Transport Assessment Review - Proposed Mixed Use Development – Chidswell, Dewsbury

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DATE:	3rd September 2020
PROJECT NUMBER:	DevWY0010
DOCUMENT REF:	TM004
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Task Overview

CH2M (on behalf of Highways England) has undertaken a review of a Transport Assessment [TA] and Framework Travel Plan [FTP] that have been submitted to Kirklees Council [KC] for the planning applications referenced 2020/92331 and 2020/92350, both located on adjacent plots on land to the east of Leeds Road, Chidswell, Dewsbury. The 2020/92331 application seeks outline planning permission for the demolition of existing dwellings and development of phased, mixed-use residential scheme, comprising up to 1,354 dwellings, up to 35 hectares of B1 / B2 / B8 uses, a local centre, primary school, access and associated infrastructure. This aspect of the development is understood as site B. The 2020/92331 application seeks outline planning permission for the development of up to 181 residential dwellings, engineering and site works, the demolition of existing properties and associated infrastructure. This aspect of the development is understood as site A.

The TA and FTP have been prepared to assess the combined impacts of the proposed development of both site A and site B as a whole, with the same TA and FTP submitted for each application. The TA assesses the impacts of the proposed development of site A only whilst also providing a summary of the separate traffic impacts of site A and B. The TA and FTP has been prepared by Pell Frischmann [Pell] on behalf of the Church Commissioners for England [the Applicant].

CH2M has previously reviewed a TA scoping note and supplementary response comments produced by Pell for the proposed development, with comments contained within Highways England response notes DevWY0010 TM002 and TM003. This TM004 technical memorandum comments on the suitability of the TA report whilst a separate CH2M technical memorandum (TM005) comments on the suitability of the FTP. Comments are made below in relation to whether the TA suitably considers the impact of the proposals upon the Strategic Road Network [SRN] in line with previous agreements made with CH2M at the scoping stage of the development. For ease of cross referencing, the headings adopted below are the same as those utilised within the TA, where relevant to Highways England.

Outstanding Matters from Pre-app Consultation

As acknowledged above, CH2M previously reviewed a TA scoping note and responding comments produced by Pell for the proposed development. The outstanding traffic and transport matters pertinent to Highways England identified by CH2M in TM003 are summarised below. Where relevant, previous pre-app comments by way of agreements and outstanding matters will inform the content of this latest review note.

1) The proposed person trip rates for the B1(c) / B2 and B8 land uses are still considered to be low.
2) Pell will need to supply the Excel spreadsheets that evidence the MSOA journey to work origin-destination pairs underpinning the turning proportions detailed in Appendix B.
3) Pell propose that Junction 41 of the M1 (Carr Gate Interchange) will not require further junction assessment given the quantum of trips expected to utilise this junction. The calculations undertaken to determine this proposed distribution will need to be supplied.
4) Further detail is required as to the growth rates from the SATURN model.

Moreover, as noted by CH2M in TM003, individual junction traffic surveys were undertaken on Wednesday 6th March 2019 with ATC surveys undertaken between Tuesday 5th March and Monday 11th March. Although the times of the surveys were generally considered appropriate, at the time of surveying roadworks were in place at M62 Junction 28. Pell therefore committed to updating these surveys in Autumn 2019 during school term time. This was considered acceptable.

In line with the above, Paragraph 1.11 of the TA confirms that new surveys were agreed and undertaken in November 2019, however, the outputs are stated as not being available at the time of TA submission. A TA Addendum is therefore proposed to follow the planning submission which will be applicable to M62 J28.

Local Plan Position

As previously identified within CH2M TM002, the proposed development forms part of the proposed mixed-use allocation 'MX1905' in the Publication Draft Kirklees Local Plan which was submitted for examination in April 2017. The Plan was adopted in February 2019 and the site is now MXS7. Highways England has already considered this site through assessment work related to the Kirklees Draft Local Plan allocations. Within the site-specific considerations, it is identified that additional mitigation on the wider highway network will be required. Development of this site has the potential for a significant impact on the Strategic Road Network. The TA will need to demonstrate that committed schemes can accommodate the additional demand. Where this is not the case the development may need to contribute to additional schemes identified by KC and Leeds City Council [LCC] in conjunction with Highways England and included within the IDP.

