

Copeland Borough Council
Harras Moor, Whitehaven
Transport and Highways Review

Issue | 27 November 2019

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number

Ove Arup & Partners Ltd
6th Floor 3 Piccadilly Place
Manchester M1 3BN
United Kingdom
www.arup.com

ARUP

Contents

	Page
1 Introduction	4
1.1 Background	4
2 Scope of Assessment	5
3 Methodology	6
3.1 Accident Analysis	6
3.2 Accessibility Audit	8
3.3 Access Proposals	10
3.4 Traffic Impact Assessment	11
4 Impacts	19
4.1 Junction Capacity	19
4.2 Safety	20
4.3 Harras Road Narrowing	21
5 Mitigation	24
6 Conclusion	27

Summary

Ove Arup & Partners Ltd (“Arup”) has been commissioned by Copeland Borough Council (“CBC”) to undertake an independent review of the transport and highways documentation submitted on behalf of Homes England in support of a planning application for a residential development of up to 370 dwellings on land at Harras Moor, Whitehaven.

At a Copeland Planning Panel meeting held on 18 September 2019, Members were minded to refuse the application, against Planning Officer recommendation.

Scope of Assessment

The scope of the assessment undertaken on behalf of the Applicant has been reviewed to ensure that it has been agreed with the relevant highway authorities and is appropriate for the scale, nature and location of the proposed development. Overall the review has concluded that the scope of assessment of the Transport Assessment is appropriate in terms of both its content and its geographic extent. There is evidence that both CCC and HE have been consulted on, and are satisfied with, the scope of the assessment.

Methodology

The review has considered whether the agreed scope of works has subsequently been followed in the production of the Transport Assessment work undertaken on behalf of the Applicant and that the methodology that has been followed in the Transport Assessment is appropriate.

It is considered that the methodology used for identifying the recent accident history on the highway network is appropriate. Accident data has been obtained for a five-year period which is considered to be an appropriate timescale, in line with best practice as set out by the Department for Transport. The geographic area covered by the accident analysis is considered to be appropriate based upon the nature of the proposed development and the likely extent of any potential impacts on the highway network.

Whilst it makes reference to the appropriate standards and guidance, the methodology for assessing the accessibility of the site is limited and is based primarily upon the distance to key facilities with limited consideration given to assessing the quality or adequacy of available routes. The analysis is also generally based upon upper limits of ‘acceptable’ walking and cycling distances (of 2km and 5km respectively) rather than ‘recommended’ or ‘desirable’ distances.

The proposed accesses (which are applied for in detail) are considered appropriate both in number and layout given the nature and scale of the proposed development. The proposed accesses can be delivered in accordance with the relevant guidance. Road safety audits of the proposed site access should be provided at an appropriate stage in the design of the junctions to be agreed with the local highway authority. As access is not a reserved matter, the specification

of the accesses is to be approved as submitted. The traffic surveys undertaken to inform the Transport Assessment were carried out at an appropriate date (i.e. outside of school holidays) and cover the anticipated peak highway periods. There is no evidence to suggest that the surveys are not representative of 'typical' highway conditions.

In developing forecasts of future year traffic flows without the proposed development in place, appropriate growth factors have been used and adjacent committed developments have been accounted for. The trip rates used to forecast the traffic generated by the development are considered to be appropriate and the fact that these have been applied to a slightly larger development quantum than is proposed (i.e. 380 dwellings) provides a further degree of robustness.

The distribution and assignment of traffic onto the network follows an appropriate evidence-based methodology, supplemented by local knowledge on behalf of the local highway authority. These results have been replicated by Arup using a similar methodology.

Overall the methodology used to forecast the traffic generated by the proposed development is considered to be appropriate and represents an accurate forecast based on industry standard methods.

Impacts

The modelling outputs indicate that the proposed development would have a potential adverse impact at two junctions on the highway network. One of these is on the local highway network and one is on the Strategic Road Network (SRN). The traffic generated by the proposed development is not anticipated to result in adverse impacts elsewhere on the assessed highway network. It is understood that discussions between the applicant and the highway authorities has taken place and that a consensus has been reached that appropriate schemes for both junctions can be delivered to mitigate the impact of the proposed development.

It is not anticipated that any new safety concerns would result from traffic associated with the proposed development. At an appropriate point in the design of the new access junction, and any approved mitigation schemes, an independent Road Safety Audit should be undertaken to ensure that the designs adequately consider all safety issues.

The narrowing of Harras Road as it passes beneath the A595 is recognised as an existing pinchpoint for the highway network. A review of historic accident data does not indicate any existing accident issues at this location, even over an extended period of 20 years. The forecast increase in traffic at this location due to the proposed development is estimated to be in the order of 14-15%, though this may be an over-estimate as some traffic may use an alternative route via Albert Terrace to avoid the pinchpoint. National Planning Policy Framework (NPPF) (2018) notes that *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."* Based on the available data, it is not considered that this level of increase would have an unacceptable impact on safety or a severe impact on highway capacity.

Mitigation

The junctions identified by the applicant as requiring mitigation are considered appropriate based upon the results presented in the assessment. The details of this mitigation should be developed by the applicant in consultation with the relevant highway authorities.

The accessibility to the proposed development for sustainable non-car modes (i.e. walking, cycling and public transport) is currently limited with regards to the quality of routes available with no mitigation proposed. Although enhancements to this provision are not essential to making the proposed development acceptable in planning terms, there are opportunities to significantly enhance access to the proposed development by sustainable transport modes. If such enhancement were to be provided they would need to be secured by way of a Section 106 Agreement.

The targets set out in the Framework Travel Plan (i.e. to match the existing mode split for the area) are not considered to be sufficiently ambitious. Targets that seek to reduce the proportion of car trips should be encouraged. The travel plan monitoring period of three years seems short and could reasonably be increased to five years.

Conclusion

Having reviewed the documents submitted as part of the planning application it is concluded that the scope of assessment that has been undertaken is appropriate considering the scale, nature and location of the proposed development.

The assessment has been undertaken in accordance with that scope using a methodology that is appropriate and in accordance with standard practices for assessing the impact of developments such as that proposed at Harras Moor.

The identified transport and highways impacts of the proposed development are consistent with the assessment undertaken and the proposed mitigation is considered to be both appropriate in mitigating these impacts and deliverable.

