



**Residential Development
A649 Halifax Road, Hartshead Moor
Metropolitan Borough of Kirklees
West Yorkshire**

Transport Statement



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Residential Development: A649 Halifax Road, Hartshead Moor Transport Statement

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Executive Summary

This Transport Statement is in support of the development application for a residential development in Hartshead Moor, located between Hartshead Moor Top and Scholes to the west, and Hartshead Moorside, Hightown and Cleckheaton to the east. The report reviews the transport demand and provision of the development, accessibility and parking provision, and sustainable travel facilities available.

The proposed development comprises 11 new dwelling units, including 2 and 4-bedroom homes. The area is predominantly residential, bordering on rural/farmland. Access is off the A649 Halifax Road, a short distance west of the signalised junction with the A643 Moorside / Highmoor Lane, and east of its junctions with the B6120 Scholes Lane and the A643 Walton Lane. There are numerous schools, supermarkets and a station within a 4 mile radius of the site, and a major hospital 5 miles away. There are numerous other industrial, business, service and retail facilities available in the wider areas, which consists of numerous villages and town which over the years have to a large extent merged with one another.

Crashes recorded in the available data for 2019 to 2023 within the study area were reviewed.

Bus routes link the development site with Brighouse and Liversedge, which will provide for many day-to-day needs and access to a railway station, and with Leeds and intermediate areas, for shopping, services and entertainment.

Peak vehicular traffic movements generated by the site are estimated to be 7 trips in the morning peak hour and 6 in the evening peak hour. With a single access road serving the site, and the likely split between northbound and southbound movements between 50/50 and 67/33 in either direction, the impact on traffic in the area is likely to be minimal.

25 parking spaces will be available within the site, 3 being designated as visitor bays, and in addition 5 of the homes will have integral garages. There will also be cycle stands, and each home will have electric vehicle charging facilities. The site is close to bus stops, which will encourage the use of sustainable travel modes. The access road provides excellent sight distance for safe access onto Halifax Road and can accommodate refuse trucks and fire tenders.

This transport statement concludes that this development can be supported as having minimal negative transport impacts and contributing towards the current demand for additional homes.

1. Introduction

This transport statement is in support of a planning application for a residential development in Hartshead Moor, Metropolitan Borough of Kirklees, West Yorkshire. The site lies north of Huddersfield, just east of the M62 motorway, with Cleckheaton, Liversedge and Hightown to the east, and Hartshead Moor Top and Scholes on the opposite side of the M62 to the west. The development site is located on the north side of the A649 Halifax Road, with its access approximately 130m west of the signalised junction of Halifax Road with the A643 Moorside/Highmoor Lane.

2. Site Location

Figure 1 below indicates the general location of the development site on the A649 Halifax Road in Hartshead Moor in relation to major transport routes such as the M62 directly west of the site and the M1 to the east, and to the nearby urban areas of Halifax, Dewsbury, Wakefield, Huddersfield, Bradford and Leeds.