Site Location

The site is located to the east of the A653 Leeds Road Dual Carriageway, a key corridor between Dewsbury and Leeds. Leeds Road runs in a north-south direction, adjoining the A638 Wakefield Road to the south and Junction 28 (Tingley Interchange) of the M62 to the north. The site has immediate connectivity to the SRN, with an approximate distance of 2 miles to Tingley Interchange of the M62 to the north, 4 miles to Junction 41 of the M1 to the east and 3 miles to Junction 40 of the M1 to the southeast. The location of the site in relation to the SRN is detailed in TA Figure 1.1 below.

TA Figure 1.1 – Site Location Plan

Existing Transport Conditions

Walking Journey Times and Networks

The 10 and 20 minute walking radii, detailed in Figure 2.2 of the TA, have been taken from each respective site access to points around the site using a standard assumed walking speed of approximately 3mph. The TA confirms that this method has weighted the radii according to distance from the accesses of the site, rather than from the centre.

CH2M would typically expect a 2km isochrone to be provided within the TA opposed to 10 / 20 minute radii, however, it is acknowledged by CH2M that both north-eastern Dewsbury and south-western Tingley remains accessible via 2km pedestrian trip. It is acknowledged by CH2M that the majority of roads surrounding the site, including Leeds Road, Heybeck Lane, Chidswell Lane and Windsor Road, have footways provided on both sides of the carriageway to facilitate pedestrian movement. Pedestrian crossing facilities and streetlighting are provided on the A653 Leeds Road. Heybeck Lane and Chidswell Lane are lit but do not have any formal crossing facilities.

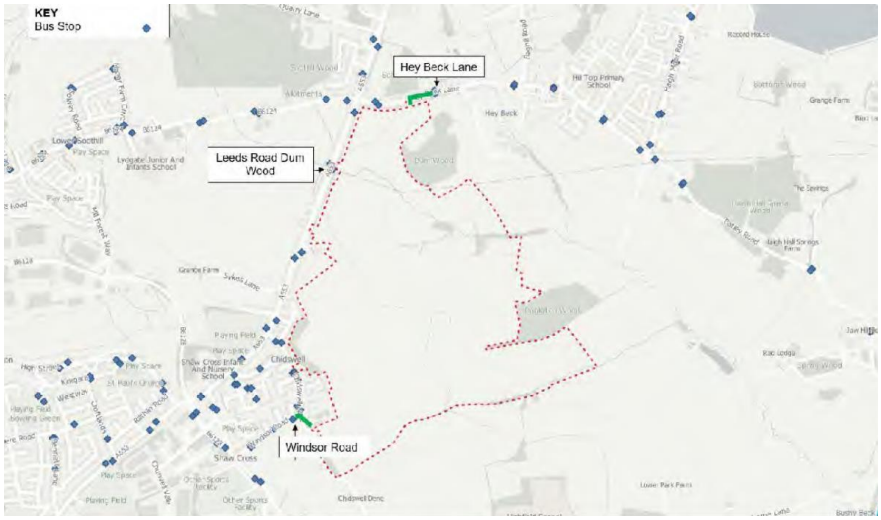
Cycling Journey Times and Networks

The TA notes that the 10 and 20 minute cycling radii were taken from each of the site accesses to locations surrounding the site using a standard assumed cycling speed of approximately 12mph. As above, CH2M would typically expect a 5km isochrone to be provided within the TA opposed to a 10 / 20 minute radii. This 5km isochrone should be provided within the TA and FTP moving forward.

It is acknowledged by CH2M that the site is surrounded by various National Cycle Network [NCN] routes, namely Route 69 (Dewsbury to Ravensthorpe), Route 66 (Huddersfield to Bradford) and Route 699 (Dewsbury to Ossett), while traffic free cycle routes linking Tingley to Beeston, Middleton and Leeds City Centre exist to the north of the site.

Bus Stops

The existing bus stops within proximity to the development site are detailed within TA Figure 2.4, seen below. Table 2.1 of the TA details the approximate frequency of accessible services. The implementation of wider bus service provision by way of services and stops will be discussed further within this note and TM005.