It is evident from the consultation responses presented in the Planning Panel report that neither HE nor CCC has any objections to the proposed development (subject to discharge of appropriate conditions).

Although the applicant's statement that the site is in an accessible location to make use of sustainable forms of transport could be questioned, certainly in terms of the quality of the provision, it is considered that overall the assessment has demonstrated that the proposed development is not anticipated to result in significant adverse impacts on either the safety or the operation of the surrounding highway network.

This review therefore concludes that no reasons have been identified to suggest that the proposed development should not be approved on the grounds of traffic and transport.

1 Introduction

Ove Arup & Partners Ltd (“Arup”) has been commissioned by Copeland Borough Council (“CBC”) to undertake an independent review of the transport and highways documentation submitted on behalf of Homes England in support of a planning application for a residential development on land at Harras Moor, Whitehaven.

1.1 Background

An outline planning application (Planning ref. 4/18/2287) was submitted for a development of up to 370 houses with access applied for in detail (Drawing Ref. A0900070-P002). The following documents related to transport and highways were submitted in support of the application:

- Transport Assessment (WYG; June 2018)
- Framework Travel Plan (WYG; June 2018)
- Transport Assessment Addendum (WYG; November 2018)

At a Copeland Planning Panel meeting held on 18 September 2019, Members voted that they were minded to refuse the application, against Planning Officer recommendation.

Arup has undertaken an independent review of the transport documents submitted in support of the proposed development.

In order to fully understand the issues relating to transport and highways raised at the Planning Panel, Arup attended a meeting with CBC officers and Members on 11 October 2019. At this session, CBC and Arup presented the proposed scope of the independent review and provided Members with an opportunity to clarify any issues and concerns that they had relating to the application.

This report sets out the findings of the independent review undertaken by Arup and provides recommendations following the review.

The key elements of the review are as follows:

- Is the scope of assessment agreed with the highway authorities appropriate for the scale, nature and location of the proposed development?
- Has the agreed scope of works duly been followed in the production of the Transport Assessment work undertaken (i.e. is the methodology appropriate)?
- Are the identified transport and highways impacts of the proposed development consistent with the assessment undertaken?
- Is any mitigation proposed appropriate in addressing any identified impacts?
- Are the conclusions drawn as to the acceptability of the proposed development reasonable?

2 Scope of Assessment

The scope of any Transport Assessment should be determined in consultation with the appropriate highway authorities, with due consideration of the site location, the surrounding transport infrastructure and the nature of the proposed development.

Due to the proximity of the proposed site to the A595, which forms part of the Strategic Road Network (SRN), there is a requirement for the scope to be agreed both with Cumbria County Council (CCC) as the local highway authority, and also Highways England (HE) as the highway authority for the SRN.

It is evident from the documents submitted that the scope of assessment has been fully agreed with both highway authorities and that ongoing consultation with these bodies has been undertaken. The geographic scope of assessment is considered to be reasonable with regards to the number and location of junctions assessed based upon the scale of the development proposed and the likely extent of the potential impacts on the highway network.

The scope proposed for the original Transport Assessment included 11 junctions (including the proposed site access – which is applied for in detail). The applicant proposed that the volume of traffic forecast to be generated by the proposed development at four of these junctions was negligible, and therefore proposed to only collect traffic data and undertake junction capacity assessments at junctions seven junctions.

However, as part of the scope for the TA Addendum, CCC and HE confirmed that these junctions should be fully assessed as part of the, along with four further junctions. As a result, a total of 15 junctions (including the proposed site access – which is applied for in detail) have been assessed. This includes a number of junctions specifically requested by the highway authorities based upon their local knowledge and understanding of existing conditions on the network. The geographic extent of the assessment extends up to 2.5km from the proposed development.

Based upon Arup's experience in preparing Transport Assessments, it is considered that the scope of assessment is appropriate for the location and scale of the proposed development. The number of junctions that have been considered is extensive as is the geographical extent of the assessment.

Overall it is considered that the scope of assessment of the Transport Assessment is appropriate in terms of both its content and its geographic extent.

There is evidence that both CCC and HE have been consulted on, and are satisfied with, the scope of the assessment.

3 Methodology

Detailed analysis of the assessment work presented by the applicant has been undertaken. This has encompassed a review of the full assessment but with specific focus on key issues and concerns identified by Members. These include the distribution of traffic onto the highway network and the analysis of impacts on highway safety.

It is noted that the Transport Assessment was initially submitted in June 2018 with a subsequent Transport Assessment Addendum being submitted in November 2018. There were a number of issues relating to the original Transport Assessment raised by the highway authorities, many of these issues were also identified as requiring further work by this review.

This includes the updating of accident data, and the assessment of a further future year (2028). These issues were subsequently included within the Transport Assessment Addendum. The review has considered both documents, though ultimately it is the Transport Assessment Addendum that the proposed development should be assessed against as it effectively supersedes the original Transport Assessment.

This section of the review considers some of the specific elements of the Transport Assessment Addendum in terms of its methodology. The methodology has been reviewed against ‘best practice’ within the industry in relation to guidance from Department for Transport and Highways England and Arup’s experience of the assessment of large developments across the UK.

3.1 Accident Analysis

The TA Addendum was submitted in November 2018 and includes accident data from 2013-2017. Analysis of the most recently available sixty-months’ worth of data would typically be undertaken. Given the typical lag time in the publication of accident data, it is considered that the data time range is appropriate.

It is considered that the extent of the study area is appropriate and includes all key junctions that are predicted to experience potentially significant increases in flow due to development traffic. Several accident clusters are examined in further detail with no significant trends identified.

