

**KIRKLEES COUNCIL
TOWN AND COUNTRY PLANNING ACT 1990
HIGHWAYS DEVELOPMENT MANAGEMENT**

PLANNING REF 2016/60/94118/E0/SH
CATEGORY Large Major

PROPOSAL OUTLINE APPLICATION FOR
RESIDENTIAL DEVELOPMENT

LOCATION LAND OFF RAVENSTHORPE ROAD,
DEWSBURY

APPLICANT ANDREW ROSE

HDC Ref. No. K16-14NW/8
Highway Officer Alistair McMurray
O. S. Ref. 230 196
Date Received 15/12/2016
Target Date 05/01/2017
Date Returned 28/02/2017
Decision
Route No. C617
Road Name RAVENSTHORPE RD
Adopted Yes
Road Name OUZELWELL LANE
Adopted Part adopted
Footpath No
Highway scheme Yes
SHLAA 906, 158, 241
Checked by / date Anita Thomas 19/12/2016

Preamble

This proposal consists off an outline application with access only to be considered. 120 residential dwellings are notionally proposed on-site.

The application in highways terms is supported by a Transport Assessment (iTransport November 2016), an indicative Masterplan Drawing (PO-MP-SPA-IL-P3565-0001-00) and a site access plan (ITY11390-GA-002 Rev A).

The application site is located to the southwest of Dewsbury Town Centre and is allocated within UDP for residential development. Vehicular access is proposed via simple priority junction to/from Ravensthorpe Road at the north-western portion of the site.

The applicant has also submitted a further outline planning application for a similar residential development on land identified as POL within the UDP. The application site is to the south of Lee's Hall Road.

Both sites form part of a wider land allocation.

A scoping exercise took place between the applicant's Highway Consultants and Highways Development Management in September 2016.

Highways Site Context

Ravensthorpe Road can be classed as a local distributor road and it serves a number of residential properties along its frontage length. It is circa 8m in width, street lit and subject to a 30mph speed limit.

Beyond its frontage, it provides access to commercial and industrial sites to the north.

Traffic calming in the form of raised tables and speed cushions are located at intervals and there are no on-street parking restrictions within the vicinity of the application site.

The existing access that provides vehicular access to the rear of 143-153 Ravensthorpe Road is currently unadopted. Rear access to these properties does not appear to be maintained on the Masterplan. Clarification from the applicant is requested in this regard.

Ravensthorpe Road becomes Calder Road a short distance to the west of the proposed site access. Calder Road crosses the River Calder to the north-west before forming a signalised junction with the A644 Huddersfield Road.

To the east of the site Ravensthorpe Road links to Forge Lane and Lees Hall Road via a 3-arm mini-roundabout.

Lees Hall Road again provides frontage access to residential properties along the majority of its length, is street lit and subject to a 30 mph speed limit. Traffic calming in the form of raised tables and speed cushions are located at intervals along the carriageway.

Policy

The submitted Transport Assessment contains a comprehensive policy review in highways/transport terms and it is considered that the proposal accords well in this regard.

Public Transport Provision

The application site is considered to be moderately well served by existing public transport facilities.

Pedestrian Accessibility, Infrastructure and PROW

The submitted Transport Assessment provides a study of existing pedestrian infrastructure within the vicinity of the site. The submitted Masterplan drawing illustrates a number of discontinuous footways. This should be addressed early in the design to avoid costly redesign at a later stage. There are no pedestrian crossing facilities shown on the Masterplan drawing and clarification from the applicant is requested in this regard.

There are two pedestrian access points proposed as part of the development. It is unclear from the submission as to what the status these access locations will be, however at a minimum, the footpaths should be offered for adoption. Currently these access points are used to access the existing land that the application site lies upon for agricultural purposes. It is also not clear as to how the remainder of the agricultural land will be accessed in the future post construction of the development. Clarification from the applicant is requested in this regard.

With regards to PROW, the application is outline with access to be considered. It is not clear if this "access" approval is sought solely for the main vehicular access or all access in/out for the application site.

