:48	2 trains	00:05:29	00:03:39
	17:27:27	17:30:34		00:03:07	00:01:18
	17:31:52	17:34:04		00:02:12	00:04:31
	17:38:35	17:41:39		00:03:04	00:03:31
	17:45:10	17:46:00		00:00:50	00:08:34
	17:54:34	17:57:49	2 trains	00:03:15	00:01:46
17:59:35	18:02:39		00:03:04	00:05:19	
<b>18:00 - 19:00</b>	18:07:58	18:11:01		00:03:03	00:06:18
	18:17:19	18:21:02		00:03:43	00:00:20
	18:21:22	18:22:12		00:00:50	00:03:19
	18:25:31	18:27:16		00:01:45	00:04:17
	18:31:33	18:35:11		00:03:38	00:02:44
	18:37:55	18:42:40	2 trains	00:04:45	00:05:50
	18:48:30	18:49:15		00:00:45	00:01:55
18:51:10	18:54:19		00:03:09	00:09:42	
<b>19:00 - 20:00</b>	19:04:01	19:05:48		00:01:47	00:04:24
	19:10:12	19:13:01		00:02:49	00:01:04
	19:14:05	19:17:18		00:03:13	00:01:01
	19:18:19	19:22:02		00:03:43	00:00:29
	19:22:31	19:24:18		00:01:47	00:17:17
	19:41:35	19:44:39		00:03:04	00:06:01
	19:50:40	19:54:30	2 trains	00:03:50	00:10:07
<b>20:00 - 21:00</b>	20:04:37	20:08:16	2 trains	00:03:39	00:09:03
	20:17:19	20:21:02		00:03:43	00:10:02
	20:31:04	20:32:50		00:01:46	00:06:00
	20:38:50	20:42:08	2 trains	00:03:18	00:01:19
	20:43:27	20:46:36		00:03:09	00:11:28
	20:58:04	20:59:49		00:01:45	00:15:16

THE DATA BELOW IS EXTRACTED FROM INFORMATION SUPPLIED BY NETWORK RAIL

HOUR	Closure Starts (Traffic should not cross the stop line)	Open To Traffic	More than one train	BARRIER DOWN ROAD CLOSED TO TRAFFIC (hr:min:sec)	BARRIER UP ROAD OPEN TO TRAFFIC (hr:min:sec)
<b>21:00 - 22:00</b>	21:15:05	21:18:18		00:03:13	00:06:47
	21:25:05	21:27:19		00:02:14	00:03:22
	21:30:41	21:34:20		00:03:39	00:01:35
	21:35:55	21:39:10		00:03:15	00:07:25
	21:46:35	21:49:39		00:03:04	00:02:01
	21:51:40	21:52:30		00:00:50	00:06:05
	21:58:35	22:01:39		00:03:04	00:15:10
<b>22:00 - 23:00</b>	22:16:49	22:20:32		00:03:43	00:02:25
	22:22:57	22:27:04		00:04:07	00:12:23
	22:39:27	22:43:35		00:04:08	00:04:27
	22:48:02	22:51:40		00:03:38	00:03:51
	22:55:31	22:57:18		00:01:47	00:17:58
<b>23:00 - 24:00</b>	23:15:16	23:17:48		00:02:32	00:03:22
	23:21:10	23:22:00		00:00:50	00:22:10
	23:44:10	23:45:00		00:00:50	00:09:07
	23:54:07	23:56:18		00:02:11	00:09:43
TOTAL				7:37:02	16:13:15

Jim Stewart  
Team Leader Development Planning  
Road and Transportation



**West Lothian  
Council**

### APPENDIX 3

#### RESULTS OF TRAFFIC AND PEDESTRIAN SURVEYS

	CARS		PEDESTRIANS	
	NORTH	SOUTH	NORTH	SOUTH
<b>AM Peak 7 a.m. to 10 a.m.</b>	524	522	26	15
<b>PM Peak 4 p.m. to 7 p.m.</b>	638	656	39	13
<b>12 hour flows 7 a.m. to 7 p.m.</b>	1879	1915	141	91
<b>24 hour flows</b>	2244	2314	157	105

The vehicle flows above are taken from the survey data for Wednesday 27 February 2013.

This is considered as a typical day for assessment of impact based on the information supplied by Network Rail that the busiest day for train movements will be a Wednesday.