CCC Highways requested further analysis to be provided for the following junctions due to their proximity to a secondary school:

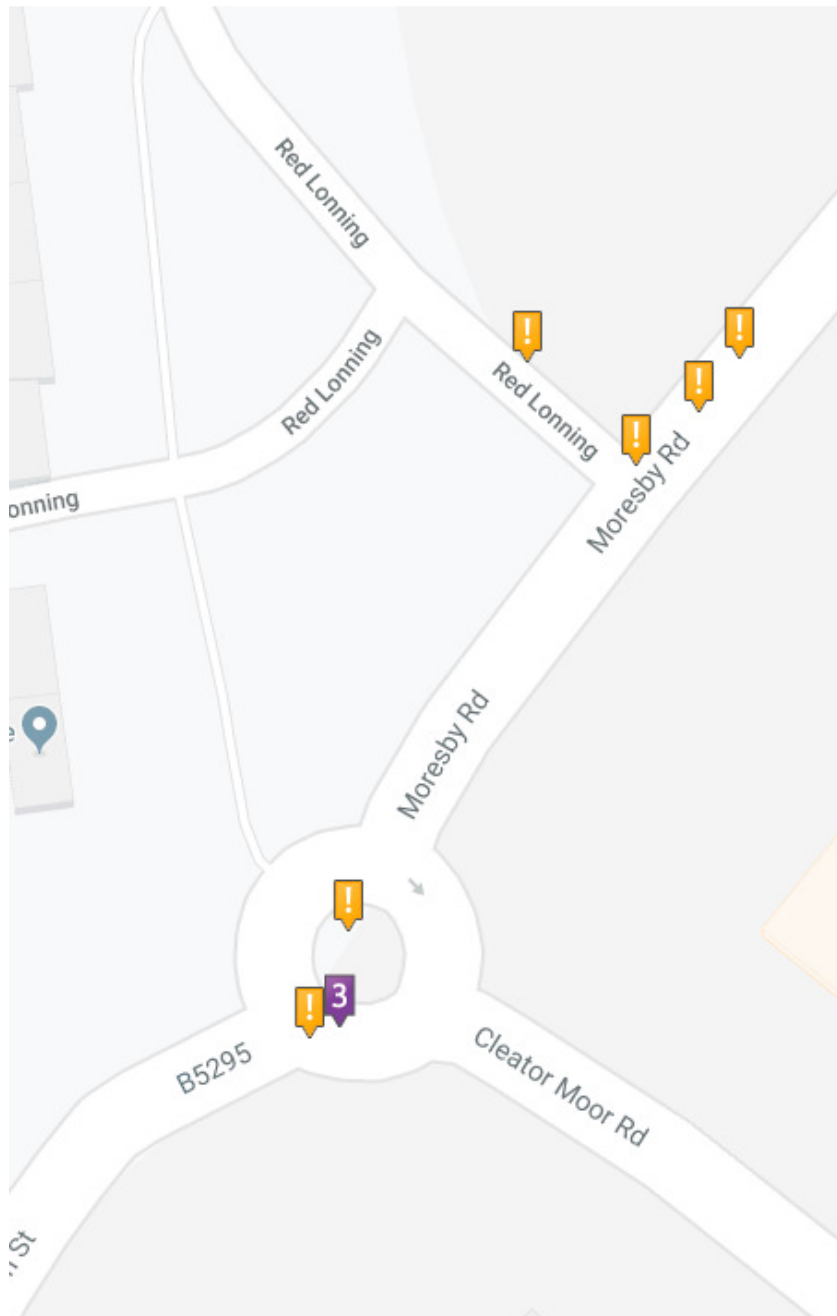
- Moresby Parks Road / Red Lonning (priority T-junction); and
- Main Street / Moresby Parks Road (roundabout).

Figure B8 of the TA Addendum includes an image taken from Crashmap which shows that five slight accidents occurred at the Moresby Parks Road / Red Lonning junction and five slight accidents occurred at the Main Street / Moresby Parks Road roundabout during the study period. No further analysis is provided as to the potential contributory factors or road users involved in these accidents.

However, it is considered that further analysis of the accident record at these junctions would have limited benefit. Five accidents at each junction over a five-year period is not considered to be indicative of a highway safety problem and no significant trends have been identified at either junction.

The most recently available sixty months' worth of data (2014-2018) for the two junctions in question is shown in Figure 1.

Figure 1: Crashmap accident data (2014-2018)



The data shows a similar accident rate at both junctions as presented in the TA Addendum, with no serious or fatal accidents recorded in the intervening period.

In response to the CCC's comments on the original TA, the TA Addendum also includes accident analysis of the following locations:

- B5295 Main Street, between Cleator Moor/ Moresby Road Roundabout and Egremont Road/ Ribton Moorside Roundabout; and
- Cleator Moor Road, between Moresby Road/Main Street Roundabout and Overend Road (i.e. in the vicinity of Whitehaven Academy access/egress).

Figure B3 of the TA Addendum includes a Crashmap plan which shows that nine slight accidents occurred on the approximately 600m section of B5295 Main Street within the study period. Figure B4 shows that five slight accidents occurred in the vicinity of Whitehaven Academy, and of these, only two occurred at the access/egress junction of the Academy in the five-year study period.

No further analysis is provided as to the potential contributory factors or road users involved in these accidents. However, again it is not considered necessary to provide any further analysis of the accident record at these junctions, as the accident rates over a five-year period are not considered to be indicative of a highway safety problem and no trends have been identified.

Overall it is considered that the methodology used for identifying the recent accident history on the highway network is appropriate.

Accident data has been obtained for a five-year period which is an appropriate timescale, in line with best practice.

The geographic area covered by the accident analysis is considered to be appropriate based upon the nature of the proposed development and the likely extent of any potential impacts on the highway network.

3.2 Accessibility Audit

Walking

The accessibility review states that a wide range of amenities and much of Whitehaven town centre lie within a 2km walking distance of the site in line with the maximum guidance set out in Manual for Streets (MfS), Chartered Institute of Highways and Transportation guidance and the superseded Planning Policy Guidance 13.

However, as noted in the Transport Assessment, shorter walking distances of 800m and 1200m are considered to represent 'acceptable' and 'preferred' distances respectively. As shown in Plan 3 of the Transport Assessment Addendum, although there are a range of facilities within the 2km maximum walking distance, most are beyond the 1200m preferred distance.

The walking assessment focuses primarily on distances and not on the quality of links that either exist or are proposed. The quality of routes available will be particularly important in encouraging walking trips from the proposed

development to the town centre and to the rail station. Nor is mention made of the significant gradients that exist due to the topography of the site.

Cycling

The cycle accessibility of the site has been assessed using an ‘acceptable’ cycling distance of the site of 5km. Similar to the pedestrian assessment, 5km is considered to be an upper limit of the distance that people are typically prepared to cycle. The accompanying Plan 4 in the Transport Assessment also represents this upper limit.

