Consultation Response from KC, Highways Development Management (HDM)		
2021/93689 Land to the south of Ravensthorpe Road / Lees Hall Road, Dewsbury		
Hybrid application for full planning permission for engineering works, drainage and utilities connection for the provision of site access from Forge Lane and Ravensthorpe Road and associated works; and for outline permission for erection of residential development and mixed use development (including community facilities) with associated works including the provision of internal estate roads and parking, landscape works (including provision of public open space, tree clearance/replacement/woodland management and ecological management) and sustainable urban drainage works drainage principles		
Date Responded: 14/12/21	**Responding Officer:** A Darwin	**Responding Ref:** HDC 16-14NW/8

RECOMMENDATION: Further information required

Further information/amendments are required regarding the following issues, which are detailed in the main body of the report:

- Further details of the proposed access strategy relating to the timing and mechanism for delivery of the 'temporary' and main site accesses is required.
- Further consideration of the pedestrian/cycle provision is required, particularly at the roundabouts to ensure compliance with LTN 1/20, together with supporting evidence/justification.
- Additional traffic calming features are required along the spine roads to ensure a self-enforcing 20mph speed limit is provided. Further improvements are also required to provide enhanced crossing provision, bus stops, access to SUDS features, VRS, pedestrian/cycle facilities, junction alignments and vertical curves. Safety implications of the proposed swales to be reviewed.
- Due to concerns regarding the temporary access on to Ravensthorpe Road, further supporting information and improvements are required.
- Amendments to the main site access roundabout are required to ensure compliance with DMRB standards, and to provide improved pedestrian/cycle facilities. Further supporting information is also required, including identification of compliance and/or departures from standard, Swept Path Analysis and Stage 1 Road Safety Audit & Designers Response.
- It is recommended that the internal roundabout is redesigned as a compact roundabout (subject to capacity considerations) and amended to comply with DMRB standards, and to provide improved pedestrian/cycle facilities. Further supporting information is also required, including identification of compliance and/or departures from standard, Swept Path Analysis and Stage 1 Road Safety Audit & Designers Response.
- An emergency link should be provided, or other proposals to ensure that emergency access can be maintained to the site at all times.
- Further details of the proposed 'active travel' links are required. It is also requested that a new pedestrian island is provided on Ravensthorpe Road, to provide a safe crossing point between the site and Ravensthorpe Railway Station.
- As part of the interim improvement works that the applicant proposes at the Forge Lane/Station Road/Thornhill Road double mini-roundabout junction, consideration should be given to providing a pedestrian refuge island on the B6117 Thornhill Road arm to assist pedestrians heading to/from the site towards Headfield C of E Junior School and Dewsbury Town Centre.
- Amendments to the Travel Plan Targets are required, together with further details of Travel Plan measures and the provision of a Travel Plan Fund.
- Further details and consideration of the PROW diversions is required.
- The applicant should consult with WYCA and bus operators to determine whether any bus service improvements could be delivered by the development. Bus stop provision should also be incorporated into the spine road design.
- Further collision analysis is required.
- Additional TRO's are required on the Calder Road arm of the A644/Calder Road junction, with the extent to be confirmed by the applicant following the traffic signal modelling that is required.
- Further details regarding the construction access strategy are required.
- Updated traffic assessment and junction modelling is required, which assesses the impact of the Phase 1 development against a static baseline scenario. Mitigation works will then need to be agreed where necessary.

Development Overview:

Hybrid application for full planning permission for engineering works, drainage and utilities connection for the provision of site access from Forge Lane and Ravensthorpe Road and associated works; and for outline permission for erection of residential development and mixed use development (including community facilities) with associated works including the provision of internal estate roads and parking, landscape works (including provision of public open space, tree clearance/replacement/woodland management and ecological management) and sustainable urban drainage works drainage principles.

The Site is allocated for residential development under Policy LP65 of the Local Plan. The Site forms part of wider housing allocation HS61 which has a gross site area of 161.37 hectares and is expected to deliver 1,869 dwellings during the Local Plan period with a further 2,131 dwellings beyond the plan period.

The proposed development comprises the first phase of the wider allocation at Dewsbury Riverside, and will deliver the early infrastructure in terms of highways and drainage, required to bring forward the wider allocation; including the delivery of a new central access point for the scheme via a new roundabout at Forge Lane.

Reference to Plans/Documents:

- Transport Assessment (ref. 2020213/001 Issue A)
- Residential Travel Plan (ref. 2020213/002 Issue A)
- Illustrative Masterplan (Rev D)
- Design and Access Statement (Rev B)
- Planning Statement (Rev 3)
- Detailed highways drawings (Various)

Access Strategy

Summary

The access strategy for the site is discussed in the various submission documents and is as described below:

'The detailed element of the planning application comprises an access roundabout and spine road, proposed from Forge Lane (including associated junctions and drainage); secondary access from Ravensthorpe Road; and internal spine road links designed to facilitate access to the proposed new Network Rail roundabout junction at the corner of Calder Road and Ravensthorpe Road as well as future development phases to the south and west of the Site.

Primary vehicular access to the Site will be provided from Forge Lane. The secondary access from Ravensthorpe Road will be required to deliver the first phase of the development. The secondary access will also facilitate the provision of community facilities at the Site (or land for their future provision) prior to the demolition of the mosque and playgroup hall.

In addition to the proposed points of vehicular access, pedestrian access to the Site will be provided from an existing footpath network as well as the proposed highway network and is proposed to connect at four points along the southern and northern boundaries.'

HDM consider the principle of the new roundabout access to be acceptable, as it is in accordance with the principles envisaged at the Local Plan allocation stage, which have been developed through the ongoing master planning work for the wider Dewsbury Riverside site. Similarly, the new pedestrian/active travel links are acceptable in principle.