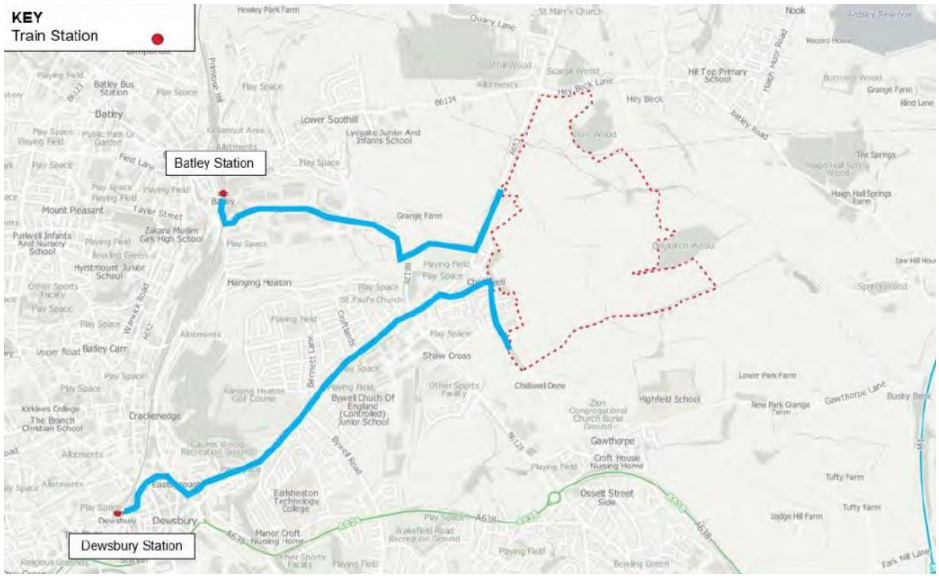
TA Figure 2.4 – Routes to Nearest Existing Bus Stops

Service (operator)	Route	Frequency (minutes)			
		Monday-Friday daytime	Monday-Friday evening	Saturday	Sunday
117 (AY)	Wakefield / Leeds	60 (schooldays only)	60 (schooldays only)	60	60
119 (AY)	Wakefield / Batley	120	-	120	-
120 (AY)	Wakefield / Batley	120 (mornings only)	-	120	-
202 (AY)	Huddersfield / Leeds	30	60	30	60
203 (AY)	Huddersfield / Leeds	30	60	30	60
205 (AY)	Dewsbury / Pudsey	60	-	60	-
212 (AY)	Dewsbury / Wakefield	60 (except 9am-3pm)	60	60 (except 9am-3pm)	60
212A (AY)	Dewsbury / Wakefield	60 (9am-3pm only)	-	60 (9am-3pm only)	-
ML2 (TLC)	Shaw Cross / Dewsbury Moor	60 (9am-3pm only)	-	60 (9am-3pm only)	-
X17 (AY)	Overton / Leeds	60 (AM peak only)	-	-	-

TA Table 2.1 – Bus Services and Approximate Frequency

Railway Stations

The two nearest railway stations accessible from the site are detailed in Figure 2.5 of the TA, seen below. Batley Railway Station is located approximately 3km west of the site and Dewsbury Railway Station approximately 4km to the south-west. Both stations remain accessible by bus, enabling the possibility of multi-modal public transport trips. The accessibility and potential utilisation of rail trips will be discussed further within TM005.



TA Figure 2.5 – Routes to Local Railway Stations

Road Traffic Accident Data

Broad data relating to road traffic accidents resulting in personal injury has been collated by Pell for 2014-2018 inclusive. This data covers both the local highway network and SRN but does not provide detailed analysis to any specific collision or collision cluster situated on the SRN at either M62 J28 or M1 J40. With reference to the road traffic accident data detailed within the TA, CH2M note that:

- Highways England will require detailed collision analysis (2015 to 2019 inclusive) to be undertaken for both M62 J28 and M1 40. This analysis is required in order to determine whether there are any collision 'cluster spots' at either junction that could indicate existing highway safety issues.
- Collision analysis undertaken must take into account the quantum, severity and causation of any collision cluster at both M62 J28 and M1 J40. This analysis must take into account the respective junction on / off-slips, the mainline within proximity to the junction, and the junction circulatory.
- The above collision analysis will also be required for M1 J41, should it be deemed by CH2M that this junction requires assessment once overall traffic impact is agreed.