Corkickle and Whitehaven rail stations are rightly identified as lying within an acceptable cycling distance of the site, providing the opportunity for multi-modal journeys to destinations further afield.

Reference is made to National Cycle Network National Route 72 passing within 1km of the site. Whilst this is correct as-the-crow-flies, in terms of journey distance it is closer to 2km. It is therefore considered that this would be of relatively limited direct benefit to the proposed development other than for dedicated cyclists on longer journeys.

As with the pedestrian analysis, no assessment of the quality of the cycle network and accessibility is made. Again, the topography of the site could substantially impact upon cycle use.

Public Transport

Bus service accessibility has been assessed with regards to the CIHT Guidelines for the Planning of Public Transport for Development. The assessment shows that the proposed development does not meet the recommended reasonable walking distance of 400m and is actually almost double this (as measured from the centre of the site – it would be further from the northern and western edges).

The Transport Assessment Addendum notes that it is more important to provide bus services which are “...*easy and attractive to passengers*...”. No evidence is provided as to how this would be achieved.

No comment is provided on the adequacy of the frequency of the services which do not currently run in the evenings or on Sundays.

Accessibility by rail is mentioned but is again distance-based rather than considering the quality of the route.

Overall it is considered that, whilst reference has been made to the appropriate standards, the methodology for assessing the accessibility of the site is limited and is based primarily based upon the distance to key facilities with limited consideration given to assessing the quality or adequacy of routes.

The analysis is generally based upon the upper limits of ‘acceptable’ walking and cycling distances (of 2km and 5km respectively) rather than ‘recommended’ or ‘desirable’ distances.

3.3 Access Proposals

Two vehicle access points to the site are proposed, as agreed during scoping discussions with CCC as the Local Highway Authority. These accesses are being applied for in detail. One access will be provided from Caldbeck Road and another onto Harras Road. It is considered that providing a minimum of two accesses is appropriate for this scale of development and would provide resilience of access if one were temporarily unavailable. Multiple accesses could help to reduce the impact of the development on any specific locations on the highway network by spreading traffic between a greater number of access points.

Access via Caldbeck Road is proposed by extending the existing road into the site. There do not appear to be any issues with this access route. It appears as though the road was designed with a view to such an extension at a future date.

A drawing (Drawing Ref. A0900070-P002) of a proposed site access junction on Harras Road is provided within the Transport Assessment Addendum. A priority-controlled T-junction is proposed with a total carriageway width of 6m on the minor arm. 2m footways are to be provided on both sides of the carriageway and will tie into the existing footway on Harras Road. The drawing illustrates that appropriate visibility splays can be achieved in both directions for vehicles egressing the site onto Harras Road, in accordance with *Design Manual for Roads and Bridges*.

It should be noted that although Harras Road is subject to a 30mph speed restriction, the required visibility splays (63m) have been based on speed surveys undertaken in February 2017, which showed 85th percentile speeds of 40.7mph (eastbound) and 40.8m (westbound). This is considered appropriate as the data clearly shows traffic travelling well in excess of the stated speed limit.

The proposed junction lies approximately 80m to the southeast of the proposed access junction for the adjacent committed development, which is located on the opposite side of Harras Road. This distance represents appropriate junction spacing in line with *Manual for Streets* and there do not appear to be any visibility issues with this arrangement. 2m wide pedestrian footways connecting into the

surrounding pedestrian network are proposed at both site accesses. The following dedicated pedestrian links are also proposed:

- to the A595 Loop Road South from the south-western boundary of the site;
- to the industrial estate road and Winchester Drive from the eastern boundary of the site;
- to Highfields and High Grove from the western boundary of the site; and
- to Laurel Bank and Highlands from the north-western boundary of the site.

The above links would provide a good level of permeability and connection to surrounding areas. However, many of these pedestrian accesses are named as 'potential' links to be investigated further as part of the future reserved matters applications for the site.

The proposed accesses, which have been applied for in detail, are considered appropriate both in number and layout given the nature and scale of the proposed development. The proposed accesses can be delivered in accordance with the relevant guidance.

Road safety audits of the proposed site access should be provided at an appropriate stage in the design of the junctions to be agreed with the local highway authority.

3.4 Traffic Impact Assessment

A number of the elements of the methodology for traffic impact assessment have been reviewed and these are described below.

Traffic Surveys

Traffic surveys were undertaken on Wednesday 21 February 2018 between 07:30-09:30 and from 15:45-18:15.

This is outside of the school holiday period with February half term in 2018 for schools in Cumbria being between Monday 12 February 2018 and Friday 16 February 2018.

The hours of the surveys are considered appropriate to capture the expected peak highway periods in both the morning and the evening. The identified peak hours (08:00-09:00 and 16:15-17:15) are within the central band of these periods (i.e. they do not include the start or end points of the survey), indicating that traffic levels are lower either side of these surveyed periods. It should be noted that trip rates for the highest period of trip generation (i.e. 17:00-18:00) have been combined with the highest network period (16:15-17:15) to provide a worst-case assessment, even though the network and development peaks do not coincide.

It is noted that these assessment periods do not include the likely peak traffic generation associated with worker trips to and from Sellafield (typically before the assessed peak hours). However, based on the forecast trip rates associated with the proposed development, traffic generated by the scheme would be lower in the earlier time period and therefore the impact would be lower than that which has been assessed within the Transport Assessment. The table below, highlights forecast traffic generated by the proposed development to demonstrate this.

Table 1: Forecast trip generation of proposed development

	Trip Generations		
Time range	Arrivals	Departures	Two-way
07:00-08:00	31	116	147
08:00-09:00	59	166	225
09:00-10:00	68	76	144
10:00-11:00	50	63	113
11:00-12:00	62	67	129
12:00-13:00	63	63	126
13:00-14:00	60	63	124
14:00-15:00	61	69	130
15:00-16:00	102	71	173
16:00-17:00	103	65	168
17:00-18:00	145	75	220
18:00-19:00	131	85	216

This table shows that traffic generated by the development would be 35% lower in the hour 07:00-08:00 than 08:00-09:00 and 24% lower in the hour 16:00-17:00 than 17:00-18:00. It is therefore concluded that the assessment undertaken has considered the worst-case impact of the development.