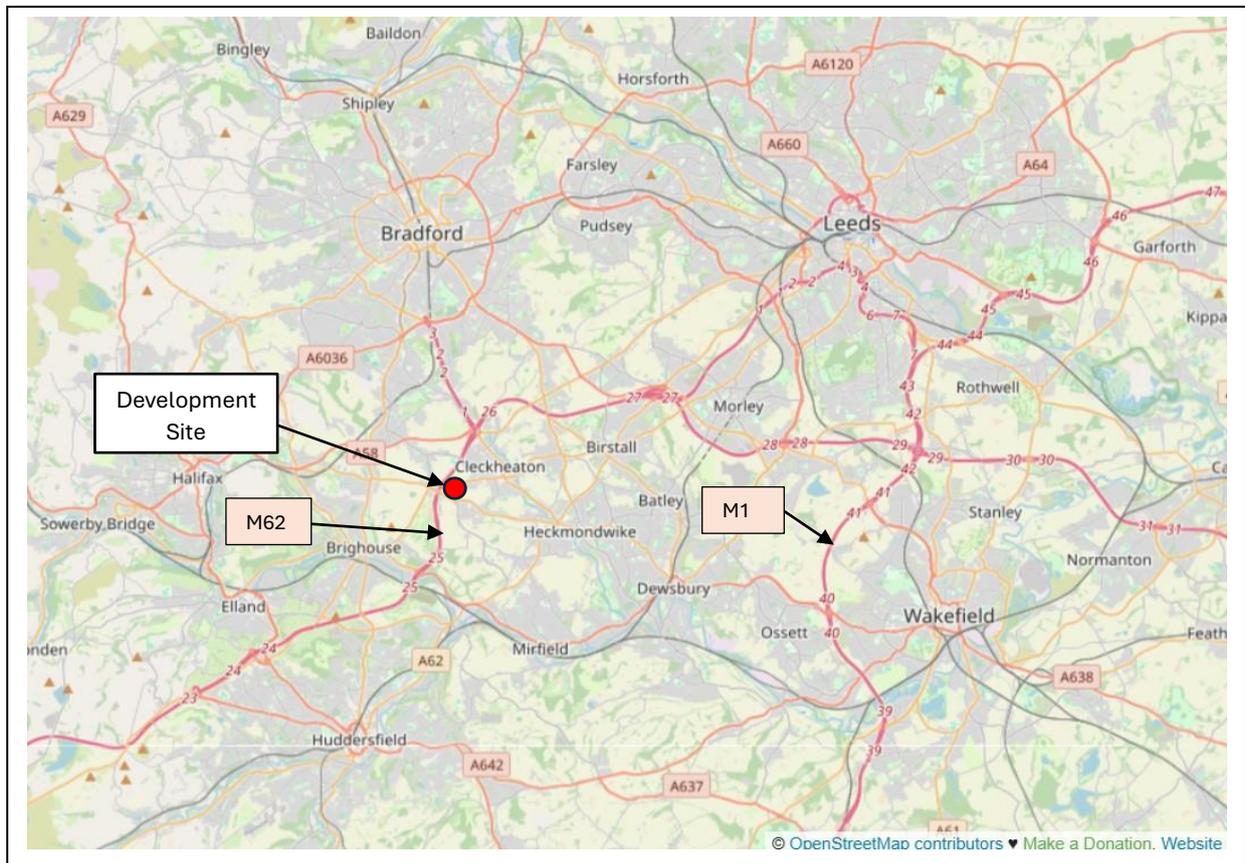


Figure 1: Wider area location of the Hartshead Moor residential development site

The Hartshead Moor area is towards the north-western edge of the West Yorkshire Metropolitan Borough of Kirklees. It is surrounded by numerous towns and villages of varying size, which tend to run into each other, with rural and semi-rural areas to the sides of the main corridors. Surrounding areas which provide employment, business and shopping opportunities within one to five miles include Hightown, Liversedge,

Heckmondwike and Dewsbury to the south-east; Cleckheaton, Moorend/Hunsworth, Gomersal and Birstall to the north-east; Scholes and Lowmoor to the north-west; and Brighouse to the south-west. A little further south is Huddersfield, and to the west, Halifax. The largest cities in the region are Bradford, eight miles to the north, and Leeds, thirteen miles to the north-east. Easy access to the motorway system is available at Junction 26 on the M62, which is just 2.6 miles from the site.

There are several infant, nursery and junior schools in close proximity in the Hartshead Moor / Hightown area, and high schools in Brighouse, Liversedge, Heckmondwike and Cleckheaton.

3. Development Proposal and Site Characteristics

3.1 Proposed development and land use context

The proposed residential development is to comprise of 11 dwelling units, being a mix of 2- and 4/5-bedroom houses. Access will be by way of a single junction with the north side of the A649 Halifax Road, located $\pm 130\text{m}$ west of the signalised junction with the A643 Moorside/Highmoor Lane, a short distance east of the section where the A649 crosses over the M62 (see Figure 2). The site is currently the extensive grounds of an older house close to Halifax Road. Figure 2 shows the local area within which the site is located.

