Appendix DT/11

WSP Modelling Scoping Note 2019 and

Associated Correspondence Regarding Alternative Access Strategies

Subject: Peel Hall Pre-App Meeting March 2019
Date: Thursday, 4 April 2019 at 09:34:57 British Summer Time
From: Taylor, Mike
To: 'Dave Tighe', fiona.bennett@highgatetransportation.co.uk
CC: Dickin, Alan, Wright, Colin, Davies, Michael (Planning), 'Colin Griffiths'
Attachments: image001.png, image002.png, Traffic Surveys.jpg, Roadworks 290319.jpg, CCTV Traffic Survey Request Form FINAL.DOCX, A49_A574 Junction previous concept_Not Committed.pdf, Peel Hall - Through Route Option B1.jpg, Peel Hall - Through Route Option B2.jpg, Modelling Roles_Stages.pdf

Dave/Fiona,

Following on from our meeting on Friday I would provide the following comments in response to the issues raised:

WMMTM16 Modelling Reports:
LINK: https://www.warrington.gov.uk/downloads/download/3828/warrington-multi-modal-transport-model-local-plan-reports
This provides links to the Local Model Validation Report, PDO Sensitivity Testing and PSVLP Transport Model Testing. In respect to the query regarding Appendices can you confirm what appendices you require and to which report they relate? (The files are large and would need to be sent on request via We Transfer). In terms of schemes we are proposing, these are confirmed in the PSVLP Modelling Report which doesn't have any appendices.

Traffic survey data:
Attached is a copy of the Highgate plan Traffic Survey Plan annotated with locations of WBC available data. Also annotated is confirmation of the suggested additional locations for turning count surveys; as discussed at the meeting there are a number of locations that are not considered essential for surveys but it is understood that Highgate wish to secure data for additional purposes.

As per the emails sent following the meeting it is noted that a number of the traffic surveys are already in place but I am conscious of the ongoing roadworks in the area particularly on Long Lane; Friday screenshot attached.

I would also point out that the Council has a protocol in place for traffic camera surveys and have attached a request form should any of your surveys involve cameras.

As discussed could you confirm what data you have available for the Blackbrook Avenue/Ballater Drive, Blackbrook Avenue/Capesthorne Road and Orford Green/Hilden Road junctions?

A574/A49 Junction:
As requested the concept scheme for this junction is attached but as confirmed at the meeting this is neither a scheme in the Council's Capital Programme nor included in the Local Plan Forecast Models; it was an output from a feasibility study for bus corridor improvement undertaken in 2013 which was not taken forward.

Peel Hall Local Plan Access Strategy:
I'm waiting for confirmation of this and will forward the information through as soon as I receive it.

Access Strategy Options:
As per the WSP Scope of Modelling and the discussions at our meetings in February 2019 and March 2019 it is suggested that alternative access strategies should be considered to identify the most appropriate access solution; these are proposed as feasible options without prejudice and do not indicate

a preference or an agreed solution. As requested sketch options for Option B1 & B2 attached.

Peel Hall WMMTM16 Modelling Process:
Flow chart attached.

M62 Junction 9 Signal Upgrade:
The timescales are as per the information on the local roadworks web page (see below) which will be updated should anything change. At this moment in time the works are ahead of schedule so it may be that the works will be completed slightly earlier.

AADT/AAWT Factors:
These can either be derived from the latest automatic traffic counts for the individual routes (and are likely to vary by road type within the study area so that Primary Routes such as the A49 corridor will have different values to the residential network such as Poplars Avenue) or AECOM can provide output from the WMMTM16 output data. We are happy with either approach or to use factors previously identified from the Local Plan modelling work; what would be your preference?

Local Roadworks:
As per the email exchange on Friday the link to roadworks information is:
https://www.warrington.gov.uk/info/201080/streets-and-transport/1984/roadworks

Please let me know if I have missed anything that we agreed action on or if you require any further information.

Regards

Mike

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Option B1

KEYS

CH.
LC.
EA.
S.
R.

*Note: Heights shown are proposed from ground level. Heights shown are fixed and take precedent over number of storeys shown.