Growth Factors

Growth factors have been obtained from the industry-standard TEMPRO database for a 2023 assessment year (i.e. application year + 5 years) and 2028 (i.e. application year + 10 years), in accordance with best practice guidance published by the Department for Transport and Highways England. It is anticipated that the development would be completed by 2028, and the future assessment years are therefore considered to take account of phasing in line with comments from CCC.

The growth factors used are for the Copeland 003 MSOA, within which the site is located, and the area type 'All' (i.e. both urban and rural areas) has been selected. The parameters used to obtain growth factors are considered appropriate and the subsequent future background traffic flows are therefore considered to be acceptable.

Traffic flows related to the adjacent site (application ref: 4/16/2416/001 and 4/16/2415/001) have been considered and included within the baseline assessment as is appropriate.

No allowance in the Transport Assessment Addendum has been made for the impact of the Sellafield Transformation programme, which is likely to result in staff being relocated from the site into neighbouring towns including Whitehaven centre. CBC has confirmed that it is not possible to forecast the potential impact of this programme at this stage and it is not therefore considered to be appropriate to model the impact of this within the assessment.

Trip Rates

Trip rates for the proposed development have been derived from the industry-standard TRICS database (2018 v7.4.4). The following parameters were applied:

- Land use – C3 houses privately owned
- Regions – excluded Greater London, RoI and NI
- No. Units – over 200 dwellings
- Survey dates – 2000-2018
- Survey days – weekday only
- Location type – suburban area, edge of town and neighbourhood centre
- Car ownership – 1.1-1.5 (based on car ownership of 1.30 vehicles per dwelling in local area)

The above parameters are considered to be appropriate for the location and scale of the proposed development.

Arup has undertaken an independent interrogation of the most up-to-date version of the TRICS database (2019 v 7.6.3). A comparison of the trip rates obtained by WYG and Arup is provided in Table 2.

Table 2: Trip rates and trip generation for the proposed development (C3 Houses Privately Owned – 380 units)

		AM Peak Hour (08:00-09:00)			PM Peak Hour (16:15-17:15)		
		Arr	Dep	Two-way	Arr	Dep	Two-way
Trip Rates	WYG	0.156	0.437	0.593	0.381	0.198	0.579
	Arup	0.150	0.421	0.571	0.398	0.168	0.566
Trip Generation	WYG	59	166	225	145	75	220
	Arup	57	160	217	151	64	215

As shown in the table, the trip rates used by WYG are slightly higher than those obtained by Arup and are therefore considered to be robust. Furthermore, the WYG assessment is based on based on 380 units rather than the 370 units proposed in the planning application, further increasing the robustness of the assessment.

It should be noted that Atkins (on behalf of HE) also confirmed these trip rates to be appropriate in a letter dated 13 February 2018.

Trip Distribution

Trip distribution for the proposed development was derived using 2011 census data. The methodology employed was to use ‘journey to work’ data (WU03EW – Location of usual residence and place of work by method of travel to work – MSOA level) as recorded in the 2011 census to forecast where residents from the new development would be most likely to work and to use this as the basis of the forecast distribution of trips onto the highway network. This is considered to be an appropriate methodology which is commonly used in such assessments.

Whilst it is recognised that not all trips generated by the proposed development would be ‘work or commuting’ trips, this methodology is considered to be both standard practice and appropriate, particularly when considering the peak hours of 08:00-09:00 and 16:15-17:15 when commuting typically forms the main trip purpose.

Journey to work data for the residential areas closest to the proposed development (i.e. the ‘Copeland 003’ Middle Layer Super Output Area (MSOA)) have been used to estimate where new residents might work. The census data can be interrogated to identify which MOSA current residents of Copeland 003 commute to.

This results in the following breakdown

Table 3: Main Employment Destinations for Copeland 003 MSOA

Local Authority	MSOA	Total %
Copeland	Copeland 007	35.3%
	Copeland 002	17.7%
	Copeland 003	13.1%
	Copeland 006	6.8%
	Copeland 005	2.6%
	Copeland 004	2.6%
	Copeland 001	1.6%
	Copeland 008	0.6%
Allerdale	n/a	13.6%
Carlisle	n/a	2.0%
Eden	n/a	1.1%
Other	n/a	2.8%
Total		100.0%