Development Proposals

Site Plan Overview

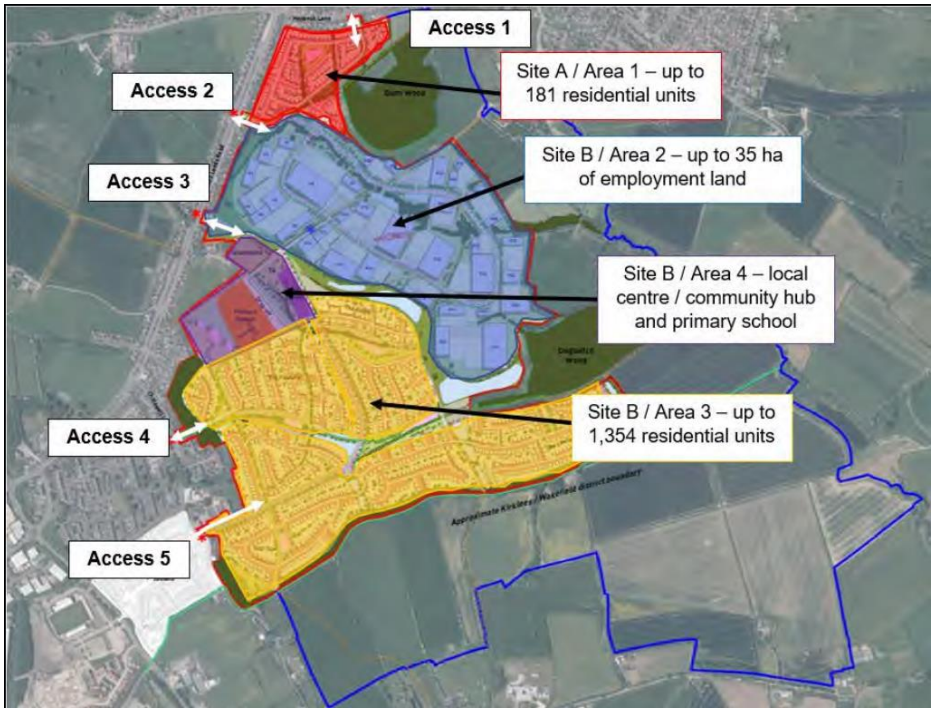
The site is to be split into two development parcels, understood as 'Site A' and 'Site B'. Site A and site B are the subject of separate outline planning applications that have been submitted to KC in parallel. The TA and FTP is intended to assess the cumulative impacts of the proposed development of both site A and site B as a whole and each has been submitted twice, once with each planning application. In summary, the following development is proposed:

- 1,535 Residential Units (C3) (distributed across Site A and Site B) – Up to approximately 181 residential units are proposed for Site A.
- 35 Hectares pf Employment Land (within Site B);
- Local Centre / Community Hub (within Site B); and
- Primary School (within Site B).

Land to the east of Leeds Road (Site B) is to comprise up to 1,354 residential dwellings, a local centre / community hub which includes a 2FE primary school, and 35 ha of employment land equating to up to 122,500 sqm GEA. For the purposes of the TA, this illustrative masterplan has assumed the following floor areas for each land use category:

- B1a Office Use – 18,375 sqm GEA;
- B1c Light Industrial – 12,250 sqm GEA;
- B2 General Industrial – 30,625 sqm GEA; and
- B8 Warehousing – 61,250 sqm GEA.

Paragraph 4.5 of the TA identifies that the proposed split between employment land uses to be delivered is flexible with the identified proportions being illustrative in status, with the exception of B1a office use (at 15% of total floorspace). Figure 4.2 of the TA details the approximate land parcel plan, as seen below.



