

PICKERINGS FARM SITE, FLAG LANE, PENWORTHAM, LANCASHIRE, PR1 9TQ

**Planning Application Ref: 07/2021/00886/ORM
& 07/2021/00887/ORM
Planning Inspectorate Ref: APP/F2360/W/22/3295498**

**PROOF OF EVIDENCE OF
Neil James Stevens**

TRANSPORT

LANCASHIRE COUNTY COUNCIL



Contents

1.0 Qualifications and Experience

2.0 Application Background

- 2.1 Reasons for Refusal (Highways Matters)
- 2.2 Preparation of the Proof of Evidence & Statement of Common Ground
- 2.3 Description of the Appeal Application Site
- 2.4 Description of the Highway Network

3.0 Policy, Guidance and Plans

- 3.1 National Planning Policy Framework (NPPF)
- 3.2 National Design Guide and National Model Design Code (NMDC)
- 3.3 South Ribble Local Plan
- 3.4 Compliance with Policy

4.0 Highways and Transport – Reasons for Refusal

- 4.1 Reason for Refusal 1 and 2: Modelling Methodology (RfR 1) and Transport Assessment and Technical Evidence (RfR 2)
- 4.2 Reason for Refusal 3: Highway Infrastructure Bee Lane Bridge
- 4.3 Reason for Refusal 4 and 7: Cross Borough Link Road Delivery (RfR 4) and Policy A2 and CBLR Delivery (RfR 7)
- 4.4 Reason for Refusal 5: Policy C1 and Masterplan
- 4.5 Reason for Refusal 6: Phasing and Infrastructure Delivery Schedule

5.0 Lancashire County Council's Assessment of Transport Impact - Technical Assessment

6.0 Summary and Conclusion

<u>Appendix</u>	<u>Name</u>
1	EIA Scoping Opinion
2	Applications A and B Statutory Comments
3	Chronology
3C	Statutory Comments (Addressing Masterplan and CBLR)
3D	PW Vectos Email with Additional Distribution Information (05/11/21)
3E	NS Response to Additional Distribution Information
3G	WSP Base Model Review
3H	Email from NS addressing TN04 01/06/22, 23/06/22
3I	Vectos to South Ribble 12/11/21
3K	Email from NS outlining need for LCC to undertake work
4	Vectos Email Requesting Initial Chat About Project
5	Minutes 12/07/21
6	Minutes 27/05/22
7	Minutes 30/05/22
9	Photographs of Site
10	Photographs of Congestion
11	Congestion Data
12	Survey Data
13	Adopted Highway Map
14	PROW Map
15	Unconstrained Analysis
16	Pickerings Farm Analysis LCC Version
	16 A Junction References for Raw Data, Traffic Survey Peak Hour
	16 B Committed Development
	16 C Growth
	16 D Flow Diagrams
	16 E Gravity Model Zones, Gravity Model
	16 F Trip Rates
17	Junction Modelling Results
18	Census data – Car Availability, Census data – Travel to Work
19	Traffic Data LCC Position Email 2020

	Traffic Data LCC Position Email 2021
20	Traffic Data LCC Position 2022 Tank Roundabout Data
22	West Coast Main Line Report (WCML Report)
23	Network Rail Statutory Comments (CD 2.24)
24	Indicative Scheme Phasing and Implementation Plan Avison Young
26	Typical Vehicle Widths
27	Email from NS regarding CBLR Movement Corridor Criteria

Note: Where there are omissions in sequence, these appendices have not been used.

1.0 Qualifications and Experience

- 1.1. I am a Bachelor of Engineering, with Honours in Civil Engineering from Bolton Institute of Higher Education and a Master of Science in Transport Planning from the University of Salford.
- 1.2. I am the Strategic Highways Planning Manager of Highways Development Control in Highways and Transport, Lancashire County Council (LCC). I have over 25 years' experience in Transport Planning and the assessment of highway impact from major development proposals.
- 1.3. The evidence which I have prepared and provided in this proof of evidence is correct and I confirm that the opinions expressed are my true opinions.