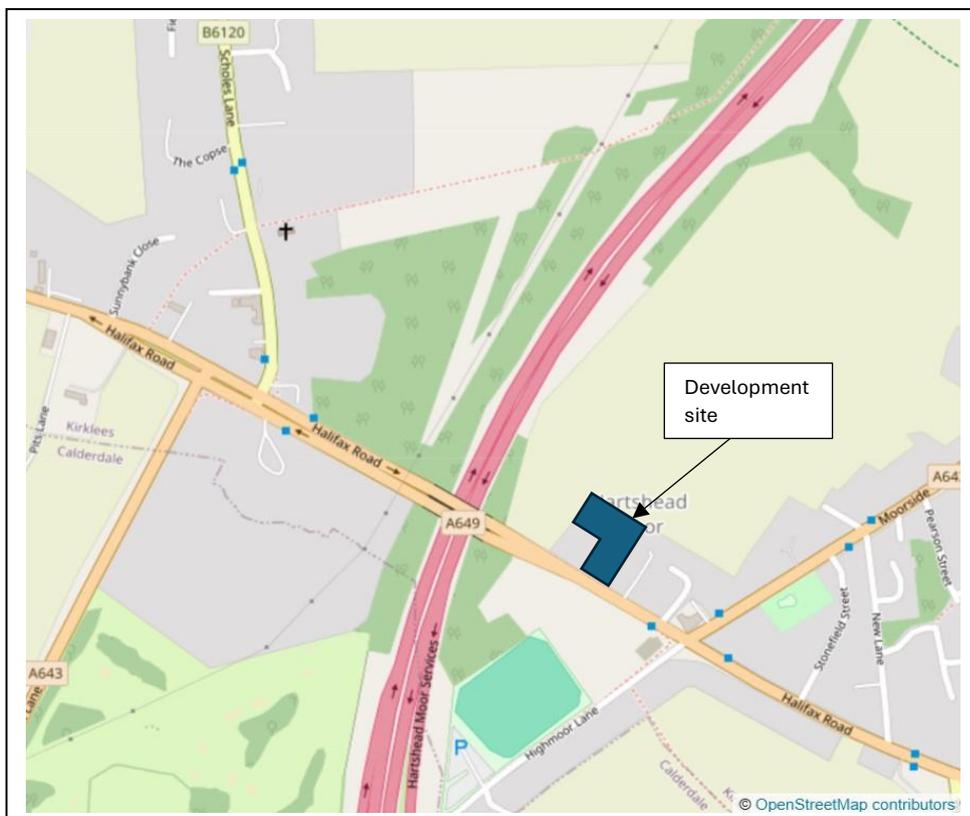


Figure 2: Local area surrounding the proposed development

The area to the east of the site is mostly residential, with farmland to the north. To the south, opposite Halifax Road, there is a site which looks likely to be redeveloped in the near future, with a cricket club beyond it. To the west of the M62, between the motorway and the B6120 Scholes Lane and the A643 Walton Lane, there is woodland and a golf course, with the village of Scholes to the north-west and agricultural land to the south-west. The nearest larger towns are Brighouse to the south-west (on the opposite side of the M62), and Cleckheaton, Liversedge and Heckmondwike to the east (see Figures 1 and 2).

3.2 Key destinations in nearby areas

Figure 3 identifies a number of potentially important destinations for trips likely to be made by residents of the new development. These include

- **Schools:** There are at least 8 primary schools and 4 secondary schools within a 4 mile radius of the site, with 4 of the primary schools being within 2 miles and the nearest just ½ a mile away, making it an easy walk.
- **Stations:** The nearest railway station is at Brighouse, which is a little over 3 miles from the site.
- **Shopping:** There are two large supermarkets each at Brighouse and at Heckmondwike. Most other shopping and business need can likely be met in the wider area, within which there are numerous business areas.
- **Hospital:** Dewsbury and District Hospital is ±5 miles from the site.

Clearly there will be other destinations which residents will need to travel to, but the above indicates that most regular travel needs can be reached by a relatively short trip.

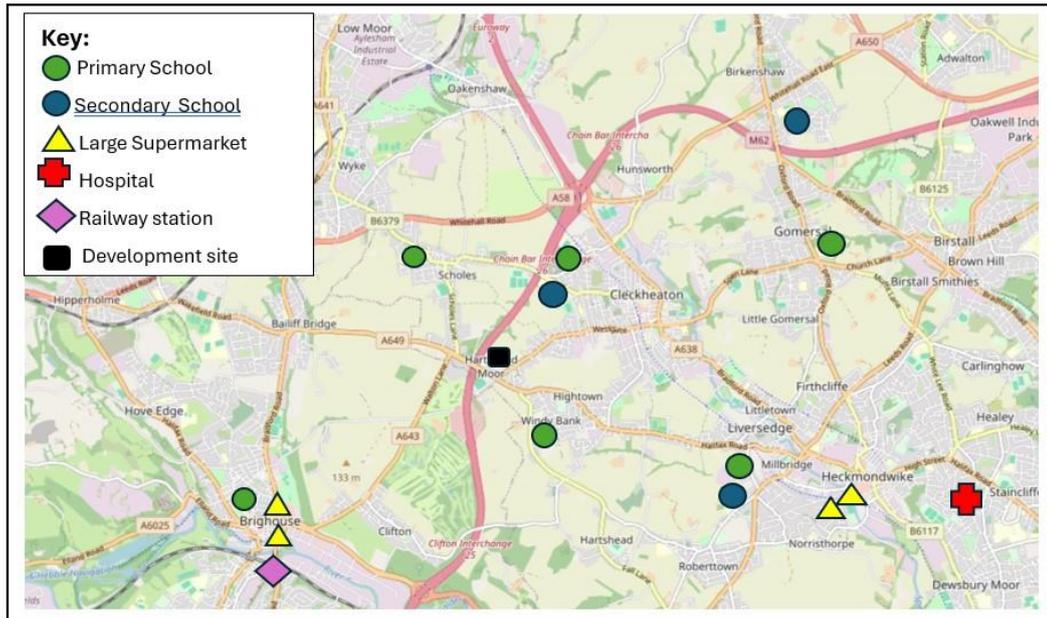


Figure 3: Development site in relation to key local destinations

3.3 Current transport infrastructure and sustainable transport facilities

- Roads:** The residential development site lies adjacent to and is accessed from the A649 Halifax Road $\pm 150\text{m}$ east of its crossing over the M62 motorway and $\pm 130\text{m}$ west of the signalised junction with the A643 Moorside and High Moor Lane. Halifax Road has a median island to the west which begins a short distance from the proposed access but still has a single lane in each direction apart from turning lanes at junctions west of the M62 crossing. All other roads in the vicinity are single carriageway, 2-lane 2-way roads, and there is a 30mph speed limit throughout. While not a major route between residential and key employment areas, Halifax Road is nevertheless an important link in the road network, being one of a limited number of routes facilitating crossing of the M62.

From the A643 signalised junction to the east, Highmoor Lane serves a fairly limited local area to the south which is predominantly residential. To the east, the A649 Halifax Road continues through Hartshead Moorside to Cleckheaton, Gomersal and Birstall to the north-east, and to Hightown, Liversedge, Heckmondwike and Dewsbury to the south-east.