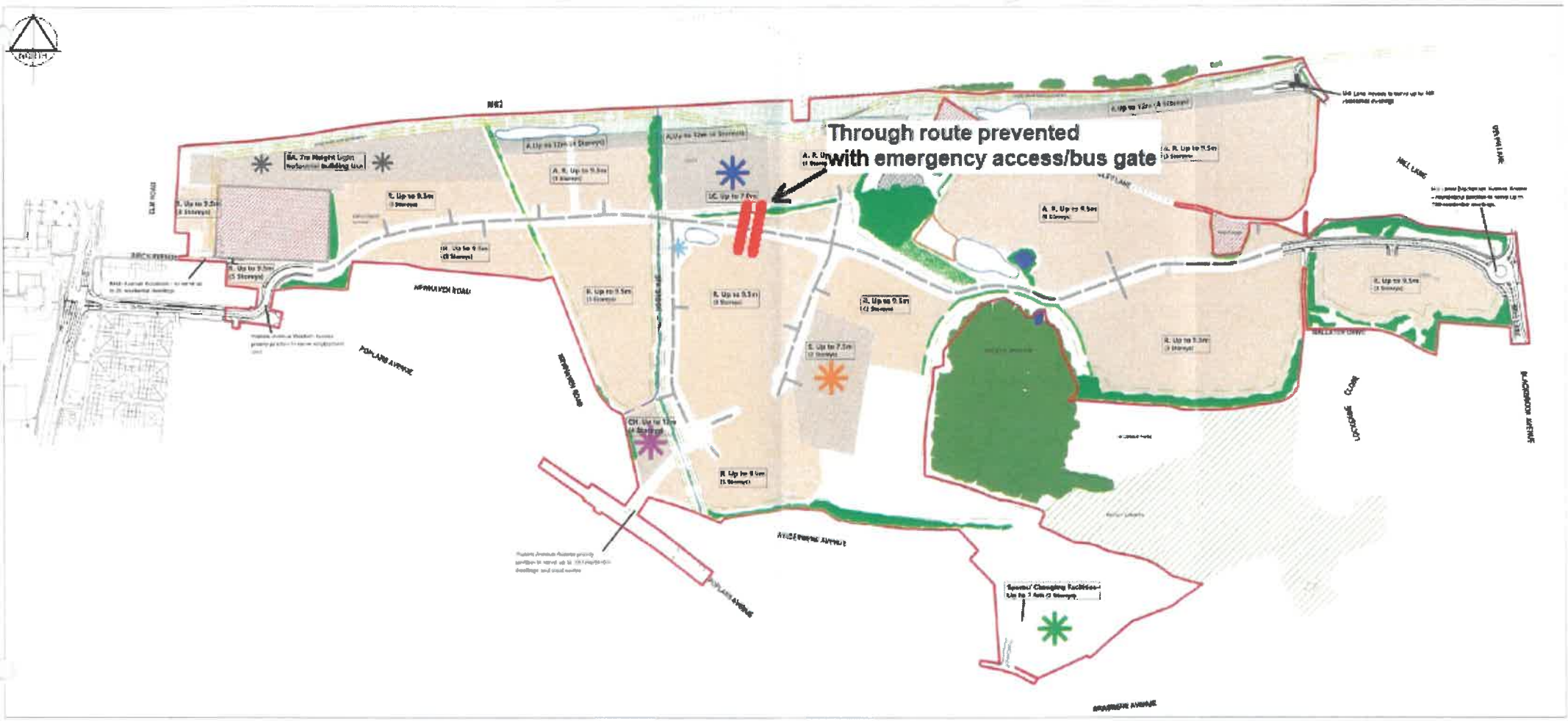
PEEL HALL, WARRINGTON

PEEL HALL, WARRINGTON

Parameters Plan- **Option B**

FIGURE APP 6B

Option B2



KEYS

PEEL HALL, WARRINGTON

Parameters Plan- **Option B**

FIGURE APP 6B

Warrington Borough Council

PEEL HALL

Scope of Modelling

70040878_SOM
FEBRUARY 2019

PUBLIC

Warrington Borough Council

PEEL HALL

Scope of Modelling

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70040878

OUR REF. NO. 70040878_SOM

DATE: FEBRUARY 2019

WSP

8 First Street
Manchester
M15 4RP

WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft			
Date	28/02/2019			
Prepared by	Colin Wright			
Signature				
Checked by	Gary Rowland			
Signature				
Authorised by	Gary Rowland			
Signature				
Project number	70040878			
Report number	70040878_SoM			
File reference				

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TABLES

FIGURES

APPENDICES

1 INTRODUCTION

1.1.1. WSP have been commissioned by Warrington Borough Council (WBC) to detail the scope of modelling required for a new planning application for a major residential development at Peel Hall, Warrington.