The provision of public non-vehicular access routes into and across the site would be sought at the relevant time in the planning process for the benefit of existing and future residents.

Off-site highway improvements to the existing PROW network may be sought and expected. Details of design for access routes, crossing points etc. should be submitted and agreed at the relevant point(s) in the planning process.

Baseline Traffic and Survey Data

In order to determine the baseline conditions on and around the local highway network of interest, the submitted Transport Assessment utilises a number of junction turning counts, queue surveys and ATC data.

As agreed with Highways Development Management existing junction turning counts were undertaken for the following agreed highway network of interest that makes up the pertinent study area for assessment:

- Lees Hall Road/Brewery Lane mini-roundabout;
- Lees Hall Road/Ravensthorpe Road/Forge Lane min-roundabout;
- Ingham Road/Slaithwaite Road simple priority junction;
- Forge Lane/Thornhill Road/Station Road dumbbell mini-roundabout; and
- Huddersfield Road/Calder Road signal controlled junction.

The junction turning counts have identified the network peak hours as 0800-0900 hrs and 1630-1730 hrs respectively.

Existing queue length surveys were undertaken on the junctions contained within the highway study area at the same time as the turning counts.

ATC data has also been obtained for a 7-day period on Ravensthorpe Road in the location of the proposed site access. The ATC data has recorded both vehicular volumetric and speed data.

The methodology for capturing the above baseline data is considered appropriate and acceptable in that regard.

Baseline Capacity Assessments

In order to assess the existing operational performance of the Lees Hall Road/Brewery Lane mini-roundabout, the junction has been modelled using ARCADY (Assessment of Roundabout CApacity and DelaY).

The model has been verified as being appropriate and the results of the operational assessment illustrate that the junction currently operates well within its theoretical capacity limits and is in line with observed queue data with a maximum ratio of flow to capacity (RFC) of 0.38 (38%) and an associated maximum queue length (MaxQ) of 1 passenger car units (pcus) occurring on the lees Hall (east) arm of the junction during the AM peak hour.

In order to assess the existing operational performance of the Lees Hall Road/Ravensthorpe Road/Forge Lane mini-roundabout, the junction has again been modelled using ARCADY.

The model has been verified as being appropriate and the results of the operational assessment illustrate that the junction currently operates well within its theoretical capacity limits and is in line with observed queue data with a maximum RFC of 0.53 and an associated MaxQ of 1 pcus occurring on the lees Hall arm of the junction during the AM peak hour.

In order to assess the operational performance of the Ingham Road/Slaithwaite Road four-arm priority controlled junction, the junction has been modelled using PICADY (Priority Intersection CApacity and DelaY).

The model has been verified as being appropriate and the results of the operational assessment illustrate that the junction currently operates within its theoretical capacity limits and is in line with observed queue data with an RFC of 0.71 and an associated MaxQ of 2 pcus occurring on the

Ingham Road (Right Turn) arm of the junction during the AM peak hour.

In order to assess the operational performance of the Forge Lane/Thornhill Road/Station Road dumbbell mini-roundabout configuration, the junction has again been modelled using ARCADY.

The results of the operational assessment illustrate that the junction currently operates well over its theoretical capacity limit with an RFC of 1.57 with an associated MaxQ of 65 pcus occurring on the Thornhill Road arm of the junction during the AM peak hour. The results also illustrate that the junction operates at close to and well over its theoretical capacity limits on all arms of the junction during both the AM and PM peak hours.

Assessed against this are the results of the observed queue data which illustrates some moderate to high queuing levels during the peak hours, but not to the extent of the modelled results.

In order to operationally assess the A644 Huddersfield Road/Calder Road signal controlled junction, the signalised operation has been modelled using LINSIG (LINcolnshire SIGnals) with signal control data being supplied by this Authority.

Kirklees UTC has assessed the models and results provided by the applicant and have replicated the models. Although they have stated that they do query some of the methodology in the way that the models have been constructed, they are content that the results of the replicated model echo the results of the applicant's model and they raise no issues in that regard.

