

Welsh Government

M4 Corridor around Newport

Environmental Statement Volume 3:
Appendix 17.1

Developments Included in Traffic
Model

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1 Developments Included in Traffic Model

1.1 Traffic forecasting and the noise and air quality assessment

1.1.1 The noise and air quality assessments presented in the ES used data from the Traffic Forecasting Report to predict future traffic flows in the opening year of 2022 and also in 2037 (plus 15 years). As such the cumulative noise and air quality effects from traffic generated from new housing and employment uses allocated in the Newport, Monmouthshire and Cardiff Local Development Plans have been considered in these assessments, alongside standard growth factors. The planning departments at each of these local authorities were consulted regarding the proposed developments. The methodology for the traffic forecasting is set out in section 4.4 (Uncertainty in Forecasting) of the Traffic Forecasting Report.

1.1.2 As such, the operational cumulative noise and air quality effects as a result of traffic have already been assessed in the noise and air quality chapters and are not repeated in the cumulative effects assessment.

1.1.3 The Traffic Forecasting Report sets out which developments are assumed for the forecasting. Table 4.2 of the Traffic Forecasting Report (adapted in Table 1.1 below) lists the development proposals included in the forecast traffic models, together with the assumed proportion completed in each of the modelled forecast years. All are allocated housing or employment sites from the Local Development Plans. The predicted percentage completion in 2022 and 2037 is also set out.

Table 1.1: Development Proposals (adapted from Table 4.1 of the Traffic Forecasting Report)

Development	Land Use	Size	Completion		
			2022	2037	
1	East Newport, north of railway line (Llanwern)	Housing	1100 units	65%	100%
2	Former Pirelli Works	Housing	250 units	100%	100%
3	Glebelands	Housing	153 units	100%	100%
4	Former Tredegar Park Golf Course	Housing	150 units	100%	100%
5	Allt yr Yn Campus	Housing	125 units	100%	100%
6	Monmouthshire Bank Sidings	Housing	575 units	42%	100%
7	Victoria Wharf	Housing	130 units	20%	100%
8	Penmaen Wharf	Housing	160 units	100%	100%
9	Former Sainsbury's site	Housing	140 units	96%	100%
10	City Vision	Housing	464 units	52%	68%
11	Lysaght Village	Housing	517 units	46%	65%

Development	Land Use	Size	Completion		
			2022	2037	
	(Orb Works)				
12	Former Bettws Comprehensive	Housing	229 units	55%	55%
13	Lysaght Parc	Housing	100 units	100%	100%
14	East Newport, south of railway line (Glan Llyn)	Housing	4000 units	43%	100%
15	Whiteheads Works	Housing	400 units	45%	83%
16	Old Town Dock	Housing	350 units	60%	100%
17	Jubilee Park (Alcan Works)	Housing	1,064 units	50%	87%
18	Jigsaw site, Hartridge	Housing	200 units	80%	100%
19	Opposite Belmont Lodge	Housing	122 units	100%	100%
20	Panasonic	Housing	250 units	100%	100%
21	Duffryn	Industry	154,000m ² GFA	-	100%
22	East of Queensway Meadows	Industry	108,000m ² GFA	-	100%
23	Celtic Springs Business Park	Offices	16,200m ² GFA	100%	100%
24	Gwent Europark	Warehousing	80,000m ² GFA	100%	100%
25	East Newport, south of railway line (Glan Llyn)	Industry	142,000m ² GFA	-	100%
26	Phoenix Park (former Pirelli works)	Industry	8,000m ² GFA	100%	100%
27	Newport City Centre redevelopment, Friars Walk	Mixed use	30,612m ² retail 2,314m ² cinema 3,440m ² restaurants	100%	100%
28	Crick Rd, Portskewett	Housing Offices	285 units 2,700m ² GFA	100%	100%
29	Fairfield Mabey, Chepstow	Housing Offices	350 units 8,100m ² GFA	100%	100%
30	Rockfield Farm, Undy	Housing Offices	270 units 5,600m ² GFA	100%	100%
31	Vinegar Hill, Undy	Housing	225 units	100%	100%
32	Sudbrook Paper Mill	Housing	190 units	100%	100%
33	Wales One, Magor	Offices	21,739m ² GFA	-	100%
34	Quay Point, Magor	Offices Industry	10,584m ² GFA 23,520m ² GFA	-	100%