However, the introduction of a new access road via Ravensthorpe Road past the Ravenhall School access is a new element that raises a number of issues that require further consideration. In the supporting document it is indicated that the new access would allow delivery of up to 150 dwellings in advance of the roundabout access, and is described in various locations in the supporting information as either a preliminary, secondary or temporary access. Based on pre-application discussions, it is understood that this access would be temporary only and the link would be removed as soon as the permanent roundabout access were completed. This should be clarified, including clear information relating timescales and mechanism for delivery, so the practicalities can be fully considered (e.g. is the temporary access intended to remain privately maintained, or would it become adopted highway and then subsequently stopped up? etc).

The supporting documentation states that the primary consideration for the access strategy is to prioritise access by sustainable modes, with pedestrians, cyclists and other active travel users being given the highest priority. This approach is welcomed and is in accordance with local and national policy. However, from a review of the site access proposals, it does not appear that this aspiration has been fully translated into the design.

LTN 1/20 'Cycle Infrastructure Design' provides the latest national guidance on designing high-quality, safe cycle infrastructure, with the Core Design Principles being that cycle infrastructure should be Coherent, Direct, Safe, Comfortable and Attractive. Key to these principles is that cyclists should be treated as vehicles and not as pedestrians, and should not generally be expected to share facilities with pedestrians in urban situations where higher flows are expected. Instead, separate cycle tracks should be provided, which are segregated from high volume motor traffic, and afforded priority at junctions. Cycle routes should also be at least as direct – and preferably more direct – than those available for private motor vehicles.

At present, the proposed cycle infrastructure within the site consists of 2.5-3.0m wide shared use cycle/footways, with no priority provided at junctions (at side roads or at the roundabouts). The cycle facilities also terminate prior to the main Forge Lane roundabout, and there are no crossing points that link to the new active travel links to Ravensthorpe Road. These pedestrian/cycle facilities do not accord with LTN 1/20 in terms of the type and quality of provision. Therefore, the applicant should review the pedestrian/cycle provision so that it complies with the principles of LTN 1/20 and provide supporting evidence to demonstrate it's compliance. It is noted that given that the spine road layout includes a new roundabout, it may well be determined by the designers that off-road cycle facilities are still the preferred option due to known safety issues for cyclists at roundabouts. Should this be the case, then the off-road provision should be improved so that it complies more closely with the principles of LTN 1/20 as far is practical, and takes account of the anticipated high volume pedestrian/cycle usage of the routes following the completion of the Dewsbury Riverside development.

The supporting information suggests that the main spine roads and roundabouts are designed in accordance with DMRB and Residential Connector Streets as described in the Kirklees Highways Design Guide, with a design speed on 25mph. Given the strategic nature of the spine roads and roundabouts, HDM consider that the roads should be designed to DMRB standards as far is practical. Should there be any need for departures from DMRB standards, these should be clearly identified by the designers, so that these matters can be considered. For the new main site access roundabout, the design speed should be determined by the existing 30mph speed limit that is in force on the local network. For the new spine roads and internal roundabout, this should be based on a design speed of 25mph(40kph); and it is expected that a 20mph speed limit would be provided within the site, which

should be clearly noted on the submission plans. However, given the width and alignment of the spine roads, it is considered that the 20mph speed limit (25mph design speed) is unlikely to be self-enforcing. Therefore, speed restraint features must be incorporated into the design, and should compliment the improved pedestrian/cycle crossing provision required at junctions (at the side roads and roundabouts) and at crossing points.

In summary, amendments to the highway proposals are required, together with further supporting information, which should include:

- Information relating to timescales and the mechanism for delivery of both vehicle accesses, particularly relating to the 'temporary' Ravensthorpe Road access, so that the practicalities can be fully considered.
- A review and amendments to the pedestrian/cycle provision at the site access(es) and spine roads, to ensure that the facilities comply with the principles and guidance contained in LTN 1/20.
- A review of the site accesses, spine road and roundabout proposals to confirm that they comply with DMRB standards or identify any necessary departures from standard.
- Provide amended proposals for the spine roads to include speed restraint features that will allow a self-enforcing 20mph speed limit to be provided.

<u>Preliminary / Secondary / Temporary access via Ravensthorpe Road</u>

Notwithstanding the previous comments relating to the preliminary / secondary / temporary access via Ravensthorpe Road, HDM, the PROW, Road Safety and Highway Design Teams have identified a number of issues that require further consideration, which have not been addressed in the supporting information. A summary of the main issues are as follows:

- This section of road passes the access to Ravenhall School, which is a school for children with special educational needs. As such, some of the pedestrians accessing the school at the start/end of the school day will be more vulnerable than most to any safety risk associated with the increase in traffic from the development. At this stage, there is no information to confirm if this route is intended to be used as a construction access to the site. Should this be the case, then this would heighten these concerns further. Further details relating to the use of the access are required, relating to it's temporary and construction access uses, and how these will be safely managed. Should it be proposed that the access is used by construction traffic, HGV use would need to be restricted outside of school start/finish times.
- There is a private access on the east side of the road that serves the back of the existing terraced properties fronting the main road. This access has restricted junction visibility to the north due to an existing parking layby. Alternative arrangements need to be considered to ensure that adequate visibility is provided at the private access. One option may be for the parking layby to be relocated to the south side of the junction.
- At the junction on to Ravensthorpe Road, there is also restricted visibility due to parking laybys on both sides of the junction. No information has been provided to confirm the extent of the existing visibility splays. However, HDM estimate that these are less than 2.4x20m, which are below standard based on the existing 30mph speed limit. Based on site observations by HDM and the Road Safety Team, parking has also been observed at the junction radii, which further restricts both junction visibility and visibility for pedestrians crossing the junction (from east to west). Further information, including speed data, is required to confirm that adequate visibility is available, with mitigation works proposed where necessary.