The results of the operational assessment illustrate that the junction currently operates within its theoretical capacity limits. Queuing occurs on all arms of the junction during the peak periods with a maximum Degree of Saturation (DoS) of 72.3% and an associated Mean Maximum Queue (MMQ) of 8 pcus occurring on the Calder Road phase of the signals during the AM peak hour. The Huddersfield Road (east) left phase of the signals see a DoS of 71.2% with an associated MMQ of 14 pcus during the AM peak hour.

PIA Assessment

A full Personal Injury Accident Assessment for data from the most recent 5-year period (April 2011-september 2016) has been undertaken for the full study area. Highways Development Management is satisfied that there are no existing accident or highway safety trends that this proposal is likely to exacerbate and as such, the proposal is acceptable in that regard.

Access Proposals

The primary vehicular, pedestrian and cycle access to the application site is proposed via a newly created priority controlled T-junction to/from Ravensthorpe Road.

The proposed access point is located west of the existing houses on Ravensthorpe Road, close to and in conflict with an industrial access. It is also sited close to a bend with limited forward visibility (there is an advanced warning sign and column mounted mirror for the industrial access) towards the development access.

There are discrepancies between the two drawings regarding the proposed highway proposals. The site topography will have a significant impact on any access road alignment proposed. In addition there is a small retaining wall and relatively steep gradient southwards into the field. The extents of the earthworks required will similarly be affected by the location of the access road. Consequently, a somewhat more definite proposal that "Approximate location of spine road" should be required.

There are no levels or gradient information provided on either drawing. A section showing the site access road (including Ravensthorpe Road) would be required to fully assess the outline proposal at this stage.

It is noted that the submitted Transport Assessment states that [sic] "initial access gradients will be no steeper than 1:40 for the first 12m and 1:20 thereafter with suitable transition curves."

In terms of an outline proposal, this is considered acceptable in this regard.

In terms of geometric characteristics, the minor estate road arm measures some 7.3m in width, 2m footways are provided on either side of the proposed estate road to tie in with the existing footways on Ravensthorpe Road with dropped kerbs and tactile paving. Kerb radii of 6m at the junction are provided.

Vehicular visibility splays of 2.4m x 56.1m to the west and 2.4m x 44m to the east along Ravensthorpe Road are illustrated on the site access plan. The submitted Transport Assessment has calculated these values from the 85%ile wet weather speeds obtained by the ATC data undertaken for the assessment.

It is not clear from the submitted site access drawing that the visibility splays to the east can be achieved as proposed. The proposed site levels may also impact upon the achievability of the visibility splays. Site levels may also impact forward visibility along the estate road.

The plots of the existing houses and current access points to the site are relatively flat. The proposed site however rises relatively steeply towards the southern boundary. Gradients will be an issue for all roads where they lie in a southerly direction.

Although acceptable in principle, some further clarification on the issues raised above is required at this stage.

It is proposed to relocate the existing speed cushions in the vicinity of the proposed site access some circa 17m to the east. This is considered appropriate and acceptable in this regard.

Swept Path Analysis Vehicle Tracking Drawing has been provided demonstrating that an 11.85m refuse vehicle can access and egress the site from/to Ravensthorpe Road in a safe and efficient manner and the site access is considered acceptable in this regard.

As the site forms part of a wider residential allocation within the Local Plan, a much upgraded junction is proposed in the form of a roundabout to which this site access would ultimately tie in if the wider allocation comes forward. This is not assessed within this application, however the onus would be on the developer to build this out and assess its suitability in terms of highway safety and efficiency.

Illustrative Masterplan and Internal Site Layout

Although not forming part of this outline application, an illustrative masterplan and internal site layout has been provided and as such, Highways Development Management is providing comments as per the submission for information.

From the submitted information, it is not entirely clear which areas would be offered for adoption and which would remain private. This will need to be addressed early in the design of any reserved matters application coming forward.