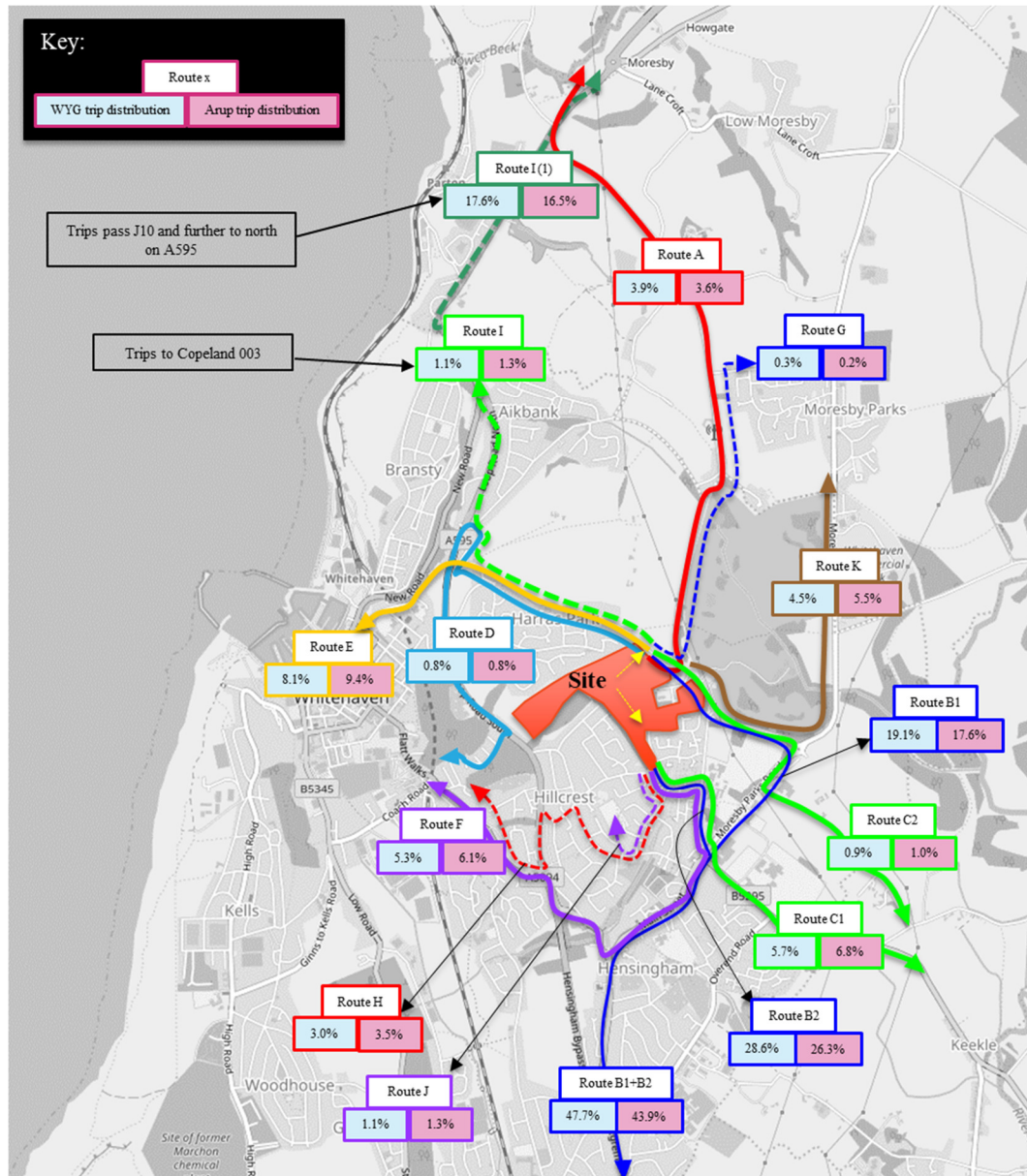
It can be seen from this table approximately 80% of the residents of the proposed development at Harras Moor are forecast to be employed within Copeland. The largest proportion would be within MSOA Copeland 007, which is located to the south of the borough and includes St Bees, Sellafield and Drigg. Copeland 002 is the second largest attractor and covers the areas of Whitehaven town centre and Corkickle. Copeland 003 is the third largest attractor within Copeland with the primary employment sites being located to the south and east of Harras Moor including Whitehaven Commercial Park, Whitehaven Academy and West Cumberland Hospital.

Using this distribution, the forecast traffic generated by the development during peak periods was assigned to the existing highway network based upon the most likely routes. This has been undertaken using a combination of the shortest appropriate route and local knowledge of existing travel behaviours. There is an element of subjectivity to this process and it is noted that CCC provided some suggested amendments to the assignment originally proposed by the applicant, which have been adopted in the methodology.

Arup has recreated the trip distribution for the proposed site as an independent exercise using the same methodology and routes used by WYG in response to comments from the CCC Highways.

Figure 2 provides a comparison of the trip distributions derived by WYG and Arup.

Figure 2: Comparison of WYG and Arup Trip Distribution



As shown in Figure 2, the WYG and Arup distributions are broadly similar, with the biggest difference being 2.3% on route B2. Based on the predicted trip generation associated with the proposed development, this equates to a difference of only five trips which is considered to be a negligible.

It is noted that one of the primary concerns expressed by Members is the forecast number of trips turning left out of the proposed Harras Road access and travelling along Harras Road/Park View/Solway View. Based upon the above methodology, WYG estimate that approximately 28% of traffic generated by the proposed development would use this route. This is comprised of approximately half of all traffic heading to Copeland 002 (Whitehaven) plus the majority of all traffic heading north towards the M6. Based on the forecast trip rates, this equates to approximately 63 additional trips in the morning peak hour and 62 additional trips in the evening peak hour.

The majority of remaining traffic would be heading south and east of Harras Road and would subsequently take alternative routes to access these destinations. This includes traffic that would turn right out onto Harras Road (which is approximately equal to the number of trips turning left). It should also be noted the access on Caldbeck Road would also be used to access the development. This would account for almost half of development generated traffic (c.44%). No traffic using the Caldbeck Road access would be expected to access onto Harras Road.

This is presented in Figure 3.

Figure 3: WYG Forecast Trip Distribution by Access



The traffic surveys undertaken in support of the Transport Assessment were carried out at an appropriate date (i.e. outside of school holidays) and cover the anticipated peak highway periods. There is no evidence to suggest that the surveys are not representative of ‘typical’ conditions.

In developing forecasts of future year traffic flows without the proposed development in place, appropriate growth factors have been used and adjacent committed developments have been accounted for.

The trip rates used to forecast the traffic generated by the development are considered to be appropriate and the fact that these have been applied to a slightly larger development quantum than is proposed (i.e. 380 dwellings) provides a further degree of robustness.

The distribution and assignment of traffic onto the network follows an appropriate evidence-based methodology, supplemented by local knowledge on behalf of the local highway authority. These results have been replicated by Arup using a similar methodology.

Overall the methodology used to forecast the traffic generated by the proposed development is considered to be appropriate and represent an accurate forecast based on industry standard methods.

4 Impacts

4.1 Junction Capacity

Based on the forecast traffic generation exercise described above, a traffic impact assessment has been undertaken for the 15 junctions covered by the Transport Assessment Addendum. This review has not considered the adequacy of the junction modelling itself as CCC, HE and their respective consultants have already reviewed these elements in detail. Rather, the focus of the review is the conclusions arrived at with regards to the acceptability of the impacts of the proposed development on the basis of the modelling outputs.

Based on this review it is considered that the traffic generated by the proposed development would result in an adverse impact upon Junction 5 (Moresby Road / Cleator Moor Road / Main Street Mini Roundabout) and Junction 9 (A595 / Egremont Road / Homewood Road Roundabout). These junctions have also been identified by HE and CCC as requiring further assessment and mitigation.

Junction 5: Moresby Road / Cleator Moor Road / Main Street Mini Roundabout

The modelling assessment presented in the Transport Assessment Addendum demonstrates that this junction currently operates close to capacity in the morning peak period and over-capacity in the evening peak period.

The assessment shows that the proposed development would have an adverse impact on the junction, increasing queue lengths by up to 16 vehicles and doubling the driver delay at the junction in the morning peak period.