- To try and address safety issues relating to parking at the junction and along the new section of temporary access road, new no waiting TRO's will be required, and these should be shown indicatively on the proposal plans. Consideration also needs to be given to the type of TRO's that will be required, as the maximum time limit for a temporary TRO is 2 years, which may not be sufficient depending on the delivery timescales for the roundabout access (further information required).
- Both the temporary Ravensthorpe Road access and the main site access roundabout works will reduce the availability of on-street parking. Therefore, replacement parking should be investigated to mitigate for any spaces that are removed.
- The road connects Bridleway DEW/94/10 to the south with Ravensthorpe Road to the north. However, no facilities have been identified to enable continued safe access to be maintained along this route for cyclists and horse riders.
- The traffic assessments undertaken for this access road does not take into account traffic from Ravenhall School.
- The Ravenhall School access is controlled by security gates, which require vehicles to wait in the junction bellmouth before being granted entry. Longer vehicles or multiple cars/vans waiting to enter the school will block passing traffic. Therefore, mitigation measures should be investigated at the school access.

Based on the above, further information and improvements are required to the temporary access arrangements, which must include Swept Path Analysis (HGV's, school vehicles and Kirklees Design Refuse Vehicle) and a Stage 1 Road Safety Audit & Designers Response.

Based on the information currently provided, it is understood that following completion of the roundabout (prior to the 150th dwelling) the temporary access would be removed. However, an alternative option that should be considered is for the new link to the spine road to be retained, and instead for the existing junction on to Ravensthorpe Road to be closed with a point vehicle closure. This option could provide a number of benefits, as follows:

- Access to the school would be improved, as improved junction visibility would be available at the new junction on to the spine road, when compared to the existing Ravensthorpe Road junction.
- It would allow the bridleway to be enhanced, by removing traffic at the Ravensthorpe Road junction, allowing an enhanced active traffic connection to be provided. This could also significantly improve pedestrian/cycle access to the school.
- The removal of the Ravensthorpe Road junction would may also allow additional on-street parking to be provided on Ravensthorpe Road, which would mitigate some of the spaces lost by the proposed roundabout.

The option of closing the Ravensthorpe Road access should be investigated in the revised submission. This should include a design for the access road in the temporary situation, together with the additional works that would be required following completion of the roundabout. It is noted that a new turning head would be required in conjunction with the point closure (could be located at the existing allotment access). Preliminary plans of this option should be provided to HDM for review. Subject to an acceptable arrangement being achieved, the proposals can then progress to the Stage 1 Road Safety Audit stage.

Roundabout Access on to Forge Lane

As previously stated, the principle of the Forge Lane Roundabout access is considered acceptable. However, only limited design information has been provided, and there are apparent safety / operational issues, which must be addressed and are summarised as follows:

- It appears that the roundabout has been designed as a compact roundabout (with max. Inscribed Circle Diameter (ICD) of 36m), with single lane approaches. However, the circulatory carriageway is shown at 8m in width and marked as two lanes (circulatory carriageway should be max. 6m and max. 1.2x max. entry width). This could encourage overtaking in the circulatory carriageway, which is a significant safety problem, particularly for cyclists who are known to be particularly vulnerable at roundabouts.
- There is a lack of entry path deflection on the Ravensthorpe Road and Forge Lane approaches, which could result in high entry/circulatory speeds.
- There is a private access on the north side of the roundabout that serves an existing industrial development. However, this does not appear to have been adequately incorporated into the design, with inbound vehicles into the industrial site needing to cross the Ravensthorpe Road roundabout arm give-way line, in conflict with waiting vehicles. Left turns into the industrial access also do not appear possible. The realigned kerb at the private access will also reduce visibility to/from the access to the west.
- The entry kerb radii on the Forge Lane and Site Access arms of the roundabout do not tie-in to the outer edge of the circulatory carriageway, which creates a poor alignment for the entries, and also makes the adjacent exits very wide. The give-way markings shown on these approaches are also incorrectly aligned. The combination of these features would be particularly problematic for circulating cyclists who would be more vulnerable to a collision with vehicles entering the roundabout. These problems appear to exist due to the staggered arm alignments. As such, it may be possible to address this issue by providing a non-circular elongated central island/circulatory carriageway and reducing the entry kerb radii (subject to swept path analysis).
- As mentioned earlier in this response, the pedestrian / cycle facilities are not in accordance with LTN 1/20 and could be improved (albeit potentially not in full accordance with LTN 1/20 due to land constraints).
- The Ravensthorpe Road/Lees Hall Road junction to the west of the roundabout becomes more constrained by these proposals, and it is unclear if the junction can still accommodate HGV access, which is required.
- A new access is proposed on the south side of the site access road, approximately 30m south of the roundabout. It is unclear what this access is intended to serve, although it appears to provide replacement parking for adjacent residents whose parking is impacted by the roundabout. This access is considered to be too close to the roundabout (min. 43m recommended to achieve visibility for 30mph speed limit). It is also unclear if right turning vehicles would be able to turn right out of the access past the splitter island. The parking area also appears to be impacted by the proposed SUDS attenuation basin.
- The roundabout reduces the available on-street parking, including reducing the parking layby on the Ravensthorpe Road exit. Additional no waiting TRO's will be required on all arms of the roundabout to prevent blocking on entry and exit and these should be shown indicatively on plan (only currently shown on initial section of the site access road), to confirm the extent of parking that would be displaced. Replacement parking for nearby residents should be provided.
- It may also be necessary to provide no loading TRO's in the vicinity of the roundabout. However, these will need to be considered carefully to ensure that refuse collection arrangements are adequately maintained.
- There are short sections of reverse curve between the roundabout entry/exit curves, which should be avoided as they create dust traps due to lack of overrunning.

- No swept path analysis has been provided to confirm that the design vehicle(s) can be accommodated at the roundabout and that at all affected site roads and accesses can continue to operate safely.

It is noted that the above comments are not necessarily an exhaustive list and there may be additional design issues that need to be addressed. The applicant should review the design in accordance with DMRB and LTN 1/20 guidance, to ensure that the design complies with standards. Should any departures from standard be identified these should be identified and then considered as part of the Stage 1 Road Safety Audit and Designers Response that is required. Full swept path analysis of the roundabout and affected junctions and accesses is also required, together with plans confirming that all visibility and geometric parameters are met.

