

## **Appendix 51**

HTp/1107/TN/07 – Traffic Growth (May 2016)

Highgate*Transportation*

**Land at Peel Hall, Warrington  
Technical Note on Traffic Growth  
(HTp/1107/TN/07)**

**May 2016**

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## **Appendices**

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## 1.0 Introduction

- 1.1 This Technical Note has been prepared by Highgate Transportation Limited on behalf of Satnam Millennium Limited to identify the appropriate growth rates to be used in the traffic assessment work associated with the Peel Hall development.
- 1.2 The baseline traffic data in the VISSIM model is 2015. It has been agreed that the Peel Hall opening year to be modelled will be 2019 and that a test will be carried out for a design year of 2029.
- 1.3 It should be noted at this time that mitigation measures use in the 'Do Something' modelling scenarios will be those agreed to address issues highlighted from the 2019 VISSIM 'Do Minimum' modelling run, which will include for vehicle trips generated by the whole of the development profile i.e. not just the level of development expected to be operational in 2019. The 2029 modelling is for reference only.
- 1.4 The industry standard TEMPRO programme was used to calculate the growth rate figures for 2015 to 2019 and for 2015 to 2029.
- 1.5 It has been agreed with Warrington Borough Council highway officers that it is appropriate to apply the methodology agreed for use in the Omega Planning Application for the growth rates in the Peel Hall modelling.
- 1.6 Therefore it is proposed to use the Warrington (00EU1) urban growth rates for the Motorway road type and apply this to all traffic flows.
- 1.7 Whilst this will be an over-estimate for the traffic growth over much of the VISSIM modelling network set up to assess the impact of the development at Peel Hall, because it is the highest growth factor from this dataset in the TEMPRO programme (see **Section 2.0**), it will nevertheless provide even more confidence in the modelling results.
- 1.8 It is therefore concluded that the use of the Warrington (00EU1) urban dataset for Motorways is suitable for the Peel Hall modelling.

## 2.0 Growth Rates

- 2.1 The baseline traffic data in the VISSIM model is 2015 and it is agreed with WBC highway officers and Highways England that the Peel Hall opening year to be modelled will be 2019, with a further test carried out for a design year of 2029.
- 2.2 It has been agreed with Warrington BC highway officers that the same growth rate methodology that was used in the Omega application and modelling can be applied to the Peel Hall site.
- 2.3 Therefore the Warrington 00EU1 Urban growth rate data from TEMPRO for Motorway road types will be used in the VISSIM modelling. The resultant growth rates derived from TEMPRO are set out in **Table 2.1** below for the AM and PM peak hours.

**Table 2.1 – TEMPRO growth rates**

Years	Growth Factors	
	AM	PM
2015-2019	1.0672	1.0679
2015-2029	1.2460	1.2504

- 2.4 Screen shots of the TEMPRO programme for 2015 to 2019 and 2015- to 2029 growth rates are contained in **Appendix 1** and **Appendix 2** for reference respectively.
- 2.5 The use of the Motorway growth rates is higher than that of any other type of urban road. A summary of the AM peak growth factors for 2015-2019 is shown below in **Table 2.2** as an example.

**Table 2.2 – TEMPRO AM growth rates range (2015-2019)**

Road Type	Warrington (00EU1)
Motorway	1.0672
Trunk	1.0454
Principal	1.0503
Minor	1.0529
All	1.0529

- 2.6 It can be seen from the above table that the principal growth rates are lower than the minor/all growth rate factors, but higher than the trunk road growth rates. As there is limited scope for growth on A49 and the highway network is constrained in this area of Warrington it is therefore considered that the use of the Motorway road type for deriving growth rate factors is robust.

### **Committed Development**

- 2.7 It should be noted that all committed development traffic set out in HTP Technical Note TN/10 will be added onto the network within VISSIM after the growth rates have been applied to the base traffic flows for all of the 2019 and 2029 modelling scenarios to ensure that committed development traffic flows are not growthed.

### **3.0 Summary and Conclusion**

- 3.1 This Technical Note has been prepared by Highgate Transportation Limited to identify the appropriate growth rates to be used in the traffic assessment work associated with the Peel Hall development.
- 3.2 The baseline traffic data in the VISSIM model is 2015. It has been agreed that the Peel Hall opening year to be modelled will be 2019 and that a test will be carried out for a design year of 2029.
- 3.3 It has been agreed with Warrington Borough Council highway officers that it is appropriate to apply the same methodology as that used and agreed in the Omega Planning Application.
- 3.4 Therefore it is proposed to use the Warrington (00EU1) urban growth rates for the Motorway road type and apply this to all traffic flows within the VISSIM model.
- 3.5 It is considered that the use of Motorway growth rates will provide an over-estimate of the actual traffic growth because it is the highest growth factor from the dataset and because the Motorway only accounts for a small proportion of the road network overall. Nevertheless, the use of the motorway factors will provide even more confidence in the modelling results.
- 3.6 It is therefore concluded that the use of the Warrington (00EU1) urban dataset for Motorways is suitable for the Peel Hall modelling.

## **Appendix 1**

2015-2019 TEMPRO Growth Rates



2015-2019

The screenshot shows the TEAR50 main form with the 'Results' window open. The 'Results' window displays a table with columns: Area Description, Name, Origin, and Destination. The table contains one row: '000-1' under Area Description, 'Hawking' under Name, '1-0-00' under Origin, and '1-0-00' under Destination. The 'Results' window also shows a 'Local Growth Figure' of 1.000.

## **Appendix 2**

2015-2029 TEMPRO Growth Rates

2015-2029

1549502 main form

data selections

trip and selections

trip and by time period selections

select time period

weekdays all peak period (0700 - 0900)

time and zone

production/attraction

origin/destination

Reset Selections

Results

Area Description

Level

0801.1

Name

Warrington

Origin

1.0346

All Purposes

Destination

1.0385

NTM Traffic Growth Calculations

1. Select NTM Dataset

NTM Dataset Description

From

To

2000

2029

2. Select Areas to make up the geographic region

Warrington (0801.1)

3. Select area type

Urban

Rural

All

4. Select road type

Motorway

Trunk

Arterial

Minor

All

5. Select which area it serves

Region

England

Calculate the adjusted local growth figure

Results

Level

Area

Local Growth Figure

0801.1

Warrington

1.2400

1549502 main form

data selections

trip and selections

trip and by time period selections

select time period

weekdays PM peak period (1800 - 1900)

time and zone

production/attraction

origin/destination

Reset Selections

Results

Area Description

Level

0801.1

Name

Warrington

Origin

1.0327

All Purposes

Destination

1.0475

NTM Traffic Growth Calculations

1. Select NTM Dataset

NTM Dataset Description

From

To

2000

2029

2. Select Areas to make up the geographic region

Warrington (0801.1)

3. Select area type

Urban

Rural

All

4. Select road type

Motorway

Trunk

Arterial

Minor

All

5. Select which area it serves

Region

England

Calculate the adjusted local growth figure

Results

Level

Area

Local Growth Figure

0801.1

Warrington

1.2024