To the west of the M62, the A649 continues through Hartshead Moor Top, Lightcliffe and Hipperholme to link with the A58 which continues west to Halifax. The B6120 Scholes Lane, which intersects with the A649 at a signalised T-junction a short distance west of the M62, proceeds northwards through the village of Scholes and on to Wyke and Low Moor. Just west of Scholes Lane on

the A649 is another signalised T-junction with the A643 Walton Lane, which leads southwards to Brighouse.

The M62 can be accessed from the site at Junction 26, which can be reached via either Scholes Lane, Branch Road and the A58 Whitehall Road from the west, or via the A643 Moorside and the A638 Bradford Road from the east. The M62 can also be accessed at Junction 25 through Brighouse.

- **Pedestrian facilities:** There are paved footways on both sides of Halifax Road past the site, as well as on all the roads from the A643 junction to the east, and the B6120 Scholes Lane to the west.
- **Cycle routes / facilities:** A cycle lane commences on either side of Halifax Road a short distance west of the site access, where the dual carriageway section commences. This continues into the single carriageway section west of Scholes Lane and the A643 Walton Lane as far as the edge of the built-up area of Hartshead Moor Top. None of the other roads in the vicinity appear to have cycle facilities, but there are some recreational cycle routes in the area.
- **Bus stops and shelters:** There are bus stops in either direction on Halifax Road on exit from the A643 Moorside junction, ie. west of the junction travelling westwards, and east of the junction travelling eastwards, and on the A643 Moorside. Shelters have been provided at the westbound stop on Halifax Road and at the northbound stop on the A643 Moorside just north of the Halifax Road traffic signals. These provide access to bus routes connecting with Brighouse, Liversedge and Leeds.

3.4 Current and future transport data

Department for Transport data for the local authority was consulted. The estimated average daily traffic flow at count station 37479, on the same link and in close proximity to the development's access road, was 13 228 vehicles in 2023, derived from count data of 12 053 vehicles in 2021. The previous actual count data was in 2017, with 13 451. Prior to Covid, there was a clear upward trajectory in traffic flow year by year, but daily flow has remained below 2019 levels right up to the most recent available estimated count data (2023). Travel patterns and working from home during Covid had widespread ongoing impacts in terms of daily traffic flows both here and elsewhere and resulted in long term shifts in travel patterns due to increased working from home.

Hourly traffic flow data was not readily available. Peak hour traffic flow is typically between 8% and 11% of daily flow. As this section of Halifax Road is not on a major route between key residential and employment nodes, 10% has been used as a relatively conservative estimate of peak hour traffic flow past the site. This gives a peak

hour 2-way flow of 1345 vph, with the directional split being between 673 vph in either direction (assuming a 50/50 split), to 807 vph in one direction (i.e. 60%) and 538 vph in the other (i.e. 40%), with the higher flow potentially being in either direction.

As this section of Halifax Road is more of a feeder route than a major route between key destination, it is likely that the traffic growth rate will be moderate, so an annual growth rate of 1.5% has been assumed. This gives a forecast daily traffic flow in 2030 (ie. 2025 plus 5 years) of 1477 vehicles. Peak hour directional flows in 2030 are then estimated to be between 739 vph (50/50) and 886/591 vph (60/40).

3.5 Injury crashes in the vicinity of the site

CrashMap data for the Hartshead Moor area in the 5-year period from 2019 to 2023 inclusive indicated that only one slight injury crash was recorded in close proximity to the project development site – see Figure 4 below. This crash occurred at 06h55 on a Sunday morning in August 2023, when the road surface was wet or damp, but the weather was fine. It appears that a vehicle passing or overtaking another vehicle hit an object in the road. While this crash occurred in the vicinity of the proposed site access, it clearly did not involve unsafe road conditions, as the road is wide, and visibility is excellent.