Internal Roundabout

Given the strategic nature of the proposed spine roads, it is accepted that an internal roundabout is likely to be required. However, the Transport Assessment does not include any traffic modelling or other justification to confirm whether the design of the roundabout is appropriate, and this should be provided.

Whilst details of the roundabout are not identified in the supporting documents, the detailed plans indicate that a normal roundabout with Inscribed Circle Diameter (ICD) of 48m is proposed, with multi-lane approaches provided on all arms (although unmarked on the southern arm).

As the main site access roundabout on to Forge Lane is a compact roundabout with single lane entries, it is unclear why a higher capacity roundabout is required within the site and this should be clarified. Notwithstanding this, HDM consider that subject to capacity considerations, a compact roundabout should be provided instead, as this would provide a safer junction arrangement for cyclists, allow improved pedestrian/cycle crossing provision to be provided and would be more in keeping with the development.

There are also specific design issues with the roundabout layout currently proposed, which must be addressed and are summarised as follows:

- As mentioned earlier in this response, the pedestrian / cycle facilities are not in accordance with LTN 1/20, with only dropped crossings proposed on 3 of the arms and a Pegasus crossing proposed on the southern arm. These arrangements could be significantly improved, particularly if a compact type roundabout were proposed. It is also noted that the Transport Assessment suggests that controlled facilities will be provided on all arms, which contradicts the information shown on the plans. Details of the Pegasus crossing have not been provided, with no roads markings or other details indicated on the submission plans.
- There are very abrupt transitions on the north, south and west arms of the roundabout at the start of the flared lanes, which are not in accordance with DMRB.
- There appears to be a lack of entry deflection on a number of the approaches, which could result in high entry/circulatory speeds.
- For normal roundabouts, the exit widths should be 7m passed the splitter islands. This is not provided on the north, west and east arms (although not required for compact roundabouts).
- The nearside lane on the north arm is show at circa 2m wide.
- No lane markings are shown on the southern arm.
- The approach gradients on some of the arms do not appear to be in accordance with DMRB.

Again, it is noted that the above comments are not necessarily an exhaustive list and there may be additional design issues that need to be addressed. The applicant should review the design in accordance with DMRB and LTN 1/20 guidance, to ensure that the design complies with standards.

Should any departures from standard be identified these should be identified and then considered as part of the Stage 1 Road Safety Audit & Designer Response that is required. Full swept path analysis of the roundabout is also required, together with plans confirming that all visibility and geometric parameters are met.

Spine Road

A number of points have already been highlighted in relation to the spine road, which should be addressed. These are summarised below, together with a number of additional points:

- The spine roads should be designed with a 25mph design speed and include a 20mph speed limit. At present the roads are unlikely to achieve the design speed due to their width and relatively straight alignment. Additional speed restraint measures are required.
- The proposed pedestrian/cycle facilities do not accord with LTN 1/20. These facilities should be improved, particularly at junctions. Additional crossing points are also required to link to the new 'active travel' connections, and at other suitable locations along the spine roads.
- As it is intended that the spine roads will support future bus routes through the site, the location and design of the new bus stops should be incorporated into the design.
- Swales are proposed in the verge area between the carriageway and combined cycle/footways. These features raise a number of concerns e.g. pedestrian/cycle safety issues, impact on errant vehicles (particularly at roundabouts and where VRS is required at the top of embankments), they restrict the ability to install signage and other highway features (including additional junctions) and they prevent emergency services from overrunning verges to pass an obstruction in an emergency situation etc. These matters should be considered in the design risk assessments and as part of the Stage 1 Road Safety Audit. Detailed typical cross sections of the swales should be provided, to allow HDM and the RSA Team to consider these proposals in more detail.
- In accordance with LTN 1/20, priority crossing provision for pedestrians/cyclists should be provided at side roads.
- All side roads should be perpendicular to major road, which is not the case for the access on Road 2, which should be amended.
- Minimum 30m long vertical curves are required (see Kirklees Highway Design guide). These have not currently been provided, which is a particular concern within the vicinity of the internal roundabout.
- No maintenance access has been provided for the SUDS attenuation pond features.
- No VRS have been shown to prevent errant vehicles from entering the SUDS features located at the base of embankments.
- Street tree provision should be integrated into the design and shown on the highway drawings, so any safety implications can be considered as part of the Stage 1 RSA.

The applicant should review the design in accordance with DMRB and LTN 1/20 guidance, to ensure that it complies with these standards and addresses the above issues. Should any departures from standard be identified these should be identified and then considered as part of the Stage 1 Road Safety Audit and Designers Response that is required.

Emergency & Active Travel Links:

For a development of this scale, a secondary emergency link is usually required to ensure that emergency access can be maintained at all times, even if the main access becomes blocked. The applicant should provide a secondary emergency access point and/or confirm what contingency arrangements will be put in place to ensure continuous emergency access can be maintained. The proposed active travel access(es) could also be used for emergency access, subject to adequate design.

The proposals indicate that two 'active travel' links are to be provided on to Ravensthorpe Road, one in the northwest corner of the site and the other utilising the recently approved allotment access. However, no details have been provided for the design of these links, or how these will connect to the main spine road, and no crossing provision has been provided to allow users to cross the spine road to connect to the links.

It is also requested that a pedestrian refuge island is provided on Ravensthorpe Road to the west of the western active travel link, which would provide a safe crossing point to Ravensthorpe Railway Station. Careful siting of the pedestrian island is required, to ensure that on-street parking at the nearby dwellings does not create safety issues at the refuge island. A design drawing showing the details of the active travel links and new pedestrian island should be provided.

Accessibility and Sustainable Transport:

As the site is allocated in the Local Plan for residential development (Site Ref. HS61), the potential accessibility of the site was assessed as part of this process and is considered to be acceptable, subject to the development providing the necessary improvements to public transport, walking and cycling.

