East Midlands Gateway Phase 2 (EMG2) Transport Review

on behalf of Protect Diseworth

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Railton TPC Ltd ref:	EMG2 C
Planning Inspectorate	Ref: DCO: BC0410001, MCO: TR0510002
Planning Authority	Ref: N/A
Date:	July 2026
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APPENDICES

1 INTRODUCTION

1.1 Railton TPC Ltd has been commissioned by Protect Diseworth (PD), a group of local residents, to review transport work undertaken in support of an application by SEGRO Properties Limited, for an order granting development consent (DCO order) for a scheme comprising the East Midlands Gateway Phase 2 (EMG2) and an order making material changes to the previously approved East Midlands Gateway Rail Freight Interchange and Highway Order 2016 (MCO order).

1.2 The EMG2 Main Site comprises 300,000sqm of B2/B8 use class plus an allowance for 200,000sqm of B8 mezzanine floorspace on land south of East Midlands Airport bounded on the north by the A453. The village of Diseworth is located immediately to the south-west of the scheme. The EMG2 Main Site is shown on the plan attached as **Appendix 1**.

1.3 The proposed mitigation includes highway works at and around Junction 24 of the M1. These works are defined as a Nationally Significant Infrastructure Project (NSIP). The key element of these works comprises a new direct slip road from the northbound M1 to the westbound A50. The purpose of this is to remove vehicles currently travelling from the M1 northbound to the A50 westbound from Junction 23A of the M1, Junction 24 of the M1 and the section of the A453 that connects the two junctions. The scheme is shown on the plan in **Appendix 2**.

1.4 The author is Director of Railton TPC Ltd who has worked for 35 years in the transport planning industry. He is a member of the Chartered Institution of Highways and Transportation (MCIHT). He has dealt with highways and transport matters for a wide range of development types from local to strategic scale. He has given evidence at informal hearings and public inquiries, participated in Local Plan Inquiries and examinations of Nationally Significant Infrastructure Projects (NSIPs).

1.5 The author has assisted PD in responding to the Examination Authority's (ExA's) Second Written Questions (Deadline 4 16 June 2026) and has participated in the Third Issue Specific Hearing (ISH3) on 13 May 2026.

1.6 Artificial Intelligence has not been used to source any of the information or to derive any of the text in this report.

1.7 Supporting transport work is contained in the following documents:

- Traffic and Transportation Chapter 6 of Environmental Statement (ES) (Document DCO 6.6/MCO 6.6), SEGRO, October 2025;
- Transport Assessment (TA) (Technical Appendix 6A of ES), BWB, October 2025;
- PRTM 2023 Sensitivity Test Technical Note and Local Road Network Impact Assessment Note, BWB, March 2026;
- EMFM 2019 Sensitivity Test Modelling Technical Note, BWB, November 2025;
- Framework Travel Plan (FTP) (Technical Appendix 6C of ES), BWB, October 2025;
- Applicant's Response to Hearing Action Points, SEGRO, April 2026 (Document DCO 7.4/MCO 7.4)

1.8 The TA includes numerous Appendices, some of which comprise reports in their own right. These are referenced in the text below when necessary.

1.9 Following the ISH3 the author met with the applicant's highways consultants (BWB) and has sought to clarify outstanding concerns. The following sections identify a number of concerns regarding the transport assessments that support the application and provide commentary on discussions with the applicant. The final section provides a summary of the points raised.

2 TRAFFIC MODELLING

General

2.1 The following concerns are based on a review of the traffic modelling reported by the applicant and discussions with the applicant's transport consultants (BWB) at and following ISH3.

Use of Actual Rather than Demand Flows from PRTM

2.2 The decision has been made to adopt *actual* rather than *demand* flows from the strategic modelling (see para. 6.4 on pdf p.381 of APP-082).

2.3 The source of strategic traffic flow information is the Pan Regional Transport Model (PRTM). A cordon within this wider model is used to extract traffic flows in a smaller area containing the proposed site. The smaller strategic model is the East Midlands Freeport Model (EMFM). Traffic flows are extracted from the EMFM for the area including the east-west section of the A453 adjacent to the site and the north-south section of the A453 including Junctions 23A and 24 of the M1 that has been modelled using VISSIM. A furnessing procedure is used to convert link flows into turning movements at junctions. The furnessing procedure is considered in the following sub-section.

2.4 The various methodological stages used to derive turning movements and link flows in the various modelled scenarios introduce potential sources of error. The decision to use *actual* rather than *demand* flows is one such potential source of error.

2.5 The implication of this is that if parts of the network being modelled are over capacity in one or more of the modelled scenarios, the modelled flows would only include the trips that are able to enter the network (if any trips were unable to enter the network they would be identified as unreleased trips or latent demand). Once the flows are extracted from the strategic model for input to the VISSIM model, there is no further opportunity for any *demand* trips that are not included in *actual* trips to enter the network. This is likely to occur when additional highway capacity is provided in the form of the proposed mitigation.

Reliability of VISSIM Model

2.6 PD has met with BWB highways consultants to discuss this matter. BWB has suggested that there should be no unreleased trips in the strategic modelling. However, information presented in the VISSIM Forecast Modelling Report (Appendix 50 of APP-082) does not show consistent or logical numbers of trips in each of the VISSIM model runs suggesting that there are inconsistencies in the outputs from the EMFM model that are used to

derive inputs for the VISSIM model. The information is shown in the tables attached as **Appendix 3**. Commentary on the table in Appendix 1 is provided in the following paragraphs.

2.7 **Table 1:** This shows the number of vehicle trips in each of the VISSIM model runs. The totals include base flows, traffic growth, traffic associated with any committed development included in the scenario and traffic associated with the proposed development where this is included. Analysis of the trip numbers should reveal consistent patterns but this is not the case as described below.

2.8 **Table 2**: This table summarises the number of unreleased trips within each of the models. These are trips that were unable to enter the modelled network during the modelled time period because of congestion. It is clear that in 2038 the increased levels of congestion, even in the *with mitigation* scenarios are leading to significant levels of latent demand. In the 2038 situation the level of latent demand in the 2B situation with development and with mitigation (357 trips) is higher than the 2038 situation without development and without mitigation (252 trips). This suggests that the proposed highway improvements are not mitigating the impact of the proposed development.

2.9 **Table 3**: This table combines vehicle arrivals with latent demand. It therefore shows the *demand* flows within the model. These figures are used to explore the effects of adding development flows, the effects of mitigation and the effects of adding Local Plan development.

2.10 **Table 4**: This shows the effects of adding EMG2 development flows. The net increase in demand flows should be equal to the trip generation of the development in the peak hours (around 1,000 trips). In the PM peak the model appears to be presenting logical results. In the AM peak, however, the change in demand flows varies between 609 trips and 1.516 trips. The former is significantly below what would be expected and the latter is significantly higher than would be expected. These results are unexplained.

2.11 **Table 5**: This table shows the effects of adding mitigation. The applicant has stated that one of the benefits of the proposed mitigation is to increase the capacity of the local highway network. This should allow more trips to be accommodated. In the PM peak, however, the modelling results indicate that the mitigation leads to a reduction in the number of trips within the model (127 fewer trips in the situation with Local Plan development and 93 fewer trips in the situation without Local Plan development). This result is illogical.

2.12 **Table 6**: This table summarises the effects of adding Local Plan development. The expectation is that Local Plan development will add additional trips to the modelled area.

This, however, is not the case. In the 2028 situation with the proposed development, the addition of Local Plan development leads to a *reduction* in trips within the model. In the 2028 situation without the proposed development, Local Plan development leads to a significant increase in trips in the AM peak (+782), a level of increase far in excess of any other situations. These results are inconsistent and contradictory.

2.13 These inconsistencies have been reported to BWB but there has been no response to explain them.

Reliability of EMFM (Latent Demand)

2.14 A similar concern regarding unreleased trips has been raised by National Highways' consultants, JSJV, in relation to the EMFM. The VISSIM 2019 EMFM Sensitivity Test Modelling Technical Note (REP1-059) deals with a number of concerns raised by NH including Substantive issue 5 that states:

> *'JSJV believes that a constrained network in the EMFM is either holding significant volumes of traffic up in queues or distorting natural traffic routing (possibly both), especially in the longer term (i.e. 2038) resulting in varying rather than comparable traffic flow changes across the network'.* (REP1-059 para. 2.1)

2.15 BWB's response is as follows:

> *'6.22 With regards to substantive issue 5, It appears that in general there is an increase in flows between 2028 and 2038 at the points shown in the diagram at section 3.6 of NH's Technical Note included in Appendix 2* [points on the M1 northbound and southbound]. *Even though there may be a capacity constraint between locations 1* [M1 northbound south of A50] *and 6* [M1 southbound south of Junction 23A] *of said diagram on the M1 in EMFM, the updated 2019 EMFM sensitivity test Stage 2A VISSIM modelling utilises flows from the extents of the network, primarily from locations 2* [M1 southbound north of Junction 24] *and 5* [M1 northbound south of Junction 23A] *for M1 southbound and northbound movement respectively. These appear to operate at a reasonable VoC* [volume over capacity]. *Furthermore, any distortion in routing along the M1 is assumed to be routing via the A453 instead. Because the VISSIM model utilises dynamic assignment, it can take into account such routing choices.*
>
> *6.23 A review of the forecast flow change between Stage 2a and Stage 1A indicates that there is a reduction in traffic flows on the A453 between Finger Farm and M1J24, with a similar increase noted on the M1. As a result, whist there's a constraint on the M1, there is sufficient capacity on the A453 to allow an equilibrium to be achieved in terms of traffic flows. Given that there is this route choice within the EMFM model, it should have allowed for all traffic wanting to route through the network to be accounted for, either via the M1 or A453'.* (REP1-059 paras. 6.22 and 6.23)

2.16 The response is couched in general terms, focuses on the M1 and concludes that the model 'should' have allowed for all traffic. No clear evidence is provided to provide reassurance that latent demand in the EMFM is not affecting the modelling results.

Furnessing of EMFM Link Flows to Identify 2028 and 2038 Base Flows

2.17 In order to refine the outputs from the EMFM so that they reflect observed turning counts for input to the VISSIM model, a furnessing procedure has been adopted by BWB. This is described in the EMPG2 Traffic Flow Technical Note 2 – Furnessing and Forecasting Methodology (BWB, October 2025)[1].

2.18 The furnessing procedure involved identifying the change in link flows in the EMFM 2022 and 2028/38 situations and then applying the flow increases proportionally across the 2022 observed turning movements at junctions. The furnessing involved an iterative process whereby the turning count matrix is summed alternately across rows and columns aiming to achieve target totals with the total being constrained by total inbound flows (sum of rows) and then outbound flows (sum of columns). This method, after a certain number of iterations leads to a 'balance' whereby both rows and columns find an equilibrium.