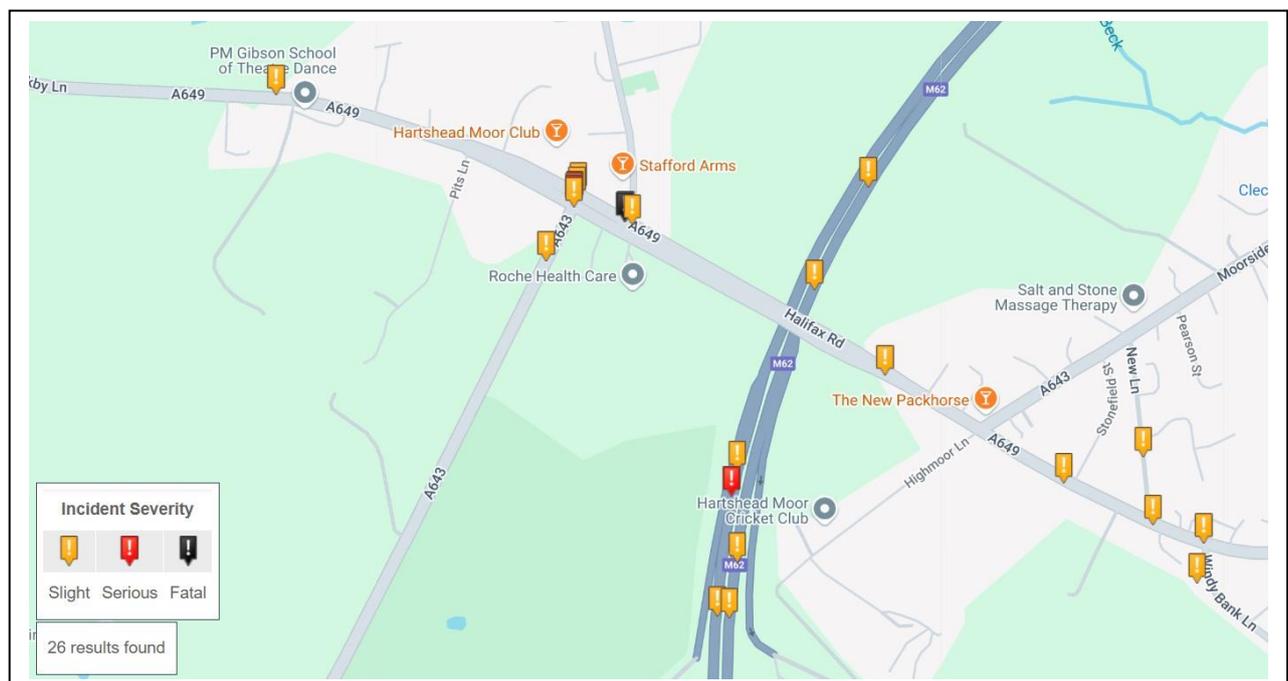


Figure 4: CrashMap data for the Hartshead Moor area, 2019 – 2023

To the east of the site, between 2019 and 2023, all five collisions were slight injury crashes, and occurred east of the signalised junction of the A649 Halifax Road with the A643 Moorside/Highmoor Lane junction.

To the west of the site, at the junctions of Halifax Road with the B6120 Scholes Lane and the A643 Walton Lane there were nine crashes, including three involving serious injury and one a fatal crash. While this section appears to warrant crash reduction measures, it is over 400m from the proposed site access, on the dual carriageway section of Halifax Road with one lane in each direction, and effectively quite separate from the area close to the development site access. The crashes all occurred at junctions, so should not be regarded as having any relationship to road safety in proximity to the development.

4. Proposed Development

4.1 Proposed land use and site transport facilities

The proposed residential development is planned to consist of eleven (11) privately owned dwelling units, comprised of four 2-bedroom homes and six 4/5-bedroom detached homes. Details of the development are as follows (see Figures 7 and 8):

Plot1: 2 bed bungalow, no garage;

Plot 2: 2 bed dormer bungalow with integral garage;

Plots 3 & 4: 2 bed semis, no garage;

Plot 5: 4/5 bed detached with integral garage;

Plots 6 & 7: 4 bed detached with integral garage;

Plot 8: 4 bed detached, no garage, or 3 bed detached with integral garage;

Plot 9: 4 bed detached, integral garage;

Plot 10: bed detached, integral garage;

Plot 11: 2 bed bungalow, no garage.

The proposed single access road serving the site is located $\pm 130\text{m}$ west of the signalised junction of Halifax Road with Moorside / Highmoor Lane (see Figure 2). The site is a currently a mainly lawned garden of a large single residential property. The proposed layout of the development site may be seen in Figure 7.

All properties within the development will be accessed by a road which intersects with the A649 Halifax Road. Sight triangles from the access road into Halifax Road have been carefully assessed to ensure that they comply with accepted design standards for junction visibility splays and provide clear sight lines past any parked vehicles to ensure safe stopping sight distance for approaching vehicles. All site parking will be accessed from this road, will be off-street, and will consist of driveway access and two parking spaces for each home, as well as three centrally located visitor parking spaces. Five of the homes will have integral garages in addition to their parking spaces. Including garages, there will be a total of 30 parking spaces for residents and visitors, largely obviating the need for any on-street parking on Halifax Road near the site, although there are nearby parking embayment's on both sides of Halifax Road for the occasional times when extra parking is needed.

Electric vehicle charging points will be provided at each home. While the ideal for sustainability is to reduce the number of private vehicle trips, the provision of EV charging facilities should encourage residents to switch to electric vehicles, with an associated reduction in carbon emissions generated by the development.

Bike stands will be provided adjacent to Plot 4, for use by anyone not storing their bicycles within their properties.