There is no transition or delineation feature between the traditional estate road and the shared surface

area. Where ramps are placed to demarcate different surfaces, the footways should continue beyond the ramp to provide for level pedestrian crossing of the carriageway. Where ramps or other traffic calming features are proposed, they should be positioned to avoid creating or exacerbating captive low points.

The shared surface through route as presented should be reconsidered both conceptually and for conflicts with public highway.

There currently don't appear to be any publicly accessible visitor parking spaces provided within the shared surface areas of the development.

Some form of turning facility will need to be provided at all cul-de-sac locations within the site. Vehicles will be required to be able to both enter and exit carways, accessways etc in a forward gear. In addition vehicles should not be required to reverse past the house being visited (except to reverse into the plot driveway) in order to do so.

The turning heads as shown may not be sufficient to accommodate the turning envelope required by Kirklees Council refuse vehicles. Swept Path Analysis Vehicular tracking would need to be provided to demonstrate that refuse vehicles can enter and manoeuvre within the access roads in a safe and efficient manner. Kirklees Council would not expect refuse (or other service) vehicles to enter private roads or forecourts. However it is not clear where the refuse bins or bin collection points would be located. This is a particular concern for those plots not adjacent to the public highway. Bin pads and collection points will need to be located in accordance with Kirklees Council's "Good Practice Guide for Developers" document.

There are a number of open water channels within the development site. These channels may transfer water from outside of the development site. These channels are not shown on the Masterplan layout and it is not clear how they will be dealt with as part of the development.

There are no drainage details shown on the site plan drawing. There is however a "Dry Basin" shown. Consideration will need to be given as to its adoption.

A suitable storm water outfall will need to be identified for the development and has this will require early discussion with Kirklees Drainage Engineers in any reserved matters application coming forward.

There are a number of open space areas within the proposals. Consideration as to the resultant ownership of these will be needed and to who will be responsible for their future maintenance.

The proposed trees within plot frontages should be repositioned so that the ultimate spread of the trees will not overhang the public highway areas.

There is no level information provided with the submission however there are significant gradients across the site. It is not clear whether retaining walls will be necessary as part of the development. Any retaining structures affecting the highway will require formal technical approval by the Council as the Highway Authority. It is recommended to provide details of all proposed retaining features and underground storage facilities (including pipes) to Kirklees's Highways Structures section at an early stage with any reserved matters application coming forward.

The results of any ground investigation (contamination) reports or coal mining reports for the site will also need to be provided.

Traffic Impact Assessment Methodology

Although the application site forms part of a wider strategic allocation which would be assessed upon its own merits, this proposal is required to be satisfactory in highways terms in its own regard. In line with this, at the request of Highways Development Management, the submitted Transport Assessment provides a sensitivity test assessment assuming a post 5-year assessment year of 2021. This is welcomed and considered acceptable in this regard.

Committed Development has also been considered in the form of a 169 dwelling residential development located off Forge Lane (2013/92657). Cumulative Development Impact, taking into account the applicant's "sister" outline application located off Lees Hall Road is considered later within this response.

Trip Generation information for the Forge Lane Development has been supplied to the applicant by Highways Development Management and included within the submitted assessment.

Traffic from the committed development has been assigned to the network by utilising 2011 census journey to work data. This is considered acceptable.

The committed development assignment has been added to the 2016 base survey assignment in order to produce a Base+Committed Development scenario. This scenario has been included with calculated 2021 Base flows in order to produce a 2021 Base+Committed Development scenario. This approach is considered acceptable.

Trip Generation

In order to obtain multi-modal trip rates, an interrogation of the TRICS database has been undertaken in order to derive a valid dataset.

The resultant vehicular trip rates per dwelling utilised within the assessment are as follows:

AM Peak – 0.479 (two way)
PM Peak – 0.508 (two way)

Highways Development Management considers vehicular trip rates of 0.7 to be more robust and representative of new developments. Highways Development Management have had residential trip rate surveys undertaken within the Dewsbury area for a range of residential developments and the resultant trip rates based upon 7 selected sites have confirmed AM and PM trip rates of 0.7 and 0.6 trips per dwelling respectively.