The applicant states that, although there is an increase in queue and delay at the junction, this is not considered 'severe' in National Planning Policy Framework (NPPF) terms (based on the 2018 version). Two Public Inquiry case studies are presented to support this.

It is the view of CCC as the local highway authority that mitigation is required at this junction. Based upon the modelling outputs presented Arup would concur that mitigation at this location would be appropriate as there is a clear adverse impact upon the operation of this junction due to the development.

The applicant proposed a 'without prejudice' potential mitigation scheme. This is discussed in Section 0.

Junction 9: A595 / Egremont Road / Homewood Road Roundabout

The modelling assessment presented in the Transport Assessment Addendum demonstrates that this junction currently operates within capacity in the morning peak period and at capacity in the evening peak period.

The assessment shows that the proposed development would have an adverse impact on the junction in future during the evening peak period, increasing queue lengths by up to 16 vehicles and increasing driver delay at the junction by approximately 50%.

The applicant states that, although there is an increase in queue and delay at the junction, this is not considered 'severe' in National Planning Policy Framework (NPPF) terms (based on the 2018 version).

It is the view of HE as the highway authority that mitigation is required at this junction. Based upon the modelling outputs presented Arup would concur that mitigation at this location would be appropriate as there is a clear adverse impact upon the operation of this junction due to the development in the evening peak period.

It is understood that HE is satisfied that an acceptable mitigation scheme can be delivered in this location, though at this stage a detailed design has not been agreed.

The modelling outputs do not indicate any other impacts elsewhere within the assessed highway network.

The modelling outputs indicate that the proposed development would have a potential adverse impact at two junctions on the highway network. One of these is on the local highway network and one is on the SRN.

The traffic generated by the proposed development is not anticipated to result in adverse impacts elsewhere on the assessed highway network.

It is understood that discussions between the applicant and the highway authorities has taken place and consensus has been reached that appropriate schemes for both junctions can be delivered to mitigate the impact of the proposed development.

4.2 Safety

As set out in Section 3.1, a review of historic accident data for the most recent five-years has not identified any specific points of concern.

Based on the residential nature of traffic that would be generated by the proposed development and the relatively small proportional increase in traffic flows on the network, it is not anticipated that any new safety concerns would result from traffic associated with the proposed development.

A new junction is proposed onto Harras Road. At an appropriate point in the design of this junction, an independent Road Safety Audit should be undertaken to ensure that the design adequately considers all safety issues associated with the access. The same should also apply to any junction mitigation schemes. As access is not a reserved matter, the specification of the accesses is to be approved as submitted.

It is not anticipated that any new safety concerns would result from traffic associated with the proposed development.

At an appropriate point in the design of the new access junction, and any approved mitigation schemes, an independent Road Safety Audit should be undertaken at the earliest opportunity to ensure that the designs adequately consider all safety issues.

4.3 Harras Road Narrowing

At the 11 October meeting between Arup, CBC and Members, specific concerns were raised regarding the acceptability of increased traffic using Harras Road, given the narrowing to a single lane as it passes beneath the A595 (at Park View). This is clearly a pinchpoint within the existing network. However, as it is an existing constraint, consideration of the issue in the context of the planning application for the proposed development must focus on the acceptability of the forecast increase in traffic using this part of the highway network as a result of the proposed development.

Consideration has been given to this issue and the following points are relevant.

- No accidents have been reported at this location in the assessment period (2013-2017);
- Looking further back, there have only been two reported accidents in the last 20 years, both of which resulted only in slight injuries;

It is therefore considered that there is not an existing accident issue at this location that could be exacerbated by an increase in traffic due to the proposed development.

That is not to say that an increase in traffic as a result of the proposed development could not result in a safety issue in the future. In respect of this, a review of the forecast increase in traffic flow at this location due to the proposed development has been undertaken. This is summarised in the table below.

Table 4: Forecast peak hour increase in traffic in Harras Road due to development

	AM peak hour (08:00-09:00)	PM peak hour (16:15-17:15)
2018 surveyed flows	259	320
2028 forecast flows without development	341	388
Additional trips using the passing beneath the A595 as a result of the development	62	61
2028 forecast flows with development	403	449
% increase due to development	15.4%	13.6%

- As set out in Section 3.4, it is considered that the trip generation and distribution presented by the applicant in the Transport Assessment Addendum provides a realistic forecast of the future traffic flows on the network;
- The forecast two-way hourly traffic using this part of Harras Road as a result of the proposed development is 62 trips in the morning peak hour and 61 trips in the evening peak hour;
- Having reviewed the distribution used by the applicant, this may be an over-estimate as all traffic travelling between the proposed development access on Harras Road and Victoria Road has been assumed to pass through the narrowing under the A595, whereas an alternative route via Albert Terrace may be used by some traffic (indeed use of this alternative route is supported by surveys presented in the Transport Assessment Appendix);
- In 2028 (assumed full buildout year of the development) two-way traffic hourly flows on Harras Road are forecast to be 403 vehicles in the morning peak and 449 vehicles in the evening peak;
- The additional traffic generated by the proposed development therefore represents an increase of 15% in the morning peak period and 14% in the evening peak period;
- NPPF (2018) notes that “*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*” It is not considered that this level of increase would have an unacceptable impact on safety or a severe residual cumulative impact on the road network. In terms of Environmental Impact Assessment, increases of traffic flow of 30% and above are commonly considered as the threshold for which an assessment of impacts should be undertaken.

The available survey data does not fully include school closure hours, as it only starts at 15:45. However, as demonstrated in Table 1, traffic generated by the development would be 21% lower in the hour 15:00-16:00 than 17:00-18:00. It is therefore concluded that the assessment undertaken has considered the worst-case impact of the development.

The narrowing of Harras Road as it passes beneath the A595 is recognised as an existing pinchpoint for the highway network.

A review of historic accident data does not indicate any existing accident issues at this location, even over an extended period of 20 years.

The forecast increase in traffic at this location due to the proposed development is estimated to be in the order of 14-15%, though this may be an over-estimate as some traffic may use an alternative route via Albert Terrace to avoid the pinchpoint.

Based on the available data, it is not considered that this level of increase would have an unacceptable impact on safety or a severe impact on highway capacity.