2.19 The furnessing process, when constrained by link flows achieves a *mathematical* equilibrium that is as reliable as possible as far as link flows are concerned (since this reflects the design of the procedure) but does not guarantee that turning movements are reliable.

2.20 Appendix 1 of the Local Model Validation Report (LMVR)[2] contains turning count flow diagrams that compare observed 2023 turning movements with modelled 2023 turning movements. A summary of the data at the Finger Farm roundabout is attached as **Appendix 4** of this report.

2.21 Scrutiny of the turning movements reveals some significant differences between modelled and observed turning movements:

- In the AM peak, the southbound A453 to M1 modelled movement is 384 vehicles less than observed;
- In the PM peak the same modelled movement is 158 vehicles less than observed;
- The northbound M1 to A453 north modelled movement in the AM peak is 193 vehicles less than observed.

1 Appendix 2 of the TA

2 LMVR, BWB, August 2023 (Appendix 46 of the TA)

2.22 These are significant differences[3] and are likely to undermine the reliability of future year traffic modelling using the VISSIM model.

Potential Unreliability of Modelling

2.23 The following points summarise concerns regarding the potential unreliability of the traffic modelling approach:

- The network that is being modelled is subject to congestion both now and in the future;
- Congestion, by definition, implies that the network does not have sufficient capacity to accommodate all of the vehicle trips that currently, or are predicted to, use the network;
- Where demand exceeds capacity, the modelling will lead to latent demand/ unreleased trips. The modelling is unable to provide any certainty about where or when these trips may, in reality, appear;
- The exclusion of latent demand/unreleased trips from the assessments has been agreed to be the preferred approach as the parties involved have agreed that 'actual' rather than 'demand' flows should be used;
- It is a fact that there are varying amounts of latent demand in the VISSIM model since these are reported;
- It is not know whether there are unreleased trips in the EMFM model as these are not reported (despite concerns about them having been raised by NH and its consultants);
- Since outputs from the EMFM model are used as inputs to the VISSIM model, there are ***two*** stages where modelling results may be affected by latent demand/unreleased trips;
- Uncertainties from the first stage of modelling (EMFM) could therefore amplify uncertainties from the second stage of modelling (i.e. lost trips added to lost trips);
- The potential for uncertainty is increased further by the use of the furnessing technique that seeks to match turning movements to link flows but can only do so in an approximate manner.

2.24 In a congested network, drivers will seek alternative routes to avoid delays. The residual latent demand/unreleased trips are likely to appear on unsuitable parts of the highway network such as rat-running through villages such as Diseworth.

2.25 If unreleased demand in the EMFM model is not being taken into account either in the VISSIM model or in relation to individual junctions, there is a risk that demand on key parts of the strategic network is being under-estimated, thus prejudicing the ability to properly assess the performance of the strategic network into the future with the proposed development.

3 In modelling terms, the differences give rise to GEH values in excess of 5

3 IMPACT ON A453 BETWEEN SITE ACCESS AND FINGER FARM ROUNDABOUT

Data from Applicant's Spreadsheets

3.1 Spreadsheets containing traffic flows and turning movements extracted from the EMFM model are referenced in the EMFM 2019 Forecasting Report (Appendix 41 of TA) and have been obtained from the applicant. The modelled flows on the A453 between the site access and Finger Farm roundabout taken from the turning movements at the site access roundabout (A453 east) for the various modelled situations are summarised in the following table:

Table 1: Modelled Traffic Flows on A453 East of Site Access/passenger car units (pcus)

Scenario	Year	WoD/WD	AM Peak		PM Peak	
			EB	WB	EB	WB
1A	2022	WoD	767	1,110	985	720
	2023	WoD	800	1,156	1,035	659
	2024	WoD	807	2,303	1,046	1,270
	2028	WoD	890	1,157	1,098	706
	2038	WoD	818	1,192	1,406	796
	2028	WD	1,026	1,431	1,634	985
	2038	WD	882	1,393	1,704	1,031
1B	2028	WoD	828	1,190	1,085	656
	2038	WoD	918	1,328	1,180	868
	2028	WD	1,007	1,461	1,643	930
	2038	WD	986	1,421	1,642	1,107
2A	2028	WD	1,098	1,655	1,657	1,012
	2038	WD	1,165	1,666	1,712	1,065
2B	2028	WD	1,051	1,674	1,627	983
	2038	WD	1,094	1,700	1,662	1,140

Red shading: unexplained 'outlier' – see below
Orange shading: link over capacity assuming 8 second red time at toucan crossing– see below
Yellow shading: link over capacity assuming 21 second red time at toucan crossing – see below

3.2 It is noted that in 2024 WoD in the 1A situation, there is predicted to be a significant increase in flows on the A453 east of the site access (2,303 pcus westbound in the AM

peak). This elevated level of traffic is seen to 'disappear' in the next (2028) modelled situation. This discrepancy requires an explanation.

3.3 The modelling of the A453 adjacent to the site assumes a lane capacity of 1,700 passenger car units (pcus) per hour. In the 2038 situations with mitigation, link flows on the A453 reach or exceed 1,700pcus (see red shading in the **Table 1**). The modelling is therefore showing that the network would be at capacity. As explained above, the methodology that has been used is likely to have under-estimated traffic flows due to the exclusion of latent demand. The modelling may therefore be suggesting that the network would be operating at capacity, not because the *demand* flows happen to be at this level, but because the model is incapable of accommodating any additional trips. If this is the case, there is significant uncertainty as to where and when congestion might occur in the future.

Effect of Toucan Crossing

3.4 It is proposed to provide a toucan crossing on the A453 between the Finger Farm roundabout and the Beverley Road roundabout to allow pedestrians and cyclists to access the site from the north.

3.5 The A453 Toucan crossing has been modelled as if it is called once every 4 minutes and drivers are faced with only an 8 second red time (see REP1-058 pdf p.100). If this is the case, insufficient time would be allowed for pedestrians and cyclists to safely cross.

3.6 Notes of the applicant's monthly modelling meetings (see REP1-058 pdf p.100) confirm that the crossing reduces the capacity of the A453 from 1,700 vehicles to 1,650 vehicles, consistent with an assumption that drivers are held back for 8 seconds out of every 240 seconds (a 3.3% decrease in capacity). This would lead to the A453 operating over capacity in most of the *with development* scenarios with mitigation (see orange shading in **Table 1**).

3.7 Discussions with BWB regarding this concern have prompted the following response:

> '*The Toucan crossing has been modelled with a total intergreen period of 13 seconds and a pedestrian/cycle green time of 8 seconds, resulting in an overall vehicle red time of 21 seconds. Forecasts indicate approximately 30 pedestrian and cyclist movements generated by the proposed EMG2 development based on modal share. Considering walking and cycling catchment areas of 2 km and 5 km respectively, these users are expected to originate from either Castle Donington or Diseworth, neither of which would necessarily use the crossing. However, we hope that there is some connectivity to and from EMA, EMG1 and Kegworth and we considered it important to provide a safe crossing facility even if it may not be used that frequently.*

A crossing frequency of once every 4 minutes has therefore been assumed, equating to around 15 activations, and incorporates a longer-than minimum green time for pedestrians and cyclists. On this basis, the assumption of a 4-minute crossing interval is considered robust for modelling purposes'. (BWB email to PD 09 June 2026)

3.8 If a 21 second red time is assumed every 4 minutes the capacity of the A453 is further reduced to around 1,550pcus (a 9% reduction in capacity) and ***every*** *with development* scenario is seen to lead to the A453 operating over capacity in at least one of the modelled peak hours (see yellow shading in **Table 1**).

3.9 A request has been made for BWB to supply an extract of the VISSIM modelling input file that confirms the assumption that has been made regarding the crossing time allowed for pedestrians and cyclists. No response has been received.

3.10 It is clear from the table above that even without a toucan crossing on the A453, there are situations where capacity is predicted to be exceeded. The provision of a toucan crossing exacerbates congestion on the link. The westbound flows, if over capacity, would queue back towards the Finger Farm roundabout, raising very serious highway safety concerns. Queuing would be exacerbated if a safe red time were provided at the toucan crossing or if the level of demand of the crossing were to be higher than one call every four minutes.

3.11 BWB has suggested that the Travel Plan targets rely on a *reduction* in pedestrians and cyclists with the implication that the toucan crossing would not be used frequently. The Travel Plan targets, however, show active travel (pedestrians and cyclists) mode share doubling from 1% in the opening year and year 3 to 2% in years 7 and 10 (see Table 4-1 of APP-085).

3.12 The applicant is proposing to provide pedestrian and cycle routes within the site, a new 3.0m shared use pedestrian/cycleway along the southern side of the A453 from the Beverley Road roundabout to the proposed A453 Toucan crossing, the crossing itself, a widened existing footway/cycleway on the northern side of the A453 between the Beverley Road and Finger Farm roundabout and a new 3.0m shared use facility following the alignment of the former A453 on the western side of the existing A453 north to the EMG1 access roundabout to link with existing pedestrian and cycle crossing facilities that provide access to a route into Kegworth. The TA shows that Kegworth and part of Castle Donington lie within a convenient cycling distance of the site. The Toucan crossing would also cater for potential walk trips between the EMG1 and EMG2 sites (~2km). The significant investment in facilities for active travel modes indicates that the number of journeys on foot or by bicycle is not expected to be trivial.

3.13 Local and National policy require priority to be given to sustainable modes. There appears compelling evidence to suggest that the safe and efficient operation of the highway network relies upon a very poor level of provision for pedestrians and cyclists.

4 IMPACT ON DISEWORTH

4.1 Concern has been raised that the modelling of the A453/The Green junction shows long queues and delays in the *with development* situations and there is a risk that drivers will seek to avoid these delays by using the alternative route through the sensitive Diseworth village (Conservation Area and primary school) via Grimes Gate.

4.2 This issue has been discussed at the meeting with BWB.

4.3 The following table summarises the modelling results:

Table 2: Predicted Queues on The Green at A453 Junction/passenger car units (pcus)

Stage	AM Peak				PM Peak			
	2028		2038		2028		2038	
	WoD	WD	WoD	WD	WoD	WD	WoD	WD
Stage 1A	5.9	122.9	6.1	172.0	1.0	1.1	5.3	28.8
Stage 1B	2.8	78.5	68.0	384.1	1.0	1.2	3.4	7.6
Stage 2A		40.2		72.9		1.2		25.2
Stage 2B		15.7		262.9		1.3		7.7

Source: Tables 36, 48, 62 and 74 of TA (APP-083)

4.4 If the modelling results are correct, it is inevitable that many drivers will choose the route through Diseworth village to avoid long queues (263pcus in 2038 with development and mitigation in place).