1.1.2. This follows on from a previous planning application on this site which was refused planning permission by the Secretary of State following a Public Inquiry held in April and July 2018. Early indications are that the scale of development will be similar to that previously submitted and as such the scope of modelling is based upon a development containing 1,200 new residential units.

1.1.3. The purpose of modelling the development is to identify links and junctions on the immediate, and parts of the wider, Warrington road network that are impacted by the traffic generated by the development as it is built out and on its completion. The outputs of the modelling should be used to assess specific junction operation and assist in designing appropriate mitigation measures.

2 SCOPE OF MODELLING

2.1 EXISTING MODELS

2.1.1. A revised multi modal transport model (the WMMTM16) has been developed for WBC using the services of Aecom transport consultancy. The model was developed at a cost of over £1m and included a significant amount of primary data collection, including mobile phone data to inform the origin-destination movements.

2.1.2. The WMMTM16 has been developed using SATURN modelling software, version 11.3.12U, for highway assignment modelling aspects integrated with EMME 4.29 software for public transport and demand modelling aspects. The following models have been produced:

- A Base Year Highway Model for 2016; and
- A Forecasting Model for the time horizons of 2026 and 2036 based on the aspirational land use pattern set out in the council's Preferred Development Option for the Local Plan (as published for consultation in July 2017) and committed transport schemes.
- A Forecasting model was also produced to support the Outline Business Case for the Western Link Local Major application to the DfT in December 2017. In accordance to DfT WebTag guidance this was constrained to NTEM growth factors and was based on the existing SHLAA for Warrington and committed transport scheme.

2.1.3. It is worth noting that the PDO has been subject to some changes since July 2017. A final version of the Forecast Model is currently in development to reflect the land use policies to support the Draft Local Plan. This is expected in March 2019).

2.1.4. One of the primary reasons for developing this transport model is to investigate the impact of particular developments (as requested by developers or their consultants), on the Warrington Transport network. As such any modelling work for Peel Hall should make use of the WMMTM16 at a first level of impact assessment. It will then be necessary to employ other stand alone junction modelling or micro-simulation packages to further understand and mitigate the development impact. However, the traffic flow inputs to these models should come from the WMMTM16.

2.2 BASE MODEL CHECKING

2.2.1. The WWMTM16 has a simulation area that covers the entirety of the Borough area, with an extensive buffer network beyond that. An extensive data collection exercise was undertaken to inform the model development and assist in calibrating and validating the model. Overall the model produces calibration and validation results that are in line with that advised by the DfT.

2.2.2. However, these are taken from across the entire network. If a particular area of Warrington is examined it may be the case that there has been limited data collection in this area to inform the WMMTM16, or that the local calibration and validation performance is below that of the overall model.

2.2.3. As such a check should be undertaken on the highway model performance in the area around the Peel Hall development site. Things to look at and identify would be:

- Number, location and calibration / validation performance of count sites;
- Number, location and validation performance of journey routes;
- Turning movements at key junctions in the vicinity of the site; and

- Coding of key junctions in the vicinity of the site.

2.2.4. The WMMTM16 is calibrated only to link flows, not turning movements. Therefore the turning movements at key junctions need to be compared to observed data. Similarly link flows on key links that do not have any calibration or validation counts sites, the modelled flows should be noted and compared to other existing count data that has not been used for the WMMTM16 development. It may be necessary to commission some additional traffic surveys to allow these comparisons to take place.

2.2.5. The location of key junctions and links should be agreed with WBC.

2.2.6. Any sub-optimal performances or coding errors should be identified and reported to WBC.

2.2.7. Any decision to make alteration to the current base model to alter network coding or matrices will require approval by WBC. If the base year model is to be altered then any forecasting must be carried from the altered base, and as such the existing forecast WMMTM16 models cannot be used.

2.3 FORECASTING

2.3.1. Based upon the previous work, and given the location of the site, it is assumed that forecasting will be undertaken in the highway model only. This is proportionate as there is no major public transport intervention proposed as part of the development.

FORECAST YEARS

2.3.2. Aside from the 2022 opening year two forecast years are required to represent the half and full build out of the development and associated infrastructure. The modelled years will be 2027 and 2032. Two years are required as this provides an indication of when any mitigation may be required.