TA Figure 4.2 – Illustrative Masterplan and Approximate Land Parcel Plan

Proposed Access Arrangements

Vehicular Site Access

As previously noted by CH2M within TM002, that the five points of access and egress to and from the site have been previously discussed and agreed in principle with KC Highways Officers, subject to detailed design and the necessary Road Safety Audits (RSAs). The proposed vehicular accesses are seen to be acceptable by CH2M.

Bus Access

Paragraph 4.23 of the TA confirms that the growing demand for sustainable travel options associated with residential and employment aspects of the site would encourage operators to run additional services. It is also confirmed that the internal spine road has been designed to accommodate the potential provision of bus services in the future, which is proposed to bring all extents of the site to

within 400m of a bus stop. While the TA notes that the Applicant proposes to engage with local public transport operators in the future in order to establish the commercial viability of further services, CH2M note that:

- Due to the significant level of trip generation associated with both residential and employment aspects of the site, Highways England will require confirmation and a much greater degree of detail as to the level and nature of public transport service provision that will be accessible from the proposed site. This detail is critical to ensure that the level of modal trip generation associated with all aspects of the site can be evaluated, ensuring the resultant impact on the SRN can be understood.

Cycle Access

Cycle access is proposed to be provided via the five vehicular access points, in addition to the network of internal cycle routes which connect sites A and B. This is seen to be acceptable by CH2M.

Trip Generation

Trip Generation Approach and Methodology

Residential – C3 Residential Dwellings

It is proposed that the residential units will comprise a mix of privately owned and affordable dwellings. For the purpose of the TA, it is proposed that 90% of dwellings are assumed to be privately owned (market value) and 10% will be classed as affordable ownership. Trip rates for both privately owned houses and affordable houses have therefore been considered in determining residential trip rates.

Employment – B1(a) Office, B1(c) Light Industry, B2 General Industrial, B8 Storage / Distribution

The site selection for each employment use class for the development TRICS assessment has been derived from the following land use categories:

- B1(a) Office – 02 Employment – (B) Business Park;
- B1(c) Light Industry – 02 Employment – (D) Industrial Estate;
- B2 General Industry – 02 Employment – (D) Industrial Estate; and
- B8 Storage / Distribution – 02 Employment – (F) Warehousing.

The above TRICS classes are seen to be acceptable by CH2M.

Although not previously agreed with Highways England in regards to all development aspects, the proposed trip rates for the development are detailed in Table 5.1 of the TA, seen below.

Land Use	Time Period	Arrivals	Departures	Total Two-Way
Residential Dwellings (Private) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.233	0.818	1.051
	17:00 – 18:00	0.605	0.390	0.995
	Daily (07:00-19:00)	**4.185**	**4.445**	**8.630**
Residential Dwellings (Affordable) (C3 Use Class) (trips per dwelling)	08:00 – 09:00	0.211	0.669	0.880
	17:00 – 18:00	0.477	0.373	0.850
	Daily (07:00-19:00)	**3.472**	**3.607**	**7.079**
Business (Office) (B1(a) Use Class) (trips per 100m² GFA)	08:00 – 09:00	1.970	0.268	2.238
	17:00 – 18:00	0.218	1.627	1.845
	Daily (07:00-19:00)	**7.148**	**7.022**	**14.170**
Business (Light Industry) (B1(c) Use Class) and General Industry (B2 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.747	0.263	1.010
	17:00 – 18:00	0.321	0.869	1.190
	Daily (07:00-19:00)	**4.855**	**4.735**	**9.590**
Storage or Distribution (B8 Use Class) (trips per 100m² GFA)	08:00 – 09:00	0.483	0.085	0.568
	17:00 – 18:00	0.022	0.389	0.411
	Daily (07:00-19:00)	**2.463**	**2.632**	**5.095**

TA Table 5.1 – TRICS Total Person Trip Rates

With reference to the proposed person trip rates, CH2M note that:

- CH2M previously identified in TM003 that the proposed person trip rates for the B1c / B2 and B8 land were considered to be low. However, trip rates for both B1c / B2 and B8 land uses have noticeably increased from the values previously proposed by Pell within the prior TA scoping assessments.
- The B1c / B2 trip rates are now considered acceptable.
- The B8 trip rates are now considered acceptable.
- In line with the employment land use proportions proposed at this stage of the application, the total person trip generation for the residential and employment aspects of the wider development can be accepted.