4.5 In response to the concerns that have been raised, BWB has provided the following commentary on this issue:

> *'Paragraphs 13.22 to 13.29 of the TA sets out that the strategic modelling shows that A453/The Green junction operate within capacity and therefore attracts traffic along said route. However, it should be noted strategic models are not always that well suited to assess detailed operational impacts at individual junctions. Therefore, a standalone junction assessment was undertaken which showed that the A453/The Green junction would actually operate over capacity. As a result, in reality, not all of the development traffic included for in the strategic traffic modelling work will head east towards the site via The Green and use alternative means instead. These 'long delays' are not shown in PRTM with or without the proposed mitigation in place; PRTM assumes that the A453/The Green junction operates within capacity throughout.*
>
> *All development traffic routing along Grimes Gate (38 vehicles) originates from, or route via, Shepshed/Long Whatton area in the Strategic model. An alternative route for development traffic is via the Kegworth Bypass, which has a comparable journey time but avoids the congestion on the primary route, making it a potentially a more*

attractive option for drivers. However, we have never denied that some development traffic will route via Diseworth; the plan of course being limiting this as far as practically possible, by focusing mitigation on the SRN.

A review of the development flows via 'The Green' (74 vehicles) indicates that these trips primarily originate from, or are located in close proximity to, the following areas:

- *Shepshed*
- *Thringstone*
- *Peggs Green*
- *Worthington*
- *Breedon on the Hill*

As a result, an assessment has been undertaken to determine the journey times of drivers routing from these areas, to determine how long it would take drivers to access EMG2, using the Holiday Inn EMA as a proxy, via the following routes. It should be noted that we have undertaken this assessment based on standard free flowing conditions, because if it is undertaken in a standard AM peak hour a range of approximate times is provided, hence this provides a simple, consistent way of assessing matters:

i. *The Green*
ii. *Grimes Gate*
iii. *A453 west (via Isley Walton)*
iv. *A453 east (via Finger Farm)*

The results of this assessment are tabulated below.

village/town	**Time taken to arrive at EMG2 (minutes)**			
	The Green	**Grimes Gate**	**A453 west- (Isley Walton)**	**A453 east – (Finger Farm)**
Shepshed	14	13	20	11
Thringstone	15	15	18	16
Breedon on the Hill	11	12	10	18
Worthington	17	17	14	19
Peggs Green	13	14	15	16

In summary, the above table shows that it would be quicker travelling from the places including Shepshed, Breedon on the Hill and Worthington via A453 West/East compared with the 'The Green' and 'Grimes Gate'. The journey time routes from Peggs Green and Thringstone via A453 E or W are also within minutes compared with 'The Green' and 'Grimes Gate. Furthermore, the mitigation proposals free up capacity at Finger Farm, which has been suitably modelled in PRTM, but the operation of The Green has not, for the reasons set out in the TA. Hence The Green would not be as an attractive route as suggested in PRTM, and whilst some traffic could well transfer to Grimes Gate, it would be quicker for them to

route via the A453, avoiding Diseworth entirely instead, together with the right turn movements out of the village into the A453, which those who do not live in the village have the ability to avoid. This is therefore what is likely to happen in reality, as set out in the TA, and verbally to you when we met.

The above should hopefully provide you with sufficient comfort that, whilst we have gone on record to query how The Green has been modelled in PRTM, if drivers were to avoid turning right onto the A453 via The Green they would far be more likely to re-route to access the site via the A453, than travel through Diseworth and turn right onto the A453 via Grimes Gate instead.' (BWB email to PD 09 June 2026)

4.6 Even assuming free flow conditions, the route via Grimes Gate is shown to be quicker than the route via the strategic network for areas around Thringstone and Peggs Green.

4.7 The argument put by BWB is that free flow travel times suggest that drivers would choose to route via the Kegworth Bypass and the Finger Farm roundabout rather than route via Diseworth.

4.8 The following response to this argument has been forwarded to BWB:

'Your assessment of the relative attractiveness of the routes to the site via Diseworth and via the Kegworth Bypass is not compelling. You have used free flow conditions to arrive at relative journey times as it 'provides a simple, consistent way of assessing matters'. However, this ignores the fact that drivers' decisions are based on delays and congestion rather than on free flow conditions. The latest VISSIM report shows that the Kegworth Bypass approach to the A453 is, and will be in future, subject to long queues in both peak hours and with mitigation the queues still increase compared with the without development situation in many cases. Queues are also seen to increase in many cases on the A453 approach to the Finger Farm roundabout with development and mitigation compared with the without development situation. You state that it is the intention to provide additional capacity on the SRN in order to reduce the likelihood of rat-running through sensitive villages but the modelling shows quite clearly that in this case (alternatives to using the Kegworth Bypass), development plus mitigation will increase the likelihood of rat-running.

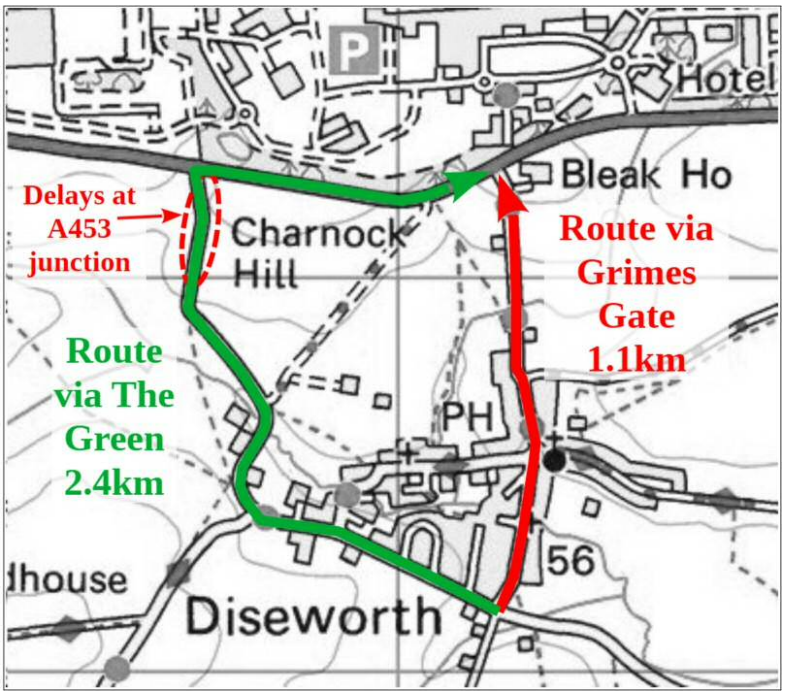
This remains a significant concern, particularly given that the most likely source of rat-running traffic is from areas to the south-east that could be deterred from using the Kegworth Bypass and instead approach westbound along The Green where the sensitive route via Grimes Gate is significantly shorter than the route continuing along The Green to the A453'. (PD email to BWB 11 June 2026)

4.9 BWB has not responded to this information.

4.10 The traffic modelling therefore indicates that the route that might be used in preference to the route via Diseworth is subject to queues and delays and a 'free flow' assessment does not reflect the conditions that would influence drivers' route choice.

4.11 Drivers approaching from the Shepshed/Long Whatton area who are avoiding the Kegworth Bypass will be approaching Disewoth from the east. For these drivers, the route to the A453 via Grimes Gate is 1.3km shorter than the route via The Green as shown on the following plan:

Plan 1: Route to A453 through Diseworth



4.12 The individual junction modelling suggests that drivers at The Green junction at the A453 would be subject to delays. The Grimes Gate/A453 junction, however, is shown not to be subject to any significant delays. The combined effect of a shorter travel distance and less delay when turning onto the A453 will lead to rat-running drivers using Grimes Gate through the Conservation Area that contains the primary school, the heritage centre, the church and sections of road without footways. The route through the village is of high sensitivity in transport environmental terms and would experience a major adverse impact in relation to pedestrian amenity, severance of community and safety of vulnerable highway users if the development leads to a significant increase in traffic on this link; an outcome that appears likely from the available evidence.

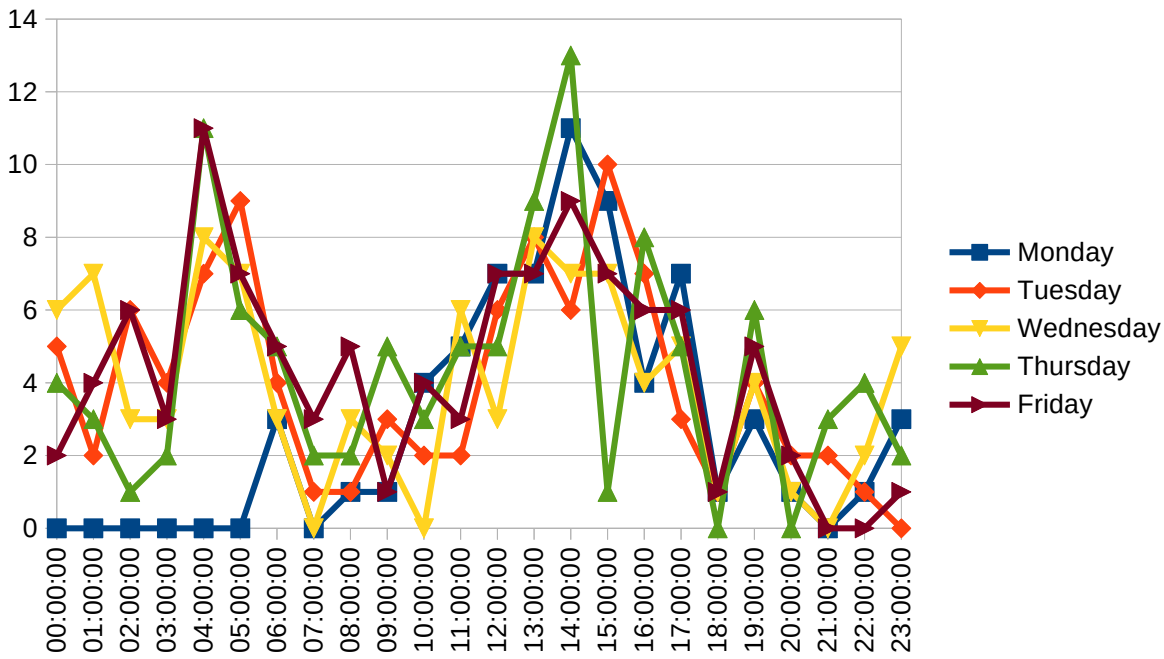
5 FAILURE TO ASSESS WORST CASE SITUATIONS

Existing Late Afternoon Congestion on A453

5.1 Local residents often seek to avoid using the A453 west of the Finger Farm roundabout during the mid to late afternoon period due to intermittent but significant queues and delays that are related to peaks in landside movement associated with the airport. These queues and delays are before the 17:00-18:00 period that has been adopted as a basis for traffic modelling and assessment. The applicant does not engage with this issue despite the PM peak trip generation of the proposed uses on the site being during the 16:00hrs to 17:00hrs period (see paragraph 7.3 of TA).