Figure 5: View to north-west across L-shaped site



Figure 6: View towards future access road up slope towards Halifax Road



Figure 7: Site development proposal

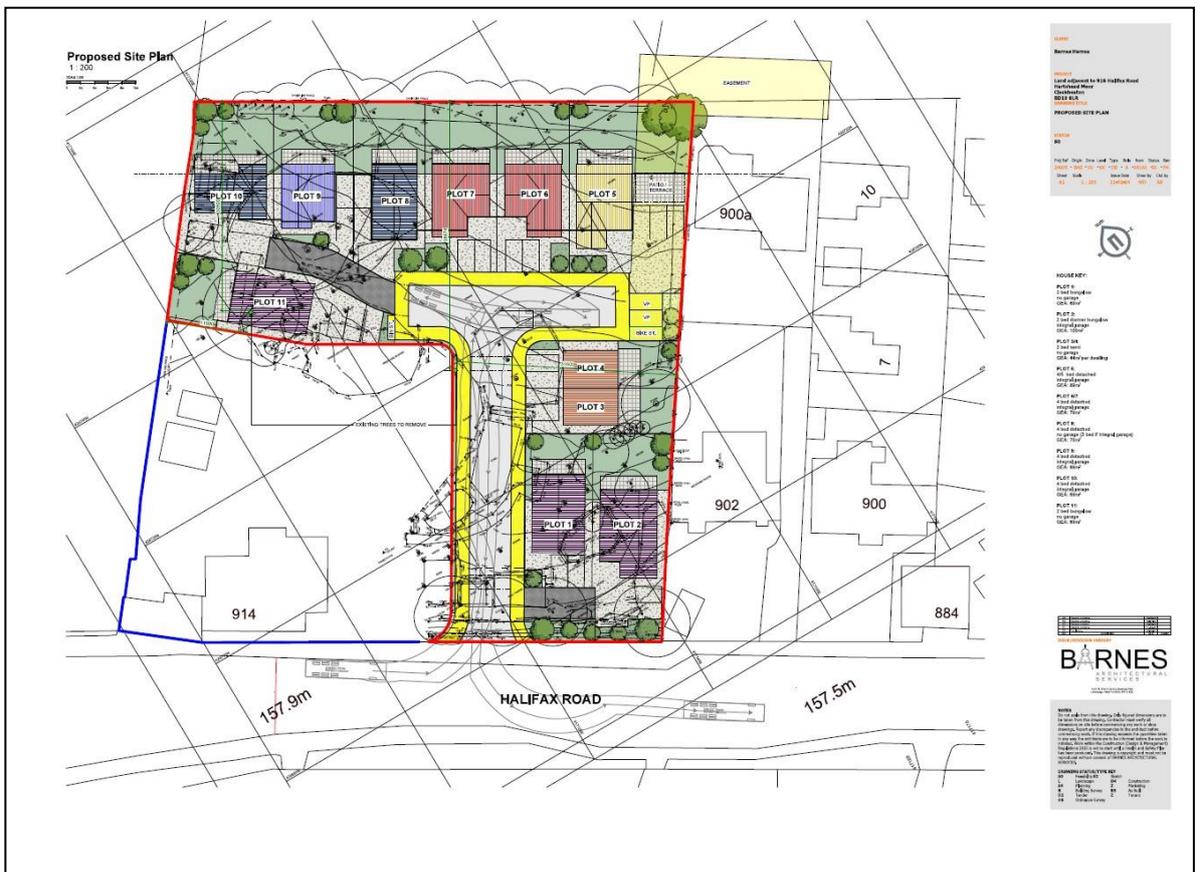


Figure 8: Site plan with truck templates

4.2 Trips generated by the proposed development

Given the relatively small scale of the development, the number of trips on foot, cycling or by public transport is difficult to estimate, the key issue being the availability of options, depending on the destinations of these trips. This section, therefore, focusses on vehicle trips likely to be generated by the development.

TRICS Consortium Ltd. (Trip Rate Information Computer System) issued a Technical Note: Residential Sub-Category Comparative Analysis, in August 2022. Their trip rate data for privately owned houses from surveys conducted between 2011 and 2021 were as follows (in vehicle trips per household):

a.m. peak hour (08:00-09:00): vehicle trip rate: 0.143 inbound, 0.386 outbound. 0.529 total;

p.m. peak hour (17:00-18:00): vehicle trip rate: 0.358 inbound, 0.176 outbound, 0.534 total;

Daily vehicle trip rate (07h:00 – 19h:00): 4.642.

These rates were for residential areas with at least 75% of houses being privately owned.

Also relevant is the long-term impact of the trend towards working from home, which rapidly increased following the COVID pandemic. A “WISERD” report: ‘Homeworking in the UK: Before and During the 2020 Lockdown’, by Alan Falstead and Darja Reuschke (Wales Institute of Social and Economic Research, Cardiff, August 2020) indicated that in 2019, prior to COVID, just 4.7% of UK employees worked from home. In April 2020, the Office of National Statistics (ONS) found that 46.6% of employees did at least part of their work from home. In February 2023 ONS indicated that 44% of workers reported home or hybrid working. Those with higher income and/or higher education tended to have higher rates of working from home. It is unlikely therefore that using the TRICS estimates for 2011 to 2021 would underestimate trips in the peak hours.

Applying the TRICS data given above, the 11 dwelling units in the proposed development are estimated to generate the following vehicle trip numbers:

A.M. peak hour (08:00 – 09:00): 2 inbound, 5 outbound, two-way total 7 trips;

P.M. peak hour (17:00 – 18:00): 4 inbound, 2 outbound, two-way total 6 trips.

It is estimated that these trips will be evenly split between trips to or from the west and the east.