However, it is noted that contrary to what is stated in the Transport Assessment, the site is quite distant from general primary school provision (as Ravenhall School is for children with special educational needs), with the nearest primary schools being located approximately 1.3km to the north. Whilst this situation is likely to improve in future, as the wider Dewsbury Riverside development is anticipated to delivery additional primary school provision, it is considered that sustainable transport improvements should be considered from the outset to help facilitate sustainable access to primary education (See comments relating to walking and cycling).

As the development includes over 50 dwellings, a Travel Plan is required for the development. An Interim Travel Plan has been prepared and must be secured by condition.

The main measure identified in the Interim Travel Plan is the provision of bus 'taster tickets' and the provision of a development website to provide sustainable travel information to residents. Whilst these measures are welcomed, further detail is required regarding the 'taster ticket'. A Travel Plan Fund should also be identified, which should be secured by S106 agreement. For other similar developments, the expected Travel Plan Fund usually equates to the cost of a bus only Residential MCard Scheme (cost to be advised by Metro / WYCA – consultation response awaited).

The Interim Travel Plan includes suggested targets for 'Sustainable Travel Modes', with the aim of increasing sustainable travel by 7% over 5 years, with a further 'stretch target' of a 10% increase. However, from the information provided, it is unclear exactly what the target will include, as it is suggested that the use of electric cars/vans will be accounted for as a sustainable travel mode. HDM do not accept this approach, as whilst electric cars/vans will provide wider environmental benefits, these vehicles will still add to traffic congestion and contribute to other negative environmental impacts. Therefore, revised targets should be proposed that focus on the reduction in single occupancy car/van trips. A separate target can then be provided to encourage electric or other low emission vehicle use. Revised targets to be confirmed.

Kirklees Council will require a Travel Plan monitoring fee to be secured as part of the S106 agreement. For a development of this scale (classed as a 'large scale major residential development') the fee is £15,000 (£3,000 per year for 5 years).

PROW:

Formal comments are awaited from the PROW team. However, based on initial discussions with HDM, the following comments/concerns are raised:

- The proposed spine roads bisect a number of existing bridleways, including Bridleway DEW/94/10 that is impacted by Road 1, and Bridleway DEW/6/50 that is impacted by Road 3. As such, these PROW will need to be formally diverted to their proposed alignment. However, there is very little detail or acknowledgement of this in the submission information. As such, further details and dedicated plans are required, which show the routes of the existing PROW, the extent of the diversions and the proposed treatment at tie-in points (both horizontal and vertical alignments), to enable the PROW Team to consider the acceptability of the proposals.
- The proposed spine roads also bisect a number of other claimed bridleways, including paths that cross road 4 and link to Ravensthorpe Road via the proposed 'Active Travel' links. Again further details are required showing how these routes are to be accommodated by the development. It is noted that the existing route that links to the allotment access appears to be impacted by the proposed SUDS basin.
- As previously stated, further details are required relating to the design of the two new 'Active Travel' links to Ravensthorpe Road. In addition to design details, this should include confirmation whether these are proposed for adoption as new PROW.

Public Transport:

Bus

The nearest bus stops to the site are located on Ouzelwell Lane, approximately 150m walk from the main site access on Forge Lane, and approximately 500m from the edge of the proposed residential development site. These stops provide access to the No. 230/230A bus service that operates between Dewsbury and Grange Moor on an hourly basis, Monday to Saturday. However, the services do not operate at evenings, with the latest bus from Dewsbury arriving at 16:33. As such, the existing service only provides limited opportunity for commuter travel.

In addition to the above, school bus services (to secondary education at St John Fisher CV Academy and Westborough High School) are provided from a stop on Lees Hall Road, immediately to the east of the Ouzelwell Lane junction.

The Transport Assessment suggests that 2 no. bus stops will be provided with realtime information at the nearest stops to the site. However, it is unclear which stops are being referred to, as the outbound stop on Ouzelwell Lane already benefits from a bus shelter. Further clarification is required.

West Yorkshire Combined Authority (WYCA) have been consulted, and their comments are awaited. However, it is anticipated that they will recommend that improvements to the bus provision are provided, which could involve the extension / diversion of existing services.

The applicant should consult directly with WYCA and bus operators to establish what improvements could be delivered by the development, either as a standalone improvement for the Phase 1 development or potentially through a financial contribution towards a wider improvement delivered as later phased of the Dewsbury Riverside development progresses in future. Once an acceptable package of bus improvement measures have been established, the necessary provision and any associated financial contribution will need to be secured by S106 agreement.

As previously stated, as the proposed spine road is to be designed to cater for future bus routes, the location and design of stops must be considered at this stage, to ensure that they can be accommodated and will provide appropriate access to all development plots.

Rail

Ravensthorpe Railway Station is located approximately 200m from the proposed western active travel access, with the majority of the Phase 1 development site located within an 800m walk of the station.

Ravensthorpe train station provides direct services towards Leeds and Huddersfield on an approximate hourly daytime service. The first service operates at around 06:06am and the last service at 11:57pm. The travel time to Leeds is around 28 minutes and to Huddersfield is around 15 minutes.

The supporting Transport Assessment concludes that *'The train station provides significant opportunity to access major conurbations by public transport within a short journey time.'* and that *'There is significant opportunity to utilise the train to access Dewsbury, Huddersfield and Leeds, as well as regional destinations further afield including Manchester'*. HDM agree with these conclusions and consider that access by train is likely to be an attractive option for development users.

As part of Network Rails proposed Transpennine Route Upgrade, which proposes additional lines and associated capacity improvement along the route, it is proposed to provide a new station at Ravensthorpe, which is proposed to be located immediately to the west of the Dewsbury Riverside site. The proposals include a realigned railway bridge on Calder Road, as well as a new access roundabout and improved station access, drop-off and parking facilities. The wider Dewsbury Riverside masterplan proposals are to provide direct links to the new station. As such, access to the site by rail will be significantly enhanced in future, making this mode of transport even more attractive.

In summary, the Phase 1 development site is accessible by public transport, with good provision by rail that will be further enhanced in future on completion of the Tran-Pennie Route upgrade proposals. However, bus accessibility is currently limited and improvements should be provided. The applicant is advised to discuss the potential improvement with WYCA and bus operators, and a package of measures should be proposed for consideration.