5.2 If it is assumed that flight departures generate peak landside movement two hours before take-off and flight arrivals generate peak landside movement one hour after landing[4], the following graph illustrates a typical weekday landside profile of movement:

Graph 1: Number of Flights affecting Landside Movement (week commencing 08 June 2026)



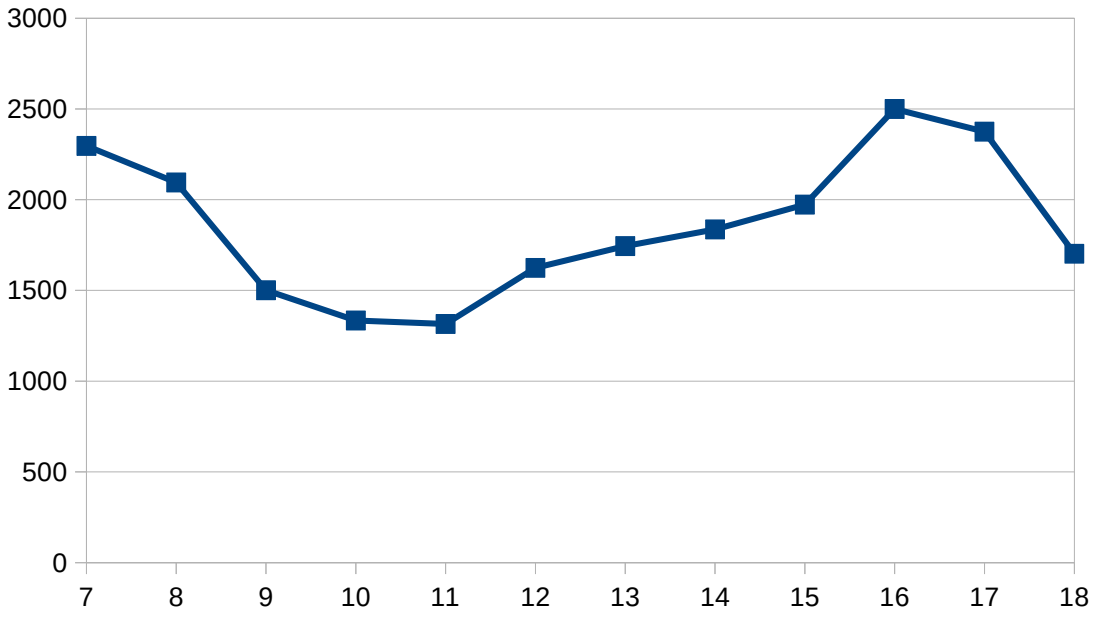
5.3 It is evident that the peak period when the airport generates landside movement is during the mid-afternoon. It is also evident that there is day-to-day variation in flight scheduling. This explains the experience of local residents who, before undertaking a

4 An assumption that has been used by Manchester Airports Group for the assessment of other airport planning applications – see, for example, Stansted Expansion.

journey during the afternoon, will often check on real-time journey apps to establish whether they can expect delays on the A453.

5.4 Further evidence of the afternoon peak on the local highway network being earlier than the 17:00-18:00 period adopted by the applicant can be derived from the Department for Transport's (DfT's) data collection point 91119 that is on the A453 north of the Finger Farm roundabout. The latest data, collected in May 2025 reveal the following daily profile of 2-way traffic movements:

Graph 2: Daily Profile of Traffic Movements on A453 North of Finger Farm Roundabout (hour commencing)



source: https://roadtraffic.dft.gov.uk/count-points/91119

5.5 The 2-way vehicle flows are seen to be higher during the 16:00-17:00hrs period than during the 17:00-18:00hrs period. They are also shown to the highest flows of the day. This is perhaps not surprising given the fact that traffic flows in the area will be significantly affected by landside airport movements and by the existing development at EMG1 that, like EMG2, has PM peak trip generation rates during the 16:00-17:00hrs period.

5.6 Since the applicant has not engaged with this issue, there is a risk that the worst case adverse impacts of the proposed development have not been assessed. If the mitigation strategy has not been based on the worst case impact, there is a risk that unacceptable impacts may arise that cannot be mitigated.

Airport Growth

5.7 Appendix A of the EMFM Forecasting Report indicates that the strategic modelling has made allowance for 940 new jobs at East Midlands Airport (EMA) between 2026 and 2028.

5.8 The East Midlands Airport Sustainable Development Plan 2025 states:

> '*EMA has the capacity and capability to significantly grow its passenger and cargo operations from 3.9m passengers and 400,000 tonnes of cargo in 2023 to seven million passengers and up to 800,000 tonnes of cargo over the next 15–20 years*'.

5.9 It is therefore likely that the amount of freight and the number of passengers will increase. Given that road access to the airport and to the associated parking areas is via the A453, it is likely that there will be significant growth in airport related traffic in the short- to medium-term and this could lead to a further uplift in vehicle movements on the A453 during the mid-afternoon period. No allowance has been made for this growth.

Major Local Events

5.10 The Donington Park Race Circuit is located to the west of the site and the main vehicle access is via the A453, passing the proposed site. The venue has a capacity of 120,000 visitors. A review of the venue's website reveals events most weekends.

5.11 The operation of the proposed development is likely to regularly coincide with major events at the racing circuit.

5.12 The applicant has not considered the implications of traffic associated with events at Donington Park.

6 TRAVEL PLAN

6.1 Information relating to the results of the EMG1 2025 Travel Plan monitoring surveys are now available in Appendix 5 (ISH1 Action Point 23 – Note on car sharing and operation of the sustainable Transport Strategy for EMG2) of Document DCO7.4/MCO7.4 Applicant's Response to Hearing Action Points. This shows the single occupancy vehicle (SOV) mode share in 2025 as 47% and compares this with the average of the previous 5 years (48%):

Table 3: EMG1 Employee Travel Survey Findings (2021 to 2025)

Mode	10-year Travel Plan Target	Employee Travel Survey Mode Share				
		2021	2022	2023	2024	2025
Single occupancy vehicle (SOV)	68%	43%	42%	51%	56%	47%
Car share	17%	26%	38%	25%	22%	33%
Public transport	10%	28%	14%	18%	16%	15%
Active travel	5%	0%	3%	2%	1%	2%
other	n/a	3%	3%	4%	5%	3%

Source: Table 1 of Appendix 5 of Applicant's Response to Hearing Action Points (April 2026)

6.2 The following table shows the targets that are proposed for the EMG2 Travel Plan:

Table 4: EMG2 Travel Plan Targets

Mode	Target			
	Opening year	Year 3	Year 7	Year 10
Single occupancy vehicle (SOV)	68%	64%	58%	56%
Car share	15%	17%	21%	22%
Public transport	12%	14%	15%	16%
Active travel	1%	1%	2%	2%
other	4%	4%	4%	4%

Source: Table 4-1 of EMG2 FTP

6.3 The Year 10 SOV target (56%) is 9% ***higher*** than the 2025 observed SOV level at EMG1 (47%). This approach displays a lack of ambition on the part of the applicant.

6.4 In the five paragraphs of text of the applicant's *Note on car sharing and operation of the sustainable Transport Strategy for EMG2,* the fact that the SOV mode share is below target (68%) is referred to five times. The applicant states, '*Whilst fluctuations in SOV were identified in 2023 and 2024* [SOV mode shares of 51% and 56%], *the Applicant would reiterate that in these years the site was still ahead of target* [68%] *and no further interventions were requested by the Sustainable Transport Working Group*' (3rd para.).

6.5 PD has also received clarification regarding Travel Plan targets from Haskoning (the author of the Travel Plan). This makes the point three times that funding of the EMG1 Travel Plan has continued despite targets having been met. Although this could be taken as a welcome approach, it also emphasises the fact that if targets are not set at a challenging level, there is a risk that funding will end as soon as targets are achieved.

6.6 Paragraph 109 of the National Planning Policy Framework states:

> '*109. Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places*'. (NPPF, Paragraph 109)

6.7 The failure to identify an ambitious target for reduction in car driver mode share indicates that the proposal is not vision-led and is thus contrary to paragraph 109 of the NPPF. Paragraph 115 of the NPPF also requires a vision-led approach to mitigation that is not evident in the proposed Travel Plan:

> *'115. In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
>
> *[…]*
>
> *d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.'* (NPPF, Paragraph 115)

Pedestrian and Cycle Crossing of A453

6.8 Apart from local links into Diseworth, the only safe route for pedestrians and cyclists associated with the site is via the proposed Toucan crossing of the A453.

6.9 As has been explained above in relation to the capacity of the A453, the minutes of the Monthly Modelling Meeting on 08 January 2026 (pdf p.100 of PRTM 2023 Sensitivity Test Technical Note and Local Road Network Impact Assessment Note, BWB, March

2026) states that the Toucan crossing is expected to operate on a 240 second cycle time with an 8 second red time for traffic. This arrangement is not safe.

6.10 Few pedestrians and cyclists will wait 240 seconds (4 minutes) to cross the A453. The majority will seek to cross when they perceive there to be a safe gap in the traffic. Given that the link is predicted to be operating at capacity (see above), it is likely that vulnerable highway users will put themselves at risk by crossing when they perceive there to be an acceptable gap. For traffic signals, the recommended maximum cycle time is 90 seconds and the absolute maximum 120 seconds, half of that suggested by the applicant.

6.11 The proposed 8 second red time for traffic is insufficient to allow pedestrians and cyclists to cross safely[5]. The traffic signals would change to amber for 3 seconds. The traffic signal would then change to red for 3 seconds while the red standing figure shows to pedestrians/cyclists. The green walking figure would then show to pedestrians/cyclists for at least 6 seconds. No signal is shown to pedestrians/cyclists for 3 seconds plus at least a further 6 seconds to allow pedestrians/cyclists to complete their crossing and potentially a further 3 seconds if pedestrians/cyclists are detected to be still on the crossing. Red signals are shown to both drivers and pedestrians/cyclists for 1 second before a red with amber signal is shown to drivers (stop) for 2 seconds. The total time that a red signal is shown to drivers is therefore likely to be at least 27 seconds.