4.3 Potential traffic impacts

From Figure 3 in a document entitled 'Junction Assessment Tools from First Principles' by Cardiff Council, a minor road right turn into a major road at a priority junction where the main road carries 1350 vph would have a capacity of around 65 vph. With the 2030 forecast 2-way flow of 1477 vph, the right turn capacity would be ± 50 vph. Given that the right turn movements out of the access road will likely be no more than 3 vph, this movement does not pose any particular concerns. Furthermore, the access from the property is located just 130m west of a signalised junction, so it is likely that the signal phases will create gaps which will make it easier to cross Halifax Road and proceed westwards. Left turns out of the access road will be easier, as they only need to find gaps in the eastbound flow (ie. up to 886 vph in the peak in 2030, assuming 60% of traffic is eastbound).

4.4 Access design

Paved footways will be provided on both sides of the access road. Tactile paving will be installed where the access road crosses the Halifax Road footway. The existing direction sign to Liversedge, Heckmondwike, Cleckheaton and Wadsworth Gardens will need to be relocated within the Halifax Road footway, as it lies within the path of the access. The new position of the sign should be carefully identified to minimise obstruction of pedestrians and to avoid reducing sight distance when looking right from the access.

The site layout provides adequate space for delivery, refuse and emergency vehicles to access the site and turn around. Figure 8 shows the site plan with the turning templates for a refuse vehicle and a fire tender. Figures 9 and 10 show the gradient of the access road in plan and cross-section. The site slopes quite steeply down from Halifax Road, and consequently the access road also has a steep slope (8 % gradient), but this is reduced to 4.5 % approaching the junction with Halifax Road from the north, in order to provide a landing area where drivers can stop more easily to wait for a suitable gap in the main road traffic.

The first properties in the site, Plots 1 and 2 to the right (east) of the access road on entry (see Figure 7), connect with the access road ± 6 m from the property line, and have a crossfall to accommodate the slope of the site. The width of the access road (6m) and of the footway (4m) facilitate turning in and out of the driveway serving these two plots.



Figure 9: Layout plan showing contours of access road



Figure 11: Stopping sight distance for eastbound traffic at 70 km/h.

Figure 12 shows the location of the speed camera relative to the proposed access point to the property, while Figure 11 shows the sight line from the access.



Figure 12: Speed camera and access point (currently a gate), looking west.



Figure 13: Sight line to the west

Figure 13 shows the sight line from the future access (direction sign to be relocated).

Considering westbound traffic, Figure 14 shows a sight distance of $\pm 82\text{m}$ from the access. Although the road is straight, the footway width on the north side of Halifax Road is reduced to the east to provide a parking embayment. A vehicle such as a delivery van parked at the western end of the embayment would limit sight distance, as shown.

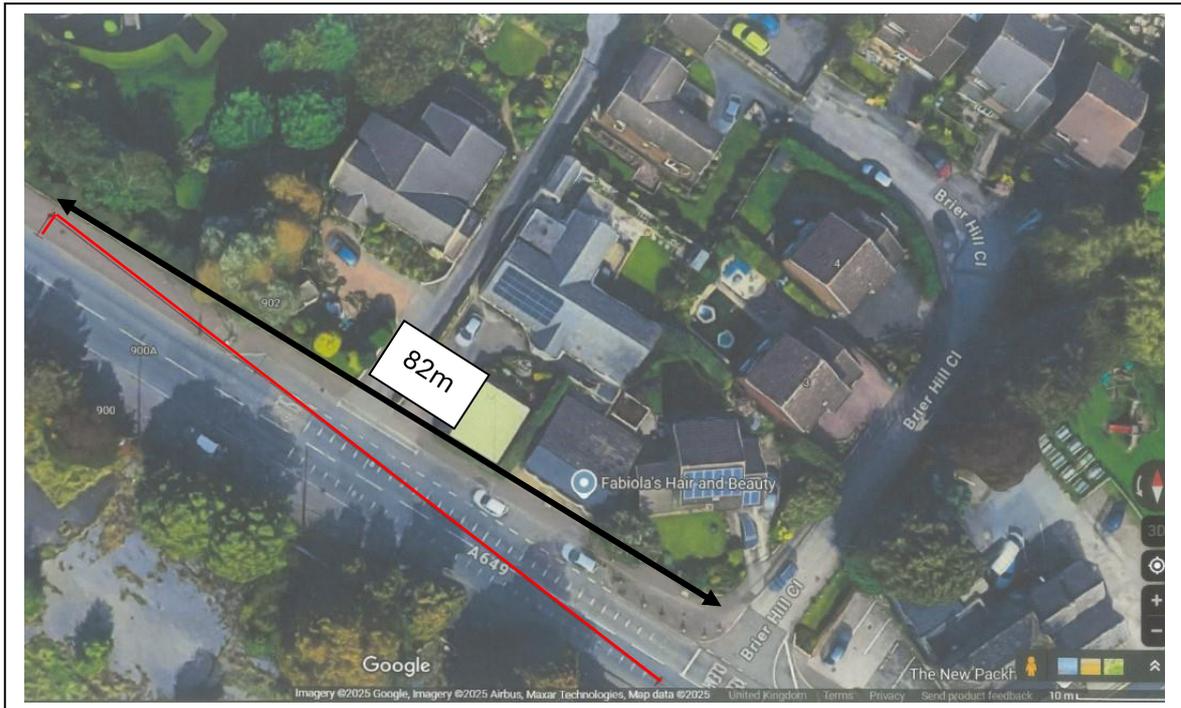


Figure 14: Stopping sight distance for westbound traffic >60 km/h

Figure 15 shows the sight line to the east, including the embayment which may restrict sight distance (but not in this instance). The sight line in Figure 14 takes this into account.