Walking and Cycling:

As previously stated, further details are required regarding the proposed active travel connections on to Ravensthorpe Road (plus a new pedestrian refuge crossing facility), together with a review of the proposed pedestrian/cycling provision across the development, spine roads and roundabouts to ensure that the provision complies with the principles set out in LTN 1/20 and meets the wider aspirations for the entire Dewsbury Riverside site.

Within the vicinity of the site, the Transport Assessment suggests that adequate walking provision is available and that cycling can occur safely on-road, without the need for further improvement.

Given the extensive on-site walking/cycling provision that is proposed (subject to satisfactory design and improvements at the main access roundabout, as previously identified), HDM consider that adequate provision has been or can be made for pedestrians and cyclists on the immediate highway network. This is in the context that wider improvements are currently being progressed by the Council in conjunction with WYCA, as part of the M2D2L project that plans to enhance pedestrian, cycle and public transport provision along the A644 corridor to the north of the site. It is considered that later phases of development at the Dewsbury Riverside site may be required to provide further enhancements in the local area, when cycling and pedestrian numbers increase.

Notwithstanding the above, some improvements to pedestrian and/or cycle connectivity may be required on the wider highway network, subject to the eventual findings of the traffic impact assessment work (both traffic capacity and accident analysis), particularly at the Calder Road/A644

signalised junction and the Forge Lane/Station Road/Thornhill Road double mini-roundabout junctions, where capacity/operational issues have already been identified in the Transport Assessment and interim mitigation works have been suggested. Specifically, consideration should be given to providing a pedestrian refuge island on the B6117 Thornhill Road arm of the junction to assist pedestrians heading to/from the site towards Headfield C of E Junior School and Dewsbury Town Centre.

Collision Analysis and Road Safety

The Transport Assessment includes a high level review of personal injury accident data on the local highway network for the latest 5 year period. However, the assessment is considered to be too narrow in scope and lacking in depth in terms of the analysis. It is also noted that a number of incidents that have occurred on Ravensthorpe Road have not been identified in the analysis (only 3 of 6 incidents have been identified) and the assessment at the Forge Lane/Station Road/Thornhill Road double mini-roundabout junctions does not extend beyond the immediate vicinity of the junction (additional incidents on the approaches should be taken into account, as they may relate directly to the junction operation).

It is requested that a more in depth accident assessment is undertaken, which considers the type of incidents that have occurred and associated causation factors, to identify if there are any patterns or trends within the study area. In particular, it is requested that this focuses on incidents involving pedestrians, cyclists and other vulnerable roads users. The study area should also include all links and junctions (including approaches where queuing occurs) that are anticipated to see an increase in 30 two-way trips during network peak periods (excluding any reduction in base traffic – see further comments relating to the traffic impact assessment).

The Councils Road Safety Team have been consulted, and they have highlighted a number of existing issues on the local network, which include (in addition to the concerns previously expressed about the proposed temporary access):

- Parking takes place on Calder Road on approach to the A644 traffic signals, which blocks access to the stop line. Queuing vehicles have also been observed that extends past the parked vehicle(s), which then creates an obstruction to vehicles turning into Calder Road from the A644, which can then cause blocking back to the signals. This issue could be addressed by extending the no waiting restrictions further south along the west side of Calder Road on approach to the signals, by either extended the double or single yellow line restrictions. The applicant is requested to consider the extent of any necessary waiting restrictions once the traffic signal modelling is provided for this junction (see further comments regarding traffic modelling below), which should be guided by anticipated queuing levels. The development would then be expected to fund the necessary TRO's and associated singing/lining, as part of the package of interim improvement works at this junction (to be discussed/agreed once traffic modelling has been provided and the development impact at the junction has been established).
- Extensive on-street parking also takes place along Lees Hall Road to the east of the site, which in certain locations and time periods prevents two-way flow along this route. With the introduction of additional development traffic along this route, congestion could be created should vehicles be unable to pass on a 'give and take' basis. To mitigate this issue, some localised no waiting restrictions may be required. However, the Road Safety Team have confirmed that they would not like to see any additional waiting restrictions imposed until the development commences, as significant operational problems may not materialise. Therefore, a Section 106 obligation will be required for the development to undertake studies on this route both prior to construction and once the development is operational (at agreed development threshold), to assess the impact of additional traffic and parking on this route. Should this determine that parking is causing excessive delay along the route, the development would be expected to fund the necessary TRO's and associated singing/lining.

Parking and site layout:

As the development is proposed in outline only, no details of parking or the development layout have been provided for consideration. As such, parking and layout related matters will need to be dealt with at the reserved matters stage, and a suitably worded condition should be imposed.

Construction Access Strategy

It has been confirmed in the planning statement that a Construction Environmental Management Plan (CEMP) would be implemented. However, no details relating to transport have been provided.

Further details should be provided to enable HDM to consider the implications of construction related activities. Specifically, this should confirm the proposed construction access strategy, expected traffic volumes and routing, delivery timing (that should avoid network peaks and school start/finish times) and how construction staff parking/travel will be managed, to minimise disruption and impact on the safe operation of the highway.

Once the principles of the Construction Access Strategy have been agreed, the final CEMP should be be secured by planning condition. Additionally, a specific planning condition will be required that relates to:

- Wheel washing facilities; and
- Carriageway and footway condition surveys (pre and post construction).

Transport Assessment and Traffic Impact:

Traffic Generation

Section 11.4 of the TA states that weekday peak hour traffic generation rates for the Dewsbury Riverside Development have been obtained from the Kirklees Council Wide Area Traffic Model (SATURN) Technical Note, produced by SYSTRA who are working on behalf of the Council to assess the wider impacts and mitigation required to accommodate the full Dewsbury Riverside and other Local Plan sites. The trip rates identified in the TA are summarised in the extract table below, together with the resultant development trips from the 350 proposed dwellings.