6.12 As has been explained, the applicant has suggested that a 21 second red signal for drivers has been assumed in the modelling. However, this is not consistent with the statements recorded in the modelling meeting and BWB has failed to provide input modelling files that confirm the assumptions that have been made regarding signal red time.

6.13 The concerns raised by the applicant's cursory and misleading assessment of the impact of the proposed Toucan crossing are threefold:

1. The proposed excessive cycle time (4 minutes) leads to an unacceptable impact on highway safety as pedestrians and cyclists may cross without a green signal;

2. The effectiveness of the Travel Plan is severely undermined if safe provision is not made for active modes;

5 See Table 18-3 of Traffic Signs Manual Chapter 6 Traffic Control, DfT, 2019

3. The capacity of the A453 (that is already predicted to be exceeded) will be reduced as the cycle time is reduced and the time allowed for pedestrians and cyclists to cross is increased to an acceptable level.

7 SUMMARY AND CONCLUSION

7.1 This report reviews transport work undertaken in support of an Application by SEGRO Properties Limited, for an order granting development consent (DCO order) for a scheme comprising the East Midlands Gateway Phase 2 (EMG2) and an order making material changes to the previously approved East Midlands Gateway Rail Freight Interchange and Highway Order 2016 (MCO order).

7.2 The reliability of the traffic modelling may be undermined by the decision to base modelling on *actual flows* rather than d*emand flows*. The former exclude latent demand/unreleased trips (i.e. trips that do not appear in the models because the network has insufficient capacity to accommodate them).

7.3 The level of latent demand in the VISSIM modelling is reported but the level of latent demand in the EMFM model is not reported despite there being compelling evidence of its existence. The issue has been raised by NH's consultants but there is no evidence that the issue has been resolved.

7.4 Scrutiny of the number of trips within the VISSIM model in the various scenarios reveals unexplained inconsistencies and apparent errors in the way proposed development flows, Local Plan development flows and the effects of mitigation affect the network. These inconsistencies have been reported to BWB but there has been no response.

7.5 The methodology for furnessing traffic flows at junctions leads to significant differences between modelled and observed turning movements at the Finger Farm roundabout.

7.6 Scrutiny of the applicant's projections of future traffic flows on the A453 between the site access roundabout and the Finger Farm roundabout indicates that the link, in its current configuration (7.3m single carriageway) would not have the capacity to accommodate future traffic levels with the proposed development in some scenarios. The evidence suggests that this would be the case whether or not Local Plan development (Isley Woodhouse etc.) is taken into account. The mitigation strategy increases traffic flows on this section of the A453.

7.7 The provision of a toucan crossing on the A453 between the Finger Farm roundabout and the site access roundabout; a key element of the site's sustainable access strategy increases the degree to which the link is shown to

operate over capacity. There is a risk that vehicles would queue back to the Finger Farm roundabout leading to serious highway safety concerns.

7.8 Discussions with the applicant confirm the concern regarding the proposed development leading to adverse impacts on Diseworth village due to rat-running. Significant delays on the Kegworth Bypass and the A453 southbound approach to the Finger Farm roundabout, predicted in future scenarios with mitigation will increase the likelihood of drivers from areas in the Shepshed/Long Whatton area seeking to avoid these delays by rat-running through Diseworth. It is likely that the route via the highly sensitive centre of the village (Grimes Gate) will be used in preference to The Green since the route through the centre of the village is shorter in terms of distance and avoids the predicted delays turning from The Green onto the A453.

7.9 Evidence suggests that the impact of the proposed development should have been assessed during the 16:00-17:00hrs period rather than the 17:00-18:00hrs period. It is the experience of local residents that the A453 is intermittently congested during the weekday mid to late afternoon period. The applicant recognises that B8 uses generate higher levels of traffic during the 16:00-17:00hrs period than during the 17:00-18:00hrs period. An assessment of airport flight profiles indicates that the earlier afternoon period experiences higher landside movement than the later. DfT data also indicate that the A453 north of the Finger Farm roundabout experiences higher flows during the earlier period. There is a risk that the worst case period of impact has not been assessed and thus potentially not mitigated.

7.10 No allowance has been made for passenger growth at East Midlands Airport despite the airport expressing confidence that passenger numbers will increase significantly in the short- to medium-term.

7.11 The applicant has failed to consider the potential impact of the proposed development on the Castle Donington Race Circuit or the potential for cumulative impacts.

7.12 The proposed Travel Plan targets represent a lack of ambition, contrary to the vision-led approach. The Travel Plan risks being undermined by the conflict between the need to provide for pedestrians and cyclists crossing the A453 safely and the potential serious highway safety impacts that could arise if the A453 becomes congested and queues back to the Finger Farm roundabout.

7.13 Overall it is concluded that there remain concerns over the reliability of the traffic modelling, the effectiveness of the Travel Plan and the potential adverse impacts resulting from rat-running through Diseworth.

APPENDICES

Appendix 1: EMG2 Main Site

EMG2 Main Site and Community Park Parameters Plan

Scale 1:2,500

Key

- EMG2 DCO order limits
- Community Park
- Land not in order limits within which existing telecom mast retained
- Development Area - Zones 1-7 including car parking, service yards, buildings, amenity building's, on plot landscaping, roads, paths, utilities and infrastructure
- No Building Area No buildings in this zone
- Zone boundary
- Estate Road and zone boundary
- Limits of deviation - Estate Road
- Landscape corridor between development zones with limits of deviation
- Area for development signage for upto 4 signs
  - Sign Board - max size (including supporting frame) 7.5m High x 18.0m, Wide x 1.0m Deep
  - Totem Sign - max size (including supporting frame) 15.5m High x 4.0m, Wide x 4.0m Deep
- Area within which estate road will cross Hyams Lane
- Point of restriction to Hyam's Lane -No public access for motor traffic west of this point
- Hyam's Lane retained and improved west of point of restriction. East of point of restriction to be converted to shared use cycle track.
- Fixed spot heights in metres above ordnance datum, identified along the ridge-line of each length of strategic mitigation mounding +/- 0.5m.
- Between any two consecutive spot heights marked on the ridge, the height of the bund at its ridge will be no lower than the lower of the two spot heights and no higher than the higher of the two spot heights.
- Open Land/Landscaping area to include retained vegetation, mitigation mounding, proposed planting, paths, attenuation & SUDs, retaining walls, retained agricultural land, publicly accessible landscape space and other applicable features.
- Areas within which strategic mitigation mounding is to be provided
- Existing Vegetation Retained
- Existing Hedgerow Retained
- Existing Trees Retained
- Area for substation extension

- Dimensions are in millimeters, unless stated otherwise.
- Scaling of this drawing is not recommended.
- It is the recipients responsibility to print this document to the correct scale.
- All relevant drawings and specifications should be read in conjunction with this drawing.

EMG 2 Works - Development Schedule

Development Zone	Number of Units erected pursuant to the DCO	Maximum amount of floorspace to be erected pursuant to the DCO per zone (m²)	Finished floor level (in metres above ordnance datum) (Allowable deviation +/- 1.5m)	Maximum Ridge Height (in metres above ordnance datum)
Zone 1	1 to 2	75,000	67.350	91.350
Zone 2	1 to 4	20,000	70.600	88.600
Zone 3	1 to 4	60,000	79.400	103.400
Zone 4	1 to 2	45,000	76.050	94.050
Zone 5	1 to 4	75,000	84.200	102.200
Zone 6	1 to 4	40,000	88.000	106.000
Zone 7	1 to 4	5,000	89.500	96.500
Maximum Total Floor Space*		**300,000**		
In addition to the limits set out in the schedule above the following units and floor space are permitted:				
Bus terminal and office within Zone 6	1-2	500	88.000	95.000
HGV parking and amenity building within Zone 7	1-2	500	89.500	96.500
Substation	1	75	84.000	69.000

* This total floor space is the maximum floor space (excluding mezzanine space) that will be developed across Zones 1-7 notwithstanding that the maximum floor space stated for each Zone combined would exceed this figure i.e. it is the overall floor space cap for Zones 1-7 excluding mezzanine floor space. In addition to this total floor space figure, up to 200,000 sqm of floor space can be provided in the form of mezzanine floor space to units within the development.

Note: Maximum Buildings heights are fixed by the maximum ridge height in metres above ordnance datum compared to the finished floor levels. The finished floor levels shown in the table above can vary 1.5m up or down. For example, if the finished floor levels are constructed at the level shown in the table without variation the maximum building heights in Zones 2, 4, 5 and 6 would be 18m and in zones 1 and 3 would be 24m being the difference between the maximum ridge height specified in the fifth column of the table and the finished floor level in the fourth column of the table.

Please Note:

- The Maximum ridge height specified excludes any associated fire escape stairwells or key clamp roof top handrails etc.
- all areas specified are gross internal areas (GIA) unless otherwise stated.

Location Plan

Scale 1:50,000

Substation Parameters Plan

Scale 1:2,500

Rev	Date	Details of Issue / Revision	Drn	Chk
P22	07.10.25	Plan and key amended	LM	MS
P21	03.10.25	Titleblock and key amended	LM	MS
P20	30.09.25	Titleblock and key amended	LM	MS
P19	29.09.25	Titleblock and key amended	LM	MS
P18	01.08.25	Titleblock and key amended	LM	MS
P17	16.06.25	Titleblock amended	LM	MS
P16	30.07.25	Boundary amended	LM	MS

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY PHASE 2 AND HIGHWAY ORDER 202[ ]

Drawing Title

PARAMETERS PLAN (EMG2 Works)