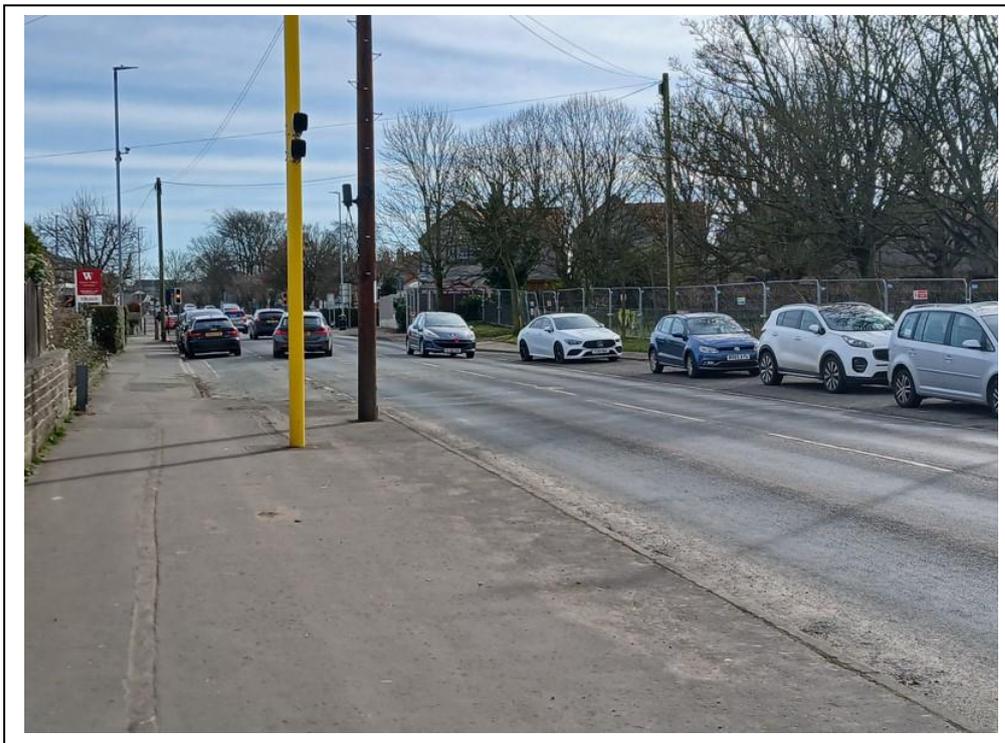


Figure 15: Sight line to east past embayment (behind speed camera and utility poles)

In light of the combination of factors applicable here, i.e. excellent sight distance, very low vehicle numbers entering the road, and the mitigating factor of the speed camera, it was not considered necessary to carry out any further speed surveys at this site.

5. Summary, Conclusions and Recommendations

A small residential development comprising 11 homes is proposed on the north side of the A649 Halifax Road in Hartshead Moor, Kirklees, an area with predominantly low density residential development surrounded by rural areas.

Traffic volume past the site is moderate, and while it is not a major road, this section of Halifax Road is an important link in the road network, being one of a limited number of crossing points over the M62 motorway. However, it is unlikely that traffic will grow to the extent that queuing and congestion will occur to any significant extent.

While some regular trips may be possible on foot, cycling or by bus, many other day-to-day trips would only involve relatively short car journeys.

Vehicle trips generated by the development are low in number: 7 vehicle trips in the morning peak hour, and 6 in the evening peak hour. The site access is by way of a single access road off the A649 Halifax Road, located $\pm 130\text{m}$ west of the signalised junction with the A643 Moorside. This section of Halifax Road is straight, with good visibility. There is a wide footway at the site entrance, further ensuring that access from the development has excellent sight distance and coupled with the low volume of vehicle movements generated by the development, it is unlikely to cause congestion or be a road safety hazard.

While some vehicle speeds along Halifax Road may be in excess of the speed limit of 30mph, the speed camera in close proximity to the site will significantly reduce speeding in the vicinity of the access.

The development site is well provided with in-site transport-related amenities, including adequate parking on driveways, in demarcated parking spaces off the internal road or in garages. Footways will be provided along both sides of the access road, and each home will have access to electric vehicle charging facilities, and cycle racks. The access driveway has generous visibility splays at its junction with Halifax Road, a "landing area" with a less steep gradient on the approach to Halifax Road, and its geometry can accommodate refuse vehicles, fire tenders and the like.

There are bus stops with shelters in close proximity to the site, and bus routes serve to link the site with Brighouse, Leeds and other destinations.

It is therefore **concluded** that the proposed development will have minimal impact on road safety or congestion on Halifax Road, or on the general character of the area, and will contribute to the need for additional housing. Sustainable travel options are available, and most day to day needs can be met with relatively short journeys, limiting the environmental impacts of the proposed development.

It is **recommended** that the proposed development a Hartshead Moor be supported.



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