In line with the above, the trip rates contained within the submitted Transport Assessment are not accepted as being representative and discussion between Highways development Management and the applicant will be required in this regard.

Notwithstanding the above, operational assessment as presented within the submitted Transport Assessment has been evaluated:

Equating the utilised trip rates to this proposed development sees the following traffic generation at the proposed suite access:

AM Peak – 15 arrivals/43 departures (57 two-way)
PM Peak – 37 arrivals/24 departures (61 two-way)

(It is noted that table 6.2 within the submitted Transport Assessment is incorrect in that the AM two-way trips should be 58).

Trip Distribution and Assignment

Traffic generated by the proposed development has been distributed across the network again utilising 2011 census journey to work data and trips have been assigned to destinations using the fastest route on google maps.

Although it is not suggested that this approach is inaccurate, it is prudent that the submitted Transport Assessment to provide sensitivity test utilising existing turning movements for junctions within the study area in order to provide a sensitivity comparison. This is requested by Highways Development Management.

Development flows have been calculated and applied to both the 2016 Base+Committed Development and 2021 Base+Committed Development scenarios in order to produce full 2016 and 2021 Assessment scenarios (Base+Committed+Development).

Traffic Impact Assessment

Operational assessment of the highway study area has been undertaken where either a +5% increase in total flows occurs at a junction, or the development will add in excess of 30 two-way trips to a junction in either the AM or PM peak hours. This approach is considered acceptable. (Subject to the sensitivity comparison detailed above)

The assessment provides a materiality assessment that illustrates that the following junctions have been subjected to operational assessment:

- Site Access/Ravensthorpe Road – (circa 60 two-way movements)
- A644 Huddersfield Road/Calder Road – (circa 40 two-way movement)

The site access junction has been modelled with PICADY for both the 2016 and 2021 Assessment scenarios (Non-TEMPRO Growthed and TEMPRO Growthed traffic).

The results of the 2016 Assessment (Non-TEMPRO Growthed) scenario demonstrates that the proposed site access would operate well within its theoretical capacity limits with an RFC of 0.11 and associated MaxQ of 0 pcus occurring on site access arm of the junction during the AM peak hour.

The results of the 2021 Assessment (TEMPRO Growthed) scenario demonstrates that the proposed site access would continue to operate well within its theoretical capacity limits with an RFC of 0.12 and associated MaxQ of 0 pcus occurring on site access arm of the junction during the AM peak hour.

The A644 Huddersfield Road/Calder Road junction has again been modelled using LINSIG for both the 2016 and 2021 Assessment scenarios (Non-TEMPRO Growthed and TEMPRO Growthed traffic).

The results of the 2016 Assessment (Non-TEMPRO Growthed) scenario demonstrates that the junction would operate within its theoretical capacity limits with a DoS of 75.6% and associated MMQ of 16 pcus occurring on the Huddersfield Road (east) left and ahead phase of the signals during the AM peak hour.

The results of the 2021 Assessment (TEMPRO Growthed) scenario demonstrates that the junction would continue to operate within its theoretical capacity limits with a DoS of 80.7% and associated MMQ of 19 pcus occurring on the Huddersfield Road (east) left and ahead phase of the signals during

**KIRKLEES COUNCIL
TOWN AND COUNTRY PLANNING ACT 1990
HIGHWAYS DEVELOPMENT MANAGEMENT**

PLANNING REF 2016/60/94118/E0/SH
CATEGORY Large Major

the AM peak hour.

Based upon the assessment results above (subject to the trip assignment sensitivity test requested), Highways development Management is content that the introduction of the proposed development would not result in a material impact upon the efficiency of the highway network in its own right.

In line with the comments provided above, Highways development Management raises no objections to the principle of this proposal in highways terms; however we raise a number of minor concerns and requests for further information and points of clarification. These should be covered within either a supplemental Transport Assessment or Transport Assessment Addendum.

It should be noted that Highways Development Management will be providing comments upon the cumulative impact of this proposal and the applicant's sister proposal (2016/94117) that should be read in conjunction with these comments.