Mode Split

Residential

In line with the TA scoping assessments undertaken by Pell, the proposed residential journey to work modal split based on the Kirklees 014 MSOA is detailed within TA Table 5.4, seen below.

Mode	Kirklees 014 MSOA (%)
Underground, metro, light rail, tram	0
Train	2
Bus, minibus or coach	7
Taxi	1
Motorcycle, scooter or moped	1
Driving a car or van	70
Passenger in a car or van	8
Bicycle	1
On foot	9
Other	1
Total	100

TA Table 5.4 – ONS Census Kirklees 014 Residential Mode Split (%)

With reference to the proposed residential journey to work modal split, CH2M note that:

- The modal split values detailed within TA Table 5.4 suitably correspond to the values previously accepted by CH2M within TM003. The residential journey to work modal split proportions are therefore seen to be acceptable.

Employment

In line with the TA scoping assessments undertaken by Pell, the proposed employment journey to work modal split based on the Kirklees 014 MSOA is detailed within TA Table 5.5, seen below.

Mode	Kirklees 014 MSOA (%)
Underground, metro, light rail, tram	0
Train	1
Bus, minibus or coach	4
Taxi	1
Motorcycle, scooter or moped	2
Driving a car or van	71
Passenger in a car or van	10
Bicycle	2
On foot	9
Other	0
Total	100

TA Table 5.5 – ONS 2011 Census Kirklees 014 Employment Mode Split (%)

With reference to the proposed employment journey to work modal split, CH2M note that:

- The modal split values detailed within TA Table 5.5 suitably correspond to the values previously accepted by CH2M within TM003. The employment journey to work modal split proportions are therefore seen to be acceptable.

Local Centre / Community Hub

It is accepted by CH2M that all / the significant majority of trips associated with these facilities will be internalised or remain solely associated with movements on the local highway network. As such, there is no expected impact from these trips on the SRN.

Primary School

As above, it is accepted by CH2M that all / the significant majority of trips associated with the primary school will be largely internalised or remain solely associated with movements on the local highway network. As such, there is no expected impact from these trips on the SRN.

Trip Distribution

A trip distribution and traffic assignment exercise has been carried out by Pell to determine where vehicular traffic associated with the site is likely to route when arriving at and departing from the site. Trips have been distributed and traffic assigned to the surrounding highway network by establishing the following:

- The likely end destinations of residents leaving the site and start origins of employees arriving at the site, identified by reviewing Census travel to work data; and
- The likely off-site routing of new trips to elsewhere in the region, for trips originating at the site and equivalent from elsewhere to the site for those trips ending at the site.

Full details of the Census data and route assignments are included at Appendix E of the TA.

With reference to the proposed trip distribution, CH2M note that:

- It is acknowledged that Appendix E contains the spreadsheet route assignment methodology utilised by Pell, however, for both residential and employment trips, the calculations provided fail to name each specific route identified. Proposed routes are instead identified as 1 through to 23.
- Until the specific routes to be utilised by development traffic is clarified by Pell, the proposed trip distribution methodology cannot be fully evaluated or accepted by CH2M.

Highway Impact Assessment

Strategic Road Network Scope

The TA confirms that M1 J40 and M62 J28 have been included in junction assessments undertaken by Pell. As identified within this review note, M62 J28 was yet to complete a congestion reduction capacity enhancement roadworks at the time of baseline surveys being undertaken.

It has subsequently been agreed with Highways England that M62 J28 would be resurveyed as to ensure survey conditions are as representative as possible. This surveying was completed in November 2019, therefore revised modelling outputs are proposed to be presented as part of a TA Addendum which is to be submitted subsequently.

Continuing, Paragraph 6.18 of the TA proposes that as a result of assessed traffic flows, it is considered that there is not a need to assess M1 J41 due to the minimal number of trips expected at this junction.