2.3.3. The HE should also be consulted as their requirements for modelled years may be different to that of WBC.

TIME PERIODS

2.3.4. Forecast models should be prepared for AM peak, inter peak and PM peak periods. The inter peak period will assist in determining AADT flow.

DEMAND FORECASTING

2.3.5. The Do Minimum demand should be forecast to NTEM levels with all committed developments modelled explicitly. If the committed development forecast exceeds NTEM then the higher growth level should be used.

2.3.6. Of the existing forecast models, the model that closely represents this forecast demand requirement is the one used for the Western Link business case submission. If the forecast years are different to the Western Link models it would be appropriate to apply linear growth to the demand. The current level of committed development should be checked against what was assumed for the Western Link demand forecasts.

2.3.7. These models can only be used if no changes are required to the base year model. If changes are made to the base year demand then demand forecasting must be carried out independently.

2.3.8. Trip generation has previously been agreed. These trips should be added on to the Do Minimum forecasts to form the Do Something demand.

2.3.9. The development trip distribution should reflect the agreed distribution produced from WMMTM16 for the Public Inquiry.

2.3.10. Additional trip generation and trip distribution must be undertaken for the IP time period.

2.3.11. Goods vehicle forecasting should be based on the latest Road Traffic Forecast information.

NETWORK FORECASTING

2.3.12. The Do Minimum network should contain all committed developments. Of the existing forecast models, the model that closely represents this forecast network requirement is the one used for the Western Link business case submission. The current committed highway schemes should be checked against what was assumed for the Western Link network forecasts.

2.3.13. A cordon of the forecast network is appropriate to improve modelling efficiency and target the local impacts only. The same extent as previously used would be acceptable to WBC.

2.3.14. The HE should also be consulted as their requirements for modelled network may be different to that of WBC

2.3.15. The Do Something model networks should consider:

- Option A - access junctions proposed by Highgate;
- Option B1 – through route linking A49 and Mill Lane; and
- Option B2 – split site with two access points, one on A49, one on Mill Lane.
- Option C – single vehicular access at Mill Lane with internal loop road.

2.3.16. These options are proposed as feasible options without prejudice and do not indicate a preference or an agreed solution.

2.3.17. An indicative sketch of Option C is included as an appendix to this document.

2.4 IMPACT ASSESSMENT

2.4.1. The use of WMMTM16 as a way of identifying junctions where further assessment is required is appropriate. All junctions with a Volume to Capacity ratio (V/C) on any approach arm of above 85% in any scenario, within the agreed area of influence of Peel Hall, should be examined further. A V/C of 85% would be considered to be the threshold at which minor fluctuations in flow or vehicle type can be accommodated without the junction reaching capacity.

2.4.2. Given the limitations of SATURN as a tool for junction modelling this stand alone analysis should be done using the following software packages with SATURN flows providing the input:

- Junctions 9 PICADY – for priority junctions;
- Junctions 9 ARCADY – for mini and standard roundabouts;
- Linsig – for signalised junctions and signalised roundabouts.

2.4.3. For Option B (i.e. an option with a new access onto the A49) the A49 should be modelled in VISSIM microsimulation software to understand how blocking back at junctions would impact on the performance of the network. Junctions to include would be:

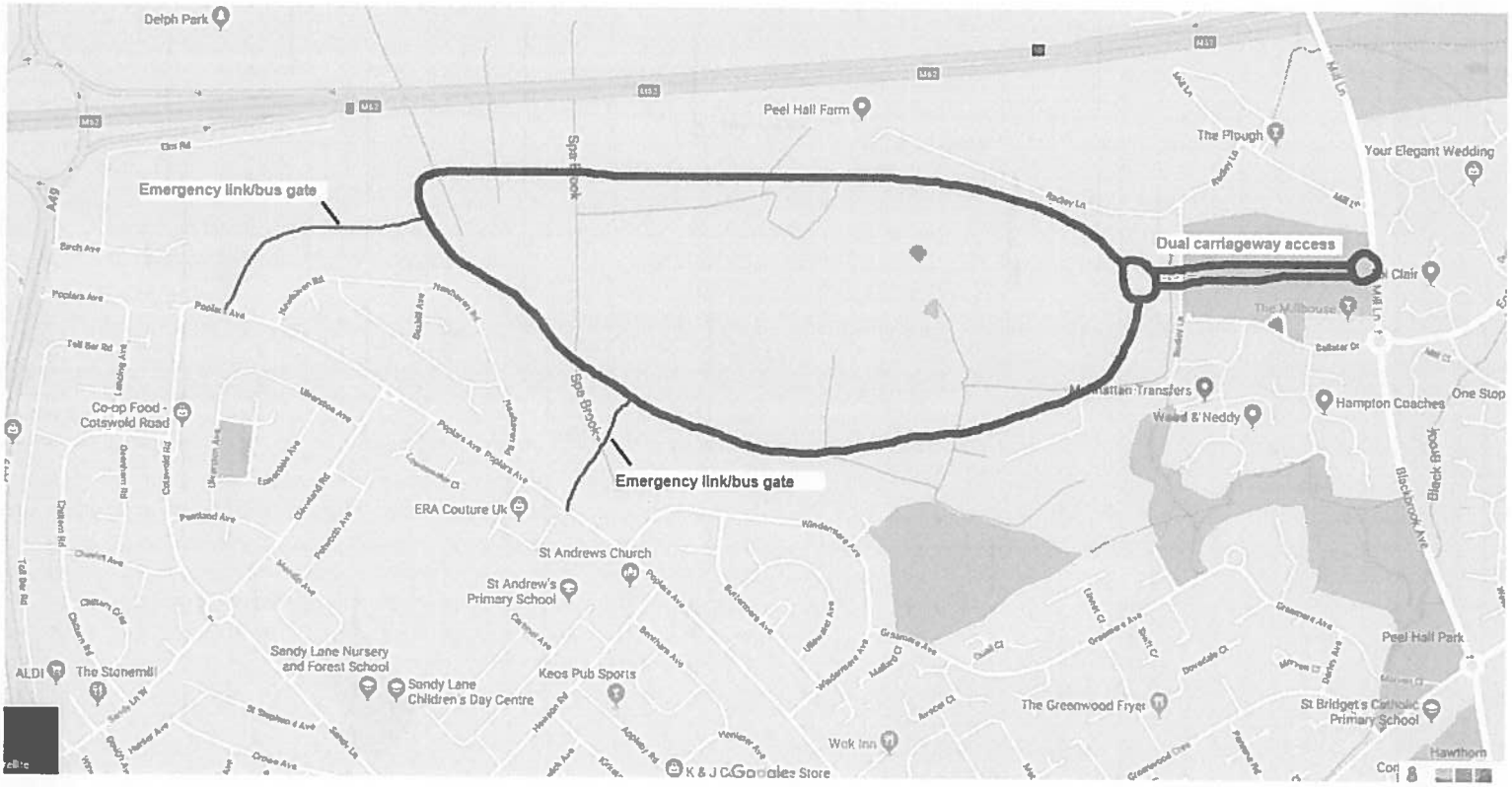
- A49 Newton Road/Winwick Link Road/Winwick Park Avenue
- A49 / Delph Lane;
- A49 / M62;
- A49 / Peel Hall Access;

- A49 / Sandy Lane West / Cromwell Avenue;
- A49 / Junction 9 retail park; and
- A49 / A50.

2.4.4. When considering mitigation measures at junctions, the mitigation should seek to accommodate not just the flow in the Do Something scenario but the Do Something flow plus any displaced flow. That is the difference between Do Minimum and Do Something flows on a junction arm may be less than the number of development trips on the arm. This indicates that a number of Do Minimum trips have diverted due to the development traffic. The mitigation should seek to accommodate the Do Minimum flows plus the development flows.

Appendix A

OPTION C INDICATIVE SKETCH


Delph Park
Peel Hall Farm
The Plough
Your Elegant Wedding
Emergency link/bus gate
Spa Brook
Dual carriageway access
Emergency link/bus gate
Co-op Food - Cotswold Road
Manhattan Transfers
Hampton Coaches
Wood & Neddy
ERA Couture Uk
St Andrews Church
St Andrew's Primary School
Sandy Lane Nursery and Forest School
Sandy Lane Children's Day Centre
Keos Pub Sports
ALDI
The Stonemill
The Greenwood Fryer
St Bridget's Catholic Primary School
Peel Hall Park
Wok Inn
K & J Goodales Store
Hawthorn