Table 11.1 Traffic Generation

	AM			PM		
	In	Out	Total	In	Out	Total
Rate	0.118	0.324	0.442	0.279	0.192	0.471
Generation	41	113	155	98	67	165

Whilst it is understood that the above trip rates were suggested by SYSTRA when preparing for the area wide traffic modelling work that they are currently undertaking, it is understood that higher two-way trip rates of 0.479 and 0.508 that were also identified in their report were utilised for the weekday AM and PM peak hour periods respectively. These were based on trip rates utilised for earlier applications at the Dewsbury Riverside site (e.g. the Miller Homes applications - REF 2016-60941 &

2016-60941). Therefore, the applicant is requested to investigate this matter further and confirm that the higher trip rates have been utilised.

Traffic Data and Distribution

Traffic flow data for the study area has been derived for a 2023 opening year and 2030 future year, which have been based on an assumed build-out rate of 50 units per year (e.g. 7 years from 2023 = 2030). However, it is acknowledged in the TA that at the 2023 opening year, the development could not be fully built out and so the derived 2023 traffic flows that have been identified *'do not reflect the reality of the incremental build-out of the development proposals'*. Therefore, the TA focuses on the 2030 future assessment year, when the development is anticipated to be fully built out. This approach is accepted by HDM and was agreed at the pre-application stage.

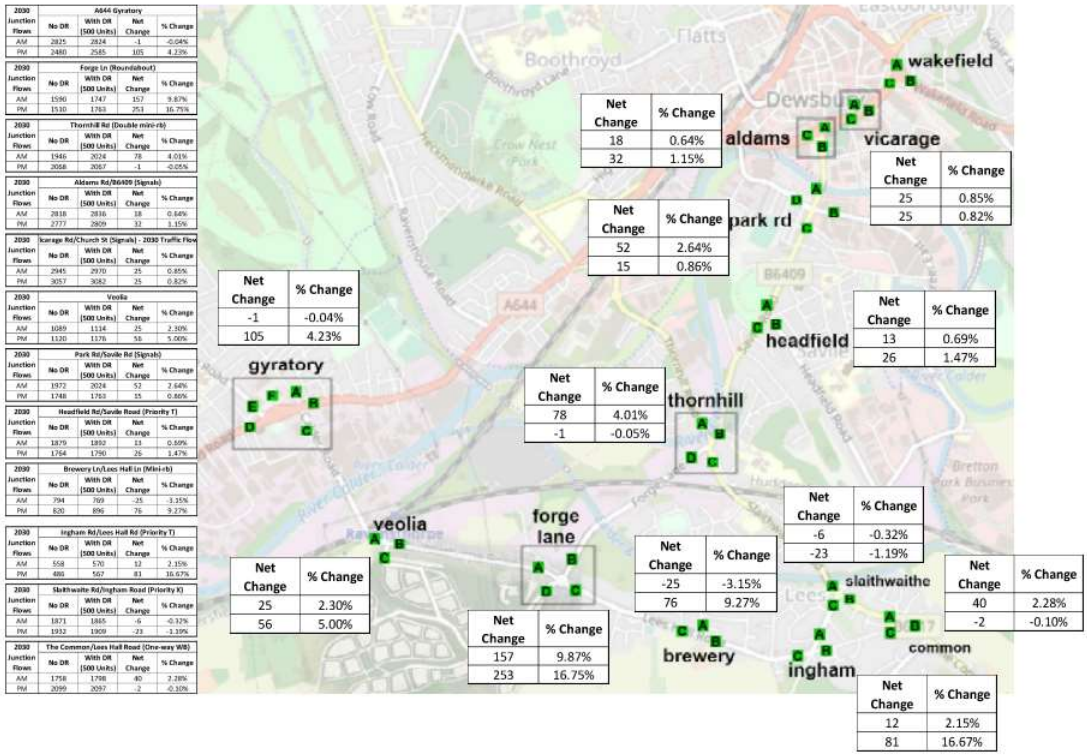
To derive the traffic flow data for the TA, the Kirklees Council Wide Area Traffic Model (SATURN) has been utilised, which has been prepared and operated by SYSTRA on behalf of the Council. To inform the TA, SYSTRA were commissioned to provide 2030 'Without Dewsbury Riverside' and 'With Dewsbury Riverside' (500 units) turning flow data. As the development traffic flow scenarios have been based on a larger scale of development than is now proposed (350 units instead of 500 units), the TA includes an adjustment of the with SYSTRA development traffic flow data that aimed to take this in account.

However, the methodology used to adjust the development traffic flow data is considered to be flawed, as it has been based on an adjustment to the net change in junction flow rather than an adjustment to the actual development traffic flows.

It is also noted that at the pre-application stage, HDM requested that base/development traffic flow data was clearly presented on traffic flow figures, so that any changes in traffic flow could be easily reviewed. However, this has not been included in the TA and must be provided.

As no traffic flow figures have been provided, HDM have compared the 2030 base and 'with development' traffic flows from the SATURN model data including in Appendix E of the TA. This review has identified that with the addition of the Dewsbury Riverside development traffic on the local network, the data suggests that some junctions would experience a decrease in traffic flows during certain time periods, which cannot be correct. To demonstrate this, HDM have produced the diagram below using the base data from Appendix E, which identifies the change in traffic flows associated with the Dewsbury Riverside development at each junction (using the SYSTRA 'with development' data that includes 500 units).