Scale	1:2500	Drawn	LM
Size	A1	Reviewed	MS

Regulation: **5(2) (o)**

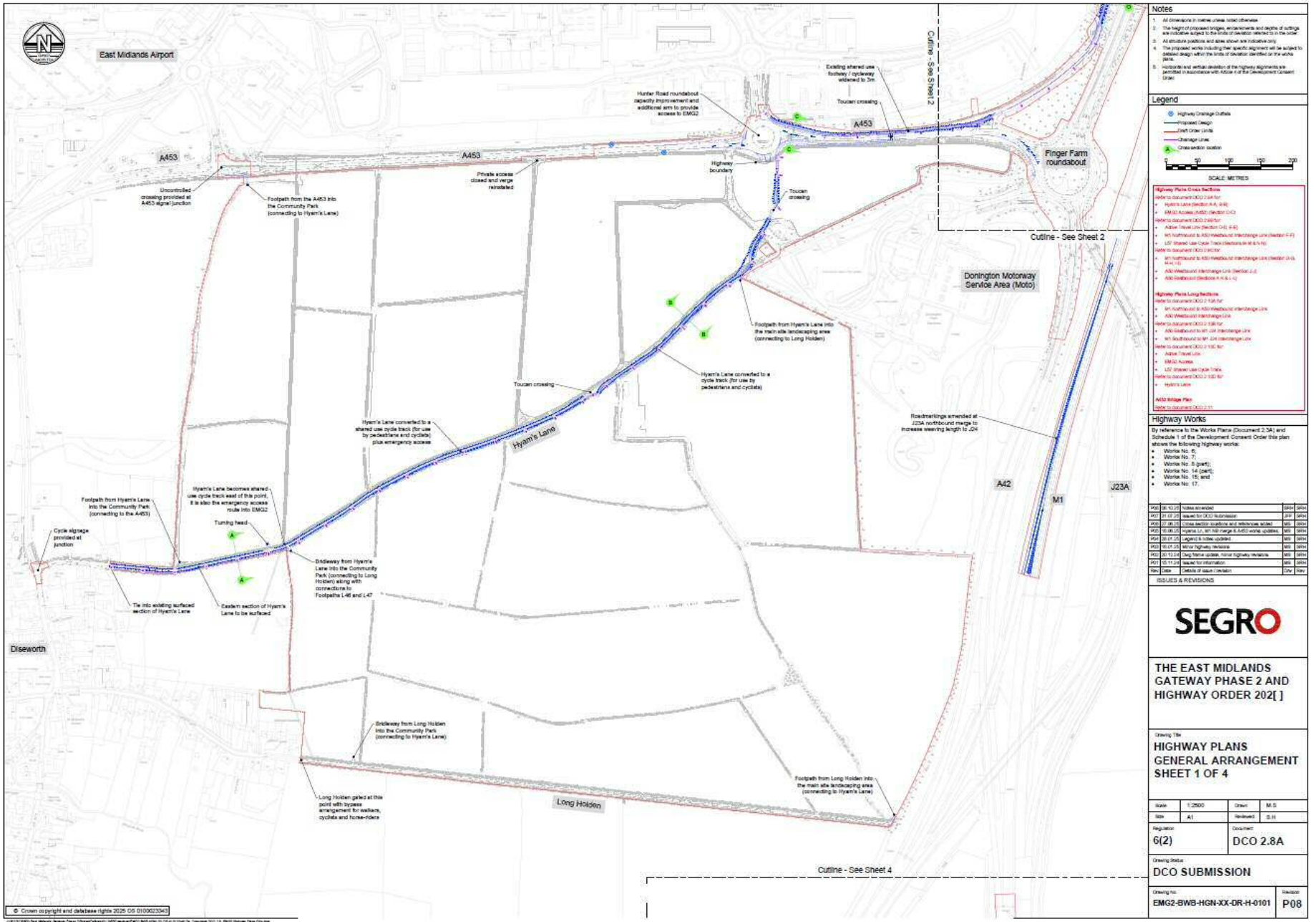
Document: **DCO 2.5**

Drawing Status: **DCO Submission**

Drawing No.: **EMG2-UMC-SI-01-DR-A-0088**

Revision: **P22**

Appendix 2: Proposed Highways Works



Notes

1. All dimensions in metres unless noted otherwise.
2. The height of proposed bridges, embankments and depths of cuttings are indicative subject to the limits of deviation referred to in the order.
3. All structure positions and sizes shown are indicative only.
4. The proposed works including their specific alignment will be subject to detailed design within the limits of deviation identified on the works plans.
5. Horizontal and vertical deviation of the highway alignments are permitted in accordance with Article 4 of the Development Consent Order.

Legend

- Highway Drainage Outfalls
- Proposed Design
- Draft Order Limits
- Drainage Lines
- Cross-section location

0 50 100 150 200

SCALE: METRES

Highway Plans Cross Sections

Refer to document DCO 2.6A for:
- Hyam's Lane (Section A-A, B-B)
- EMG2 Access (A453) (Section C-C)

Refer to document DCO 2.6B for:
- Active Travel Link (Section D-D, E-E)
- M1 Northbound to A50 Westbound Interchange Link (Section F-F)
- LDT Shared Use Cycle Track (Sections M-M & N-N)

Refer to document DCO 2.6C for:
- M1 Northbound to A50 Westbound Interchange Link (Section G-G, H-H, I-I)
- A50 Westbound Interchange Link (Section J-J)
- A50 Westbound (Sections K-K & L-L)

Highway Plans Long Sections

Refer to document DCO 2.7.6A for:
- M1 Northbound to A50 Westbound Interchange Link
- A50 Westbound Interchange Link

Refer to document DCO 2.7.6B for:
- A50 Westbound to M1 J24 Interchange Link
- M1 Southbound to M1 J24 Interchange Link

Refer to document DCO 2.7.6C for:
- Active Travel Link
- EMG2 Access
- LDT Shared Use Cycle Track

Refer to document DCO 2.7.6D for:
- Hyam's Lane

A453 Bridge Plan

Refer to document DCO 2.11

Highway Works

By reference to the Works Plans (Document 2.3A) and Schedule 1 of the Development Consent Order this plan shows the following highway works:

- Works No. 6;
- Works No. 7;
- Works No. 8 (part);
- Works No. 14 (part);
- Works No. 15; and
- Works No. 17.

Rev	Date	Details of Issue / Revision	Dtn	Chk
P08	08.10.25	Notes amended	SRH	SRH
P07	01.07.25	Issued for DCO Submission	JFF	SRH
P06	27.06.25	Cross section locations and references added	MS	SRH
P05	10.06.25	Hyams Ln, M1 NB Merge & A453 wording updated	MS	SRH
P04	29.01.25	Legend & notes updated	MS	SRH
P03	16.01.25	Minor highway revisions	MS	SRH
P02	20.12.24	Dwg frame update, minor highway revisions	MS	SRH
P01	05.11.24	Issued for information	MS	SRH

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY PHASE 2 AND HIGHWAY ORDER 202[ ]

Drawing Title

HIGHWAY PLANS GENERAL ARRANGEMENT SHEET 1 OF 4

Scale	1:2500	Drawn	M.S
Size	A1	Reviewed	S.H

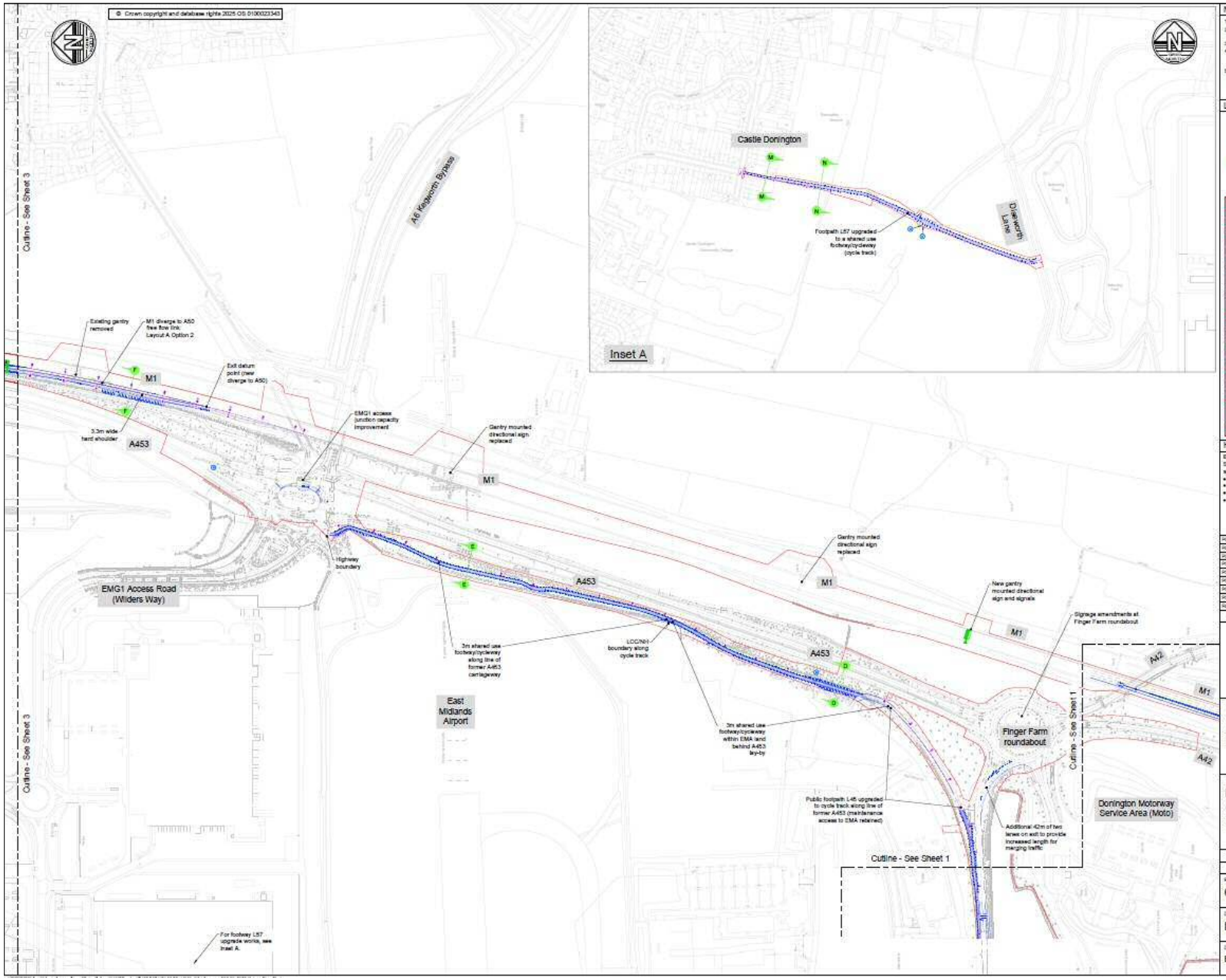
Regulation: 6(2)

Document: DCO 2.8A

Drawing Status: DCO SUBMISSION

Drawing No.: EMG2-BWB-HGN-XX-DR-H-0101

Revision: P08



Notes

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2. The height of proposed bridges, embankments and depths of cuttings are indicative subject to the limits of deviation referred to in the order.
3. All structure positions and sizes shown are indicative only.
4. The proposed works including their specific alignment will be subject to detailed design within the limits of deviation identified on the works plans.
5. Horizontal and vertical deviation of the highway alignments are permitted in accordance with Article 4 of the Development Consent Order.