With reference to the scope of SRN modelling assessments, CH2M note that:

- The principle of M62 J28 being assessed as a supplementary piece of work is acceptable.
- CH2M cannot accept the proposal that M1 J41 does not require further assessment until trip distribution proportions and resultant traffic impact are agreed.
- The modelling files and survey data utilised by Pell when undertaking the M62 J28 and M1 J40 modelling assessments should be subsequently provided to CH2M to ensure the modelling undertaken can be fully evaluated.

Future Assessment Years

Paragraph 6.23 of the TA confirms that the full impact of the complete-and-operational proposed development of both site A (up to 181 residential dwellings) and all of site B (up to 1,354 residential dwellings and up to 35ha of employment) will be assessed over a 2030 future year. This is seen to be acceptable by CH2M.

Scenarios

The TA confirms that for M62 J28 and M1 J40, classified turning count surveys have been undertaken on a mid-week during term time, to reflect existing or baseline traffic conditions. The following assessment scenarios applicable to the SRN have been considered by Pell:

- **2019 Base** – informed by 2019 classified turning count surveys;
- **2030 Do Nothing (DN)** – forecast background growth of Base traffic to 2030 at rates indicated by KC's SATURN models;
- **2030 Do Something Site A (DS A)** – 2030 Do Nothing flows with the complete and operational site A generated flows added;
- **2030 Do Something Sites A + B (DS A+B)** – 2030 Do Nothing flows with both the complete and operational site A and site B generated flows added.

The stated assessment scenarios are seen to be acceptable by CH2M. Although not specifically stated by Pell, it is assumed by CH2M that all 2030 scenarios will be growthed appropriately alongside committed development flows and the application of operational flows.

Scenario Interpolation

As discussed through the TA scoping process, Pell propose that future year assessment flows will be factored up by a SATURN derived growth factor. SATURN flows are proposed to be used to determine turn-based detailed growth rate factors which consider the contribution of Local Plan development allocations which are incorporated within the future year SATURN models utilised by Pell.

A comparison of future year growth scenarios is summarised within Table 6.1 of the TA, detailed below, which is based on weighted averages across an area cordoned to cover the junctions of interest. Pell note that whilst 'whole-of-scenario' weighted average growth rates are shown, actual growth rates have been applied on a turn by turn junction by junction basis.

Base Year	Future Year	Weekday Peak	Scenario	Weighted Cordon Area Average Growth Rate		Equivalent TEMPro Rate (NTM-Adjusted Local Growth Figure)	
2019	2024	AM	DM	1.0627	6.3%	1.0421	4.2%
2019	2024	PM	DM	1.0466	4.7%	1.0419	4.1%
2019	2030	AM	DM	1.1071	10.7%	1.0913	9.1%
2019	2030	PM	DM	1.0733	7.3%	1.0920	9.2%

TA Table 6.1 – SATURN Derived Trip Rate Growth Summary

With reference to the proposed growth rate methodology, CH2M note that:

- Pell propose that actual growth rates have been applied on a turn by turn junction by junction basis, therefore CH2M will require that the specific turn by turn growth rates applicable to both M62 J28 and M1 J40 are confirmed moving forward.
- Pell should clarify as to whether the turn by turn growth rates at the SRN take into account the identified committed development.

Committed Developments

As discussed through the TA scoping process, given the proximity of the development site to the boundary of Leeds, major committed development sites within Leeds and Leeds Local Plan allocations will require consideration within any modelling undertaken. Moreover, significant Kirklees Local Plan allocations were also identified as requiring inclusion.

Pell have liaised directly with both Leeds City Council [LCC] and KC in order to identify the committed developments that remain necessary for inclusion in modelling assessments undertaken. It is also confirmed by Pell that the identified committed developments will be included within the additional modelling undertaken in reference to the upcoming submission of the TA Addendum. This is seen to be acceptable approach by CH2M, however, as identified above, CH2M need to understand the specific turn by turn growth rates applicable at M62 J28 and M1 J40, in addition as to whether these growth rates take into account the identified committed development.

Modelling Results

Junction Analysis

With reference to the development modelling undertaken to date by Pell, CH2M note that:

- Junction analysis presented for the local highway network will not be commented on by CH2M as the operation of these junctions remain under the exclusive control of KC.