5 Mitigation

Highway Junction Mitigation

It is understood that agreements have been reached with CCC for a mitigation scheme at the junction of Moresby Road / Cleator Moor Road / Main Street Mini Roundabout and with HE for a mitigation scheme at the junction of A595 / Egremont Road / Homewood Road.

In terms of off-site junction mitigation, it is considered that these are the only locations where mitigation would be required in order to ensure that the traffic impacts of the proposed development are acceptable in planning terms.

Subject to the relevant highway authorities accepting the proposed mitigation proposals at these locations, it is therefore considered that the mitigation proposed with regards to highway impacts is appropriate.

Sustainable Travel Mitigation

The accessibility to the proposed development for sustainable non-car modes (i.e. walking, cycling and public transport) is currently limited with regards to the quality of routes available with no mitigation proposed. Although enhancements to this provision is not essential to making the proposed development acceptable in planning terms, there are opportunities to significantly enhance access to the proposed development by sustainable transport modes.

The Transport Assessment Addendum notes that the proposals include several 'potential' pedestrian links to the existing external footway network, which will be investigated further as part of the future reserved matters applications for the site. If the proposed development were to come forward without these pedestrian links, the sustainable accessibility of the site would be significantly reduced. These would have to be either reserved for consideration under the layout stage or agreed now.

In particular, despite the site's relative proximity to the town centre the availability of good quality pedestrian and cycle routes is limited. Opportunities to enhance this accessibility could include:

- Providing crossing facilities across the A595, which, as a major barrier to pedestrian movements between the proposed development and key locations within walking distance, has no crossing facilities north of Inkerman Terrace (this crossing is remote from desirelines between the proposed development and key facilities);
- An opportunity may exist to provide a pedestrian crossing of the A595 at the junction with Park Drive which would be opposite a potential pedestrian only access into the proposed development and would help to connect the development (and wider existing residential communities east of the A595) to the town centre and Corkickle rail station;
- Improving pedestrian connectivity along Harras Road towards the town centre – whilst it is considered that the impact of additional traffic on Harras Road would be acceptable in planning terms, it would not help to encourage this as a

primary pedestrian route between the north of the development and the town centre;

- There are a number of potential options that could be considered to improve pedestrian connectivity along this route. These could include making the narrow section of the road beneath the A595 one-way or even pedestrian/cycle only to encourage active travel modes along this route, Suitable alternative routes for vehicles are available via Victoria Road/Red Lonning

Bus accessibility of the site is relatively poor. Ideally the site would be served by bus services than ran along the internal road network. Opportunities to achieve this should be explored. This could include a route that connected from Caldbeck Road to the south, through the proposed development and onto the adjacent Highlands road. It is understood that land ownership may constrain opportunities in this regard.

Whilst these enhancements are desirable and would help to promote sustainable access to the proposed development it should be noted that these are not considered to be necessary to make the development acceptable in planning terms.

Travel Plan

The Framework Travel Plan outlines mode split data for the Copeland area as derived from 2011 Census data. It is proposed that this data be superseded once an initial travel survey is undertaken upon occupation of 50% of the dwellings on site. This is considered to be an appropriate methodology for establishing the baseline mode split for the site in the absence of any existing site-specific data.

However, the Framework Travel Plan also states the following:

“...over 83% of people within Copeland either drive or are a passenger in a car when travelling to and from work. The table also shows that over 9% walk but only 4% catch a bus and 1% cycle.

The aim of the Framework Travel Plan therefore is to at least match the modal split...and if possible increase usage of sustainable forms of transport over time.”

As the overarching aim of the travel plan is to encourage use of sustainable modes, it is considered that a more ambitious target than simply matching the existing (relatively high) car mode share should be the target.

The proposed measures within the Framework Travel Plan are limited. Inclusion of more substantive measures to encourage travel by walking, cycling and public transport (for example those outlined above) could help to achieve more ambitious travel plan targets.

Section 6 states that the travel plan will remain in place for 3 years after 50% of dwellings have been occupied. Typically, it would be expected for monitoring to continue for a minimum of 5 years following occupation of the development. The remainder of the proposed monitoring and assessment timetable is considered to be appropriate.

The junctions identified as requiring mitigation are considered appropriate and the details of this should be developed by the applicant in consultation with the relevant highway authorities.

The quality of accessibility to the proposed development for sustainable non-car modes is currently limited with no mitigation proposed.

Although not essential to making the proposed development acceptable in planning terms, there are opportunities to significantly enhance access to the proposed development by sustainable transport modes.

The targets set out in the Framework Travel Plan (i.e. to match the existing mode split for the area) are not considered to be sufficiently ambitious. Targets that seek to reduce the proportion of car trips should be encouraged.

The travel plan monitoring period of three years seems short and could reasonably be increased to five years.

6 Conclusion

The Transport Assessment Addendum concludes that “...*the proposed development site is in an accessible location to make use of sustainable forms of transport in compliance with the NPPF and local policy.*”

The Addendum also notes that “...*it has been demonstrated that the proposed development will not have a significant impact upon the safe and efficient operation of the surrounding highway network and that its impact will not be ‘severe’ in NPPF terms.*”

The applicant concludes that it is therefore demonstrated that no highway or transport reasons exist which should prevent approval of the planning application.

Having reviewed the documents submitted as part of the planning application it is the conclusion of this review that the scope of assessment that has been undertaken is appropriate considering the scale, nature and location of the proposed development.

The assessment has been undertaken in accordance with that scope using a methodology that is appropriate and in accordance with standard practices for assessing the impact of developments such as that proposed at Harras Moor.

The identified transport and highways impacts of the proposed development are consistent with the assessment undertaken and the proposed mitigation is considered to be appropriate in mitigating these impacts and is deliverable.

It is evident from the consultation responses presented in the Planning Panel report that neither HE nor CCC has any objections to the proposed development (subject to discharge of appropriate conditions).

Although the applicant’s statement that the site is in an accessible location to make use of sustainable forms of transport could be questioned, certainly in terms of the quality of the provision, it is considered that overall the assessment has demonstrated that the proposed development is not anticipated to result in significant adverse impacts on either the safety or the operation of the surrounding highway network.

This review therefore concludes that no reasons have been identified to suggest that the proposed development should not be approved on the grounds of traffic and transport.