Legend

- Highway Drainage Outfalls
- Proposed Design
- Draft Order Limits
- Drainage Lines
- Cross section location

0 50 100 150 200

SCALE: METRES

Highway Plans Cross Sections

Refer to document DCO 2.8A for:
- Hyatts Lane (Section A-A, B-B)
- EMG2 Access (A52) (Section C-C)

Refer to document DCO 2.8B for:
- Active Travel Link (Section C-C, E-E)
- M1 northbound to A50 Westbound Interchange Link (Section F-F)
- LS7 Shared Use Cycle Track (Sections M-M & N-N)

Refer to document DCO 2.8C for:
- M1 northbound to A50 Westbound Interchange Link (Section G-G, H-H, I-I)
- A50 Westbound Interchange Link (Section J-J)
- A50 Westbound (Sections K-K & L-L)

Highway Plans Long Sections

Refer to document DCO 2.10A for:
- M1 northbound to A50 Westbound Interchange Link
- A50 Westbound Interchange Link

Refer to document DCO 2.10B for:
- A50 Westbound to M1 J24 Interchange Link
- M1 Southbound to M1 J24 Interchange Link

Refer to document DCO 2.10C for:
- Active Travel Link
- EMG2 Access
- LS7 Shared Use Cycle Track

Refer to document DCO 2.10D for:
- Hyatts Lane

A452 Bridge Plan
Refer to document DCO 2.11

Highway Works

By reference to the Works Plans (Document 2.3B) and Schedule 1 of the Development Consent Order this plan shows the following highway works:
- Works No. 8 (part);
- Works No. 13;
- Works No. 14 (part); and
- Works No. 19.

Rev	Date	Details of Issue / Revision	Drn	Ver
P08	06.10.25	Notes amended	SRH	SRH
P07	21.07.25	Issued for DCO Submission	JPP	SRH
P06	27.06.25	Cross section locations and references added	MS	SRH
P05	16.06.25	M1 northbound amended	MS	SRH
P04	20.01.25	Legend & notes updated	MS	SRH
P03	10.01.25	Minor highway revisions	MS	SRH
P02	20.12.24	Dwg frame update, minor highway revisions	MS	SRH
P01	15.11.24	Issued for information	MS	SRH

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY PHASE 2 AND HIGHWAY ORDER 202[ ]

Drawing Title:

HIGHWAY PLANS GENERAL ARRANGEMENT SHEET 2 OF 4

Scale	1:2500	Drawn	M.S
Size	A1	Reviewed	S.H

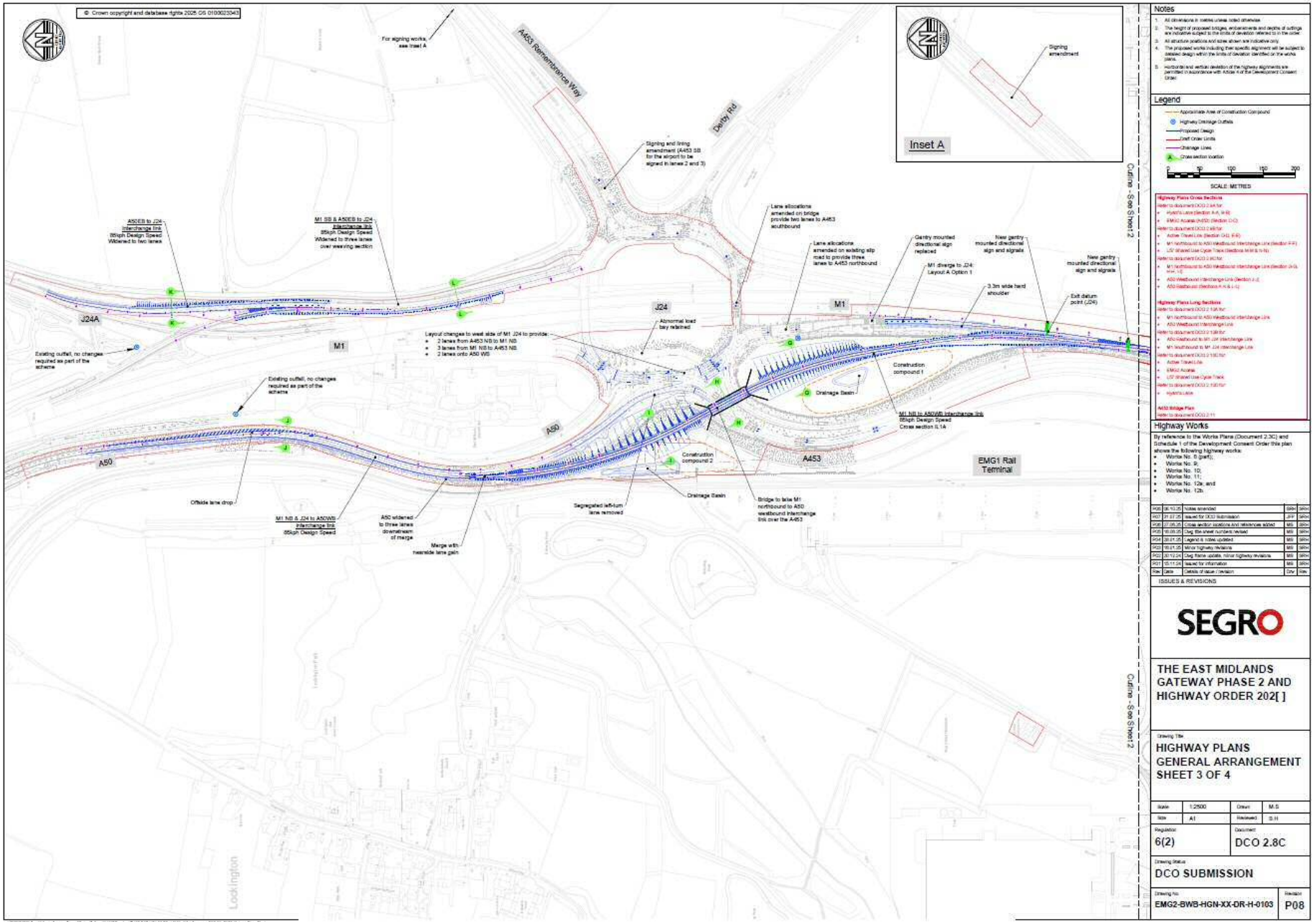
Regulation: 6(2)