- As identified within this review note, until the specific routes to be utilised by development traffic is clarified by Pell, the proposed trip distribution methodology cannot be fully evaluated or accepted by CH2M. As such, the specific impact at either M62 J28, M1 J40 or J41 cannot be quantified by CH2M at this stage.
- Future year modelling assessments applicable to the SRN cannot be accepted by CH2M until 2030 growth factors are agreed with CH2M.
- The LinSig files and survey data utilised by Pell when undertaking the baseline M1 J40 modelling assessments should be provided to CH2M to ensure the modelling undertaken can be fully evaluated.
- The TRANSYT files and November 2019 survey data utilised by Pell when undertaking the M62 J28 assessments should be subsequently provided to CH2M within the upcoming TA Addendum to ensure the modelling undertaken can be fully evaluated.
- The modelling assessments presented within the TA for M62 J28 based upon the March 2019 survey data will not be commented on by CH2M due to this data being superseded by the TA Addendum to be submitted by Pell subsequently.

Mitigation Measures

Individual Junctions

At this stage of the application process, the specific impact of development traffic at the SRN has not been agreed with CH2M. Moreover, until total development impact in addition to 2019 and 2030 modelling assessments have been agreed with CH2M, the scope of potential mitigation at SRN junctions as a result of the proposed development cannot be fully evaluated.

Sustainable Transport Strategy

The viability of sustainable transport provision to / from the site will be evaluated in full within the FTP review contained within TM005.

Summary and Conclusions

On the basis of this review, the recommendation to Highways England in relation to this development proposals is:

Holding recommendation – further information required (as identified below)

This review has highlighted the need for further information as follows:

1) Highways England will require detailed collision analysis (2015 to 2019 inclusive) to be undertaken for both M62 J28 and M1 40. This is to determine whether there is any collision 'cluster spots' at either junction that could indicate existing highway safety issues.
2) Collision analysis undertaken must take into account the quantum, severity and causation of any collision cluster at both M62 J28 and M1 J40. This analysis must take into account the respective junction on / off-slips, the mainline within proximity to the junction, and the junction circulatory.
3) Collision analysis will also be required for M1 J41, should it be deemed by CH2M that this junction requires assessment once overall traffic impact is agreed.

4) Highways England will require confirmation and a much greater degree of detail as to the level and nature of public transport service provision that will be accessible from the proposed site. This is to ensure that the level of modal trip generation associated with all aspects of the site can be evaluated, ensuring the resultant impact on the SRN can be understood.

5) It is acknowledged that Appendix E contains the spreadsheet route assignment methodology utilised by Pell, however, for both residential and employment trips, the calculations provided fail to name each specific route identified. Proposed routes are instead identified as 1 through to 23.

6) Until the specific routes to be utilised by development traffic is clarified by Pell, the proposed trip distribution methodology cannot be fully evaluated or accepted by CH2M.

7) The principle of M62 J28 being assessed as a supplementary piece of work is acceptable.

8) CH2M cannot accept the proposal that M1 J41 does not require further assessment until trip distribution proportions and resultant traffic impact are agreed.

9) The modelling files and survey data utilised by Pell when undertaking the M62 J28 and M1 J40 modelling assessments should be subsequently provided to CH2M to ensure the modelling undertaken can be fully evaluated.

10) CH2M will require that the specific turn by turn growth rates applicable to both M62 J28 and M1 J40 are confirmed moving forward, in addition as to whether these growth rates take into account the identified committed development.

11) Until the specific routes to be utilised by development traffic is clarified by Pell, the proposed trip distribution methodology cannot be fully evaluated or accepted by CH2M. As such, the specific impact at either M62 J28, M1 J40 or J41 cannot be quantified by CH2M.

12) Future year modelling assessments applicable to the SRN cannot be accepted by CH2M until 2030 growth factors are agreed with CH2M.

13) The modelling assessments presented within the TA for M62 J28 based upon the March 2019 survey data will not be commented on by CH2M due to this data being superseded by the TA Addendum to be submitted by Pell subsequently.

14) Until total development impact in addition to 2019 and 2030 modelling assessments have been agreed with CH2M, the scope of potential mitigation at SRN junctions as a result of the proposed development cannot be fully evaluated.