2.0 Application Background

2.1. Reasons for Refusal – Highways Matters

- 2.1.1. Application A (now Appeal A) was received and registered by the Local Planning Authority, South Ribble Borough Council (SRBC) on 10 August 21 (application number 07/2021/00886/ORM) and was described as follows: *Outline planning application with all matters reserved except for the principal means of access for a residential-led mixed-use development of up to 920 dwellings (Use Classes C3 and C2), a local centre including retail, employment and community uses (Use Classes E and Sui Generis), a two form entry primary school (Use Class F), green infrastructure, and associated infrastructure following the demolition of certain existing building.*
- 2.1.2. Application B (07/2021/00887/ORM) is as follows: *Outline planning application with all matters reserved except for the principal means of access for a residential development of up to 180 dwellings (Use Classes C3 and C2), green infrastructure and associated infrastructure.*
- 2.1.3. The reasons for refusal insofar as they concern or include reference to highways matters are as follows (and were common to both applications):
- 2.1.4. *Reason 1. It has not been demonstrated that the modelling methodology applied within the submitted Transport Assessment is acceptable. As such it has not been demonstrated that the proposed development would not have a severe adverse impact on the local highway network. The proposal is therefore contrary to the requirements of para. 111 of the NPPF, Policy 17 of the Core Strategy and Policy G17 of the South Ribble Local Plan.*
- 2.1.5. *Reason 2. It has not been demonstrated that the scoping and composition of technical supporting evidence of the submitted Transport Assessment is acceptable. As such it has not been demonstrated that the proposed development would not have a severe adverse impact on the local highway network. The proposal is therefore*

contrary to the requirements of para. 111 of the NPPF, Policy 17 of the Core Strategy and Policy G17 of the South Ribble Local Plan.

- 2.1.6. Reason 3. The proposed improvements to the Bee Lane bridge are not considered to be sufficient for the additional traffic, as well as increased number of pedestrians and cyclists resulting from the development, prejudicing highway safety and pedestrian safety. The proposal is therefore contrary to the requirements of para. 111 of the NPPF, Policy 17 of the Core Strategy and Policy G17 of the South Ribble Local Plan.*
- 2.1.7. Reason 4. The application fails to provide adequate certainty that the section of the Cross Borough Link Road within the site, together with the necessary physical upgrading works to the Bee Lane bridge, will be delivered. The proposal is therefore contrary to the requirements of Policy A2 of the South Ribble Local Plan.*
- 2.1.8. Reason 5. Policy C1 of the South Ribble Local Plan requires an agreed masterplan and design code for the comprehensive development of the site. The masterplan has not been formally agreed by South Ribble Council and the version submitted with the two applications does not meet the policy requirements.*
- 2.1.9. Reason 6. Policy C1 of the South Ribble Local Plan requires the submission of a phasing and infrastructure delivery schedule and an agreed programme of implementation. The submitted documentation provides insufficient detail on how the site will be delivered and no detailed phasing plan has been submitted and no programme of implementation has been agreed. Therefore, the scheme is contrary to Policy C1.*
- 2.1.10. Reason 7. Policy A2 of the South Ribble Local Plan seeks to ensure delivery of the Cross Borough Link Road through the major development site at Pickering's Farm. The two applications together with the Masterplan do not provide a firm commitment for the delivery of this key piece of infrastructure necessary to support the scale of development proposed. The scheme is therefore contrary to Policy A2.*

2.2. Preparation of the Proof of Evidence & Statement of Common Ground

2.2.1. This Proof of Evidence in conjunction with the Statement of Common Ground in respect of highways issues sets out Lancashire County Council's highways/transport response to the Appeals. The evidence considers both the highway impact of the proposed development and the mitigation measures proposed.

2.2.2. Dialogue on the Appeals has been ongoing with the Appellants' transport consultant (Vectos) and National Highways during the production of my Proof of Evidence. A number of meetings have been held and additional information has been provided by Vectos, prior to and during the drafting of this Proof of Evidence. It is also expected that further information is likely to be forthcoming from Vectos for consideration.

2.2.3. Therefore, to provide a clear and logical presentation of LCC's position throughout the process, I provide in APPENDIX 3 a clear chronology from pre-application discussions; submission of the planning applications; determination of the applications by South Ribble Borough Council; notification that the applications were subject to Appeals and were to be dealt with through the Inquiry process; through to the submission of this Proof of Evidence. The chronology as detailed in APPENDIX 3 covers three stages as outlined below:

Stage 1 – Background (Previous Application and Masterplan)

Stage 2 – Submission of Application and Transport Assessment.

Stage 3 