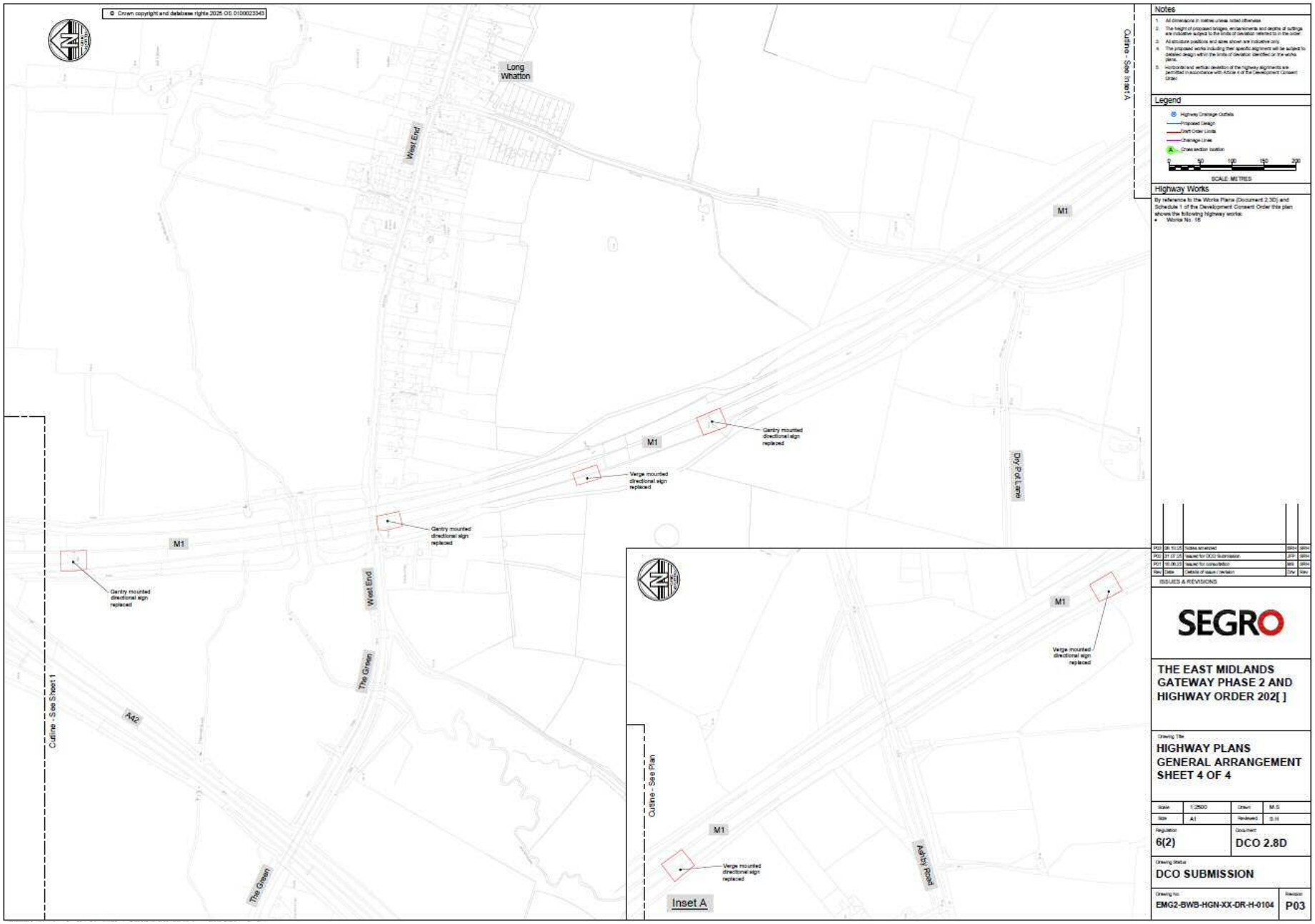
Document: DCO 2.8B

Drawing Status: DCO SUBMISSION

Drawing No.: EMG2-BWB-HGN-XX-DR-H-0102

Revision: P08


© Crown copyright and database rights 2025. OS 0100023343
For signing works, see Inset A
A453 Remembrance Way
Derby Rd
Signing and lining amendment (A453 SB for the airport to be signed in lanes 2 and 3)
Lane allocations amended on bridge provide two lanes to A453 southbound
Lane allocations amended on existing slip road to provide three lanes to A453 northbound
Gantry mounted directional sign replaced
New gantry mounted directional sign and signals
M1 diverge to J24: Layout A Option 1
3.3m wide hard shoulder
Exit datum point (J24)
New gantry mounted directional sign and signals
A50EB to J24 Interchange link
85kph Design Speed
Widened to two lanes
M1 SB & A50EB to J24 Interchange link
85kph Design Speed
Widened to three lanes over weaving section
J24A
M1
J24
Abnormal load bay retained
Layout changes to west side of M1 J24 to provide:
2 lanes from A453 NB to M1 NB
3 lanes from M1 NB to A453 NB
2 lanes onto A50 WB
Existing outfall, no changes required as part of the scheme
Existing outfall, no changes required as part of the scheme
Construction compound 1
Drainage Basin
M1 NB to A50WB Interchange link
85kph Design Speed
Cross section IL1A
A50
A453
EMG1 Rail Terminal
Construction compound 2
Drainage Basin
Offside lane drop
M1 NB & J24 to A50WB Interchange link
85kph Design Speed
A50 widened to three lanes downstream of merge
Merge with nearside lane gain
Segregated left-turn lane removed
Bridge to take M1 northbound to A50 westbound Interchange link over the A453
Lockington
Inset A
Signing amendment
Notes
1. All dimensions in metres unless noted otherwise.
2. The height of proposed bridges, embankments and depths of cuttings are indicative subject to the limits of deviation referred to in the order.
3. All structure positions and sizes shown are indicative only.
4. The proposed works including their specific alignment will be subject to detailed design within the limits of deviation identified on the works plans.
5. Horizontal and vertical deviation of the highway alignments are permitted in accordance with Article 4 of the Development Consent Order.
Legend
Approximate Area of Construction Compound
Highway Drainage Outfalls
Proposed Design
Draft Order Limits
Drainage Lines
Cross section location
0 50 100 150 200
SCALE: METRES
Highway Plans Cross Sections
Refer to document DCO 2.8A for:
Hybrid's Lane (Section A-A, B-B)
EMG1 Access (HGV) (Section C-C)
Refer to document DCO 2.8B for:
Active Travel Link (Section D-D, E-E)
M1 northbound to A50 Westbound Interchange Link (Section F-F)
LTF Shared Use Cycle Track (Sections M-M & N-N)
Refer to document DCO 2.8C for:
M1 northbound to A50 Westbound Interchange Link (Section J-J, K-K, L-L)
A50 Westbound Interchange Link (Section J-J)
A50 Eastbound (Sections K-K & L-L)
Highway Plans Long Sections
Refer to document DCO 2.10A for:
M1 northbound to A50 Westbound Interchange Link
A50 Westbound Interchange Link
Refer to document DCO 2.10B for:
A50 Eastbound to M1 J24 Interchange Link
M1 Southbound to M1 J24 Interchange Link
Refer to document DCO 2.10D for:
Active Travel Link
EMG1 Access
LTF Shared Use Cycle Track
Refer to document DCO 2.10G for:
Hybrid's Lane
A50 Bridge Plan
Refer to document DCO 2.11
Highway Works
By reference to the Works Plans (Document 2.3C) and Schedule 1 of the Development Consent Order this plan shows the following highway works:
Works No. 8 (part);
Works No. 9;
Works No. 10;
Works No. 11;
Works No. 12a; and
Works No. 12b.
P08 26.10.25 Notes amended GRH SRH
P07 21.07.25 Issued for DCO Submission JFF SRH
P06 27.06.25 Cross section locations and references added MS SRH
P05 16.06.25 Dwg title sheet numbers revised MS SRH
P04 28.01.25 Legend & notes updated MS SRH
P03 16.01.25 Minor highway revisions MS SRH
P02 20.12.24 Dwg frame update, minor highway revisions MS SRH
P01 15.11.24 Issued for information MS SRH
Rev Date Details of issue / revision Drw Chk
ISSUES & REVISIONS
SEGRO
THE EAST MIDLANDS GATEWAY PHASE 2 AND HIGHWAY ORDER 202[ ]
Drawing Title
HIGHWAY PLANS GENERAL ARRANGEMENT SHEET 3 OF 4
Scale 1:2500 Drawn M.S
Size A1 Reviewed G.H
Regulation 6(2)
Document DCO 2.8C
Drawing Status DCO SUBMISSION
Drawing No. EMG2-BWB-HGN-XX-DR-H-0103
Revision P08



Notes

1. All dimensions in metres unless noted otherwise.
2. The height of proposed bridges, embankments and depths of cuttings are indicative subject to the limits of deviation referred to in the order.
3. All structure positions and sizes shown are indicative only.
4. The proposed works including their specific alignment will be subject to detailed design within the limits of deviation identified on the works plans.
5. Horizontal and vertical deviation of the highway alignments are permitted in accordance with Article 4 of the Development Consent Order.

Legend

- Highway Drainage Outfalls
- Proposed Design
- Draft Order Limits
- Drainage Lines
- A Cross section location

0 50 100 150 200

SCALE: METRES

Highway Works

By reference to the Works Plans (Document 2.3D) and Schedule 1 of the Development Consent Order this plan shows the following highway works:

- Works No. 16

Rev	Date	Details of issue / revision	Drn	Ver
P03	08.10.25	Notes amended	SRH	SRH
P02	31.07.25	Issued for DCO Submission	JFP	SRH
P01	16.06.25	Issued for consultation	MS	SRH

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY PHASE 2 AND HIGHWAY ORDER 202[ ]

Drawing Title

HIGHWAY PLANS GENERAL ARRANGEMENT SHEET 4 OF 4

Scale	1:2500	Drawn	M.S
Size	A1	Reviewed	S.H

Regulation: **6(2)**

Document: **DCO 2.8D**

Drawing Status: **DCO SUBMISSION**

Drawing No.: **EMG2-BWB-HGN-XX-DR-H-0104**

Revision: **P03**

Appendix 3: Vehicle Arrivals and Latent Demand

Vehicle Arrivals and Latent Demand

source: VISSIM Forecast Modelling Report, March 2026

1 Vehicle arrivals

Scenario		AM Peak		PM Peak	
		2028	2038	2028	2038
1A	WoD	21,027	21,974	21,253	22,275
	WD	21,598	22,360	22,163	22,872
2A	mit	21,970	22,739	22,288	23,151
1B	WoD	20,248	21,514	21,255	22,299
	WD	21,761	21,984	22,145	23,177
2B	mit	22,217	23,170	22,346	23,109

2 Latent demand

Scenario		AM Peak		PM Peak	
		2028	2038	2028	2038
1A	WoD	4	150	15	484
	WD	48	373	44	906
2A	mit	2	580	49	500
1B	WoD	1	502	11	252
	WD	4	726	66	382
2B	mit	1	1	55	357

3 Vehicle arrivals plus latent demand

Scenario		AM Peak		PM Peak	
		2028	2038	2028	2038
1A	WoD	21,031	22,124	21,268	22,759
	WD	21,646	22,733	22,207	23,778
2A	mit	21,972	23,319	22,337	23,651
1B	WoD	20,249	22,016	21,266	22,551
	WD	21,765	22,710	22,211	23,559
2B	mit	22,218	23,171	22,401	23,466

4 Effect of adding EMG2 development

Scenario		AM Peak		PM Peak	
		2028	2038	2028	2038
1A	WoD				
	WD	615	609	939	1,019
2A	mit				
1B	WoD				
	WD	1,516	694	945	1,008
2B	mit				

5 Effect of adding mitigation

Scenario		AM Peak		PM Peak	
		2028	2038	2028	2038
1A	WoD				
	WD				
2A	mit	326	586	130	-127
1B	WoD				
	WD				
2B	mit	453	461	190	-93

Effect of adding Local Plan development

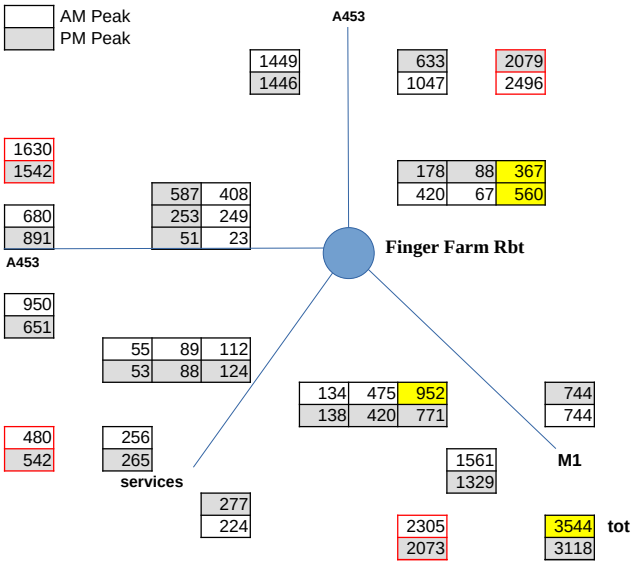
6

Scenario		AM Peak		PM Peak	
		2028	2038	2028	2038
1A	WoD	782	108	2	208
	WD	-119	23	-4	219
2A	mit	-246	148	-64	185
1B	WoD				
	WD				
2B	mit				

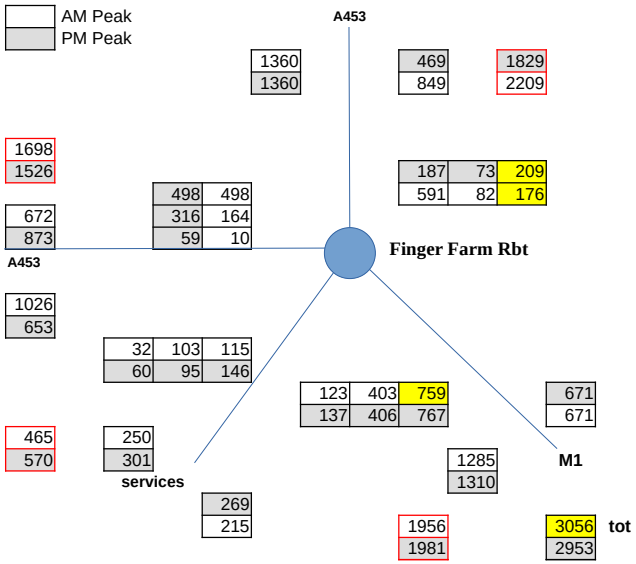
Appendix 4: Comparison of Observed and Modelled 2023 Turning Movements

Appendix 46 of Transport Assessment

2023 Observed Flows (Appendix 1 of LMVR, BWB Aug 2023)



2023 VISSIM Flows (Appendix 1 of LMVR, BWB Aug 2023)



Difference (Modelled minus Observed)