CHANGE IN JUNCTION FLOWS FROM SYSTRA SATURN MODEL - 2030 BASE + 500 UNITS AT DEWSBURY RIVERSIDE (AM Top Figure/PM Bottom Figure)



As can be seen from the data, the data appears to show some unexpected results, some of which are identified below:

- At the A644 gyratory, the introduction of Dewsbury Riverside development traffic reduces the junction flows by -1 vehicle in the AM peak;
- At the Thornhill Rd Double Mini-roundabout, the introduction of Dewsbury Riverside development traffic reduces the junction flows by -1 vehicle in the PM peak;
- At the Brewery Lane/Lees Hall Lane priority junction, the introduction of Dewsbury Riverside development traffic reduces the junction flows by -25 vehicles in the AM peak;
- Given that all development traffic would need to pass through either the A644 gyratory, the Thornhill Rd Double Mini-roundabout or the Brewery Lane/Lees Hall Lane mini-roundabout junction, it would be expected that the total increase in flow at these junctions would be the same as the total derived development traffic flows. However, this is not the case, with the net increase in flows at the three junctions being +52 (-1 + 78 – 25 = +52) in the AM peak, which should be more like +240 vehicles (e.g. AM two-way trip rate of 0.479 x 500 units = +240).

In light of the above, it appears that there is an issue with either the 'base' or the 'with development' traffic data. Unfortunately the TA provides no information regarding the methodology or assumptions included within the SATURN model assessment to understand why these issues have arisen. However, it is assumed that these issues have occurred as a result of some of the base traffic flows being displaced to other routes by development traffic within the area wide SATURN model.

Whilst HDM acknowledges that some element of traffic displacement may occur and it is appropriate to take this into account when assessing a network at a strategic level, it does not provide a robust basis for assessing the impact of a single development on individual junctions local to a development site. Instead an assessment should be undertaken that includes a static baseline traffic flow scenario (e.g. the 2030 SYSTRA baseflows), and compares this to the additional impact of Phase 1 Dewsbury Riverside development traffic, without any displacement of base traffic. This should be possible by either obtaining the Dewsbury Riverside Phase 1 traffic flows in isolation from the SATURN model

(these would then need to be factored from 500 to 350 units) or by assessing development traffic flows manually and utilising a more conventional census based traffic distribution (e.g. the approach taken for the previous Miller Homes applications at the Dewsbury Riverside site).

It is concluded that the traffic modelling as currently presented does not provide a robust basis for assessment, and a revised assessment approach and traffic modelling data should be provided for review.

Summary

- The base and development traffic flow data obtained from the SATURN model does not appear to provide for a robust assessment of traffic impact on the local highway network, suggesting that at some junctions / time periods that traffic will reduce. Therefore, a revised assessment of traffic impact is required and the scope of this revised assessment should be agreed with HDM.
- To provide a robust assessment, HDM consider that an agreed 2030 base traffic flow scenario should be provided, with development traffic then added to the network based on the correct 350 development scenario, without displacement of base traffic.
- For ease of checking and validation, all traffic data must be presented on clearly labelled and separate traffic flow diagrams. Summary tables that show the impact of development traffic (without displacement of base traffic) at each junction should also be provided.
- It is noted that once the revised traffic data is provided, it will be necessary to review the scope of junctions to be assessed. However, as advised at the pre-application stage, the starting point for this should be to assess any junctions where development traffic would increase by 30 two-way trips (again without taking account of displacement of base traffic).

It is noted that the above approach is required to allow a robust assessment of the Phase 1 Dewsbury Riverside development to be assessed, and ensure that any necessary interim mitigation works on the local highway network are provided. However, it is acknowledged that some redistribution of base traffic will take place in future and this will be taken into consideration by SYSTRA (on behalf of Kirklees Council) to establish the full package of highway improvements required on the wider highway network to accommodate all future traffic growth, which the wider Dewsbury Riverside proposals are expected to contribute towards.

Junction modelling

Given that the base traffic data has not yet been agreed, the junction modelling provided in the TA has not been reviewed in detail, and revised modelling will need to be provided. However, a number of preliminary issues have been identified, which should be addressed as follows:

- The TA does not include any up to date modelling of the A644 Gyratory junction, simply referencing previous modelling data undertaken for the M2D2L project. As requested by HDM at the pre-application stage, up to date modelling is required to consider the impact of the Phase 1 development at this junction.
- Modelling of the temporary site access junction on to Ravensthorpe Road has been undertaken. However, as the traffic flow data was produced by SYSTRA for a preliminary access option further to the northeast (now proposed as an active travel access only), the traffic data does not take into account existing traffic using the junction (e.g. school traffic) or the traffic associated with the junction opposite. The junction has also been modelled as a T-junction rather than a crossroads.
- No modelling of the internal roundabout has been undertaken, and should be provided.
- No traffic flow diagrams have been included in the TA and should be provided.
- For ease of reference, traffic model tables should include full road name labelling and include all queue, delay and RFC results etc.

- Based on an initial review of the ARCADY modelling at the Forge Lane / Station Road / Thornhill Road double mini-roundabout junction, and compared to HDM on-site observations, it appears that the modelling is overestimating queuing on some of the approaches (e.g. Station Road south and Thornhill Road). Therefore, it is requested that further validation of the base model is provided, with the modelling more accurately reflecting the existing operation and queuing at the junction.
- Notwithstanding the above, it appears that some form of interim mitigation may be required at the Forge Lane / Station Road / Thornhill Road double mini-roundabout junction, with the TA suggesting that the existing road markings would be refreshed to optimise its operation. HDM consider that simply refreshing the lining is unlikely to improve the operation of the junction. However, it may be possible to provide slight improve to it's operation (e.g. measures could be proposed to encourage better circulation) and make the junction comply more fully with current guidance contained in DMRB CD116. Therefore, in the further submission, the applicant should consider what improvements may be possible and provide a suitable plan and associated modelling of any proposed changes. Any improvement should also consider whether a pedestrian island could be provided on the Thornhill Road arm as previously mentioned. From on-site observations this appears to be possible by reducing the flared lane on this approach, which appears to be under-utilised and offers limited capacity benefit. However, careful consideration of vehicle swept paths for vehicles turning to/from Thornhill Road are required, to confirm whether this option is feasible (it is understood that islands have been removed previously, due to swept path issues). Subject to a satisfactory arrangement being agreed, any proposed improvements would need to be subject to a Stage 1 Road Safety Audit.

Planning Conditions/Section 106:

Conditions; – To be advised.

Section 106 Contributions/Requirements; – To be advised

Conclusion:

Further information required, see recommendation.