Development		Land Use	Size	Completion	
				2022	2037
		Warehousing	49,000m2 GFA		
35	Gwent Europark, Magor	Warehousing	66,500m2 GFA	-	100%
36	Newhouse Farm, Chepstow	Industry	16,000m2 GFA	-	100%
37	Pill Row, Severnbridge Ind Est	Industry	4,000m2 GFA	-	100%
38	Beaufort Park, Chepstow	Offices	1,134m2 GFA	-	100%
39	NE Cardiff (west of Pontprennau)	Housing	4,500 units	66%	100%
40	East of Pontprennau Link Road	Housing	1,300 units	82%	100%
41	St Mellons Business Park	Offices	124,000m2 GFA	-	100%
42	Areas 9-12, St Mellons	Housing	150 units	-	100%
43	Cardiff Gate International Business Park	Offices	13,362m2 GFA	100%	100%

1.1.4 In addition to the developments listed above, the traffic forecasting also included proposed highway infrastructure schemes listed below. Of those highway schemes 1 to 3 do not consist of major works as they involve signalisation and widening, 4 is outside the zone of influence for other EIA topics and 5 is included in the cumulative effects assessment matrix for allocated sites.

1. Tredegar Park Roundabout (Junction 28)

1.1.5 As part of the M4 Corridor Enhancement Measures (CEM) Programme, a scheme to improve the operation of the Junction 28 roundabout at Tredegar Park is being promoted by the Welsh Government. The proposed design for this scheme is shown in Figure 4.3 of the Traffic Forecasting Report, and comprises an enlarged at-grade signalised gyratory, incorporating through links between the M4 (west) and the A48 Southern Distributor Road.

2. A467 Bassaleg Roundabout

1.1.6 This improvement is also proposed as part of the CEM programme, and would convert the existing A467 Bassaleg roundabout into a signalised roundabout, as shown in Figure 4.4 of the Traffic Forecasting Report.

3. A48 Pont Ebbw Roundabout

1.1.7 This scheme would convert the existing signalised roundabout into a signalised 'throughabout', with a new link connecting the eastern and western arms of the

A48 Southern Distributor Road. The design of this scheme is shown in Figure 4.5 of the Traffic Forecasting Report.

4. A465 Heads of the Valleys Dualling (Abergavenny to Hirwaun)

1.1.8 The A465 trunk road forms an alternative east-west strategic route to the M4, particularly for traffic travelling between the Midlands and West Wales. This improvement scheme comprises four sections:

- Section 3 (Brynmawr to Tredegar) was approved following a Public Inquiry in 2012, and was completed in 2015;
- Section 2 (Gilwern to Brynmawr) was approved following a Public Inquiry in spring 2014. Construction commenced in early 2015, and is scheduled for completion in 2018;
- Section 5 (Dowlais Top to A470) is not yet programmed, but is expected to commence in time for completion by 2022; and
- Section 6 (A470 to Hirwaun) is not yet programmed, but is expected to commence in time for completion by 2022.

5. Newport Eastern Expansion Area SP16 (iii) Llanwern North South Link

1.1.9 Additional infrastructure is proposed to serve the major residential developments planned on the former steelworks site (Glan Llyn, ref 14 and 25 in Table 4.2) and the area north of the railway around the village of Llanwern (ref 1 in Table 4.2). The proposals comprise:

- A new north-south link over the mainline railway, connecting the A48 SDR and Llanwern village to the A4810; and
- Upgrading of the A48 SDR / Cot Hill junction, from the existing left-in/left-out priority arrangement to an all-movement signal-controlled junction.

1.1.10 The phasing of the development proposals has been extended, and it is now assumed that these infrastructure proposals will be in place prior to the 2037 design year.

1.1.11 By the 2022 opening year, it is assumed that the only additional infrastructure will be the construction of a new junction on Cot Hill west of Llanwern village, to facilitate access for the initial development phases on the land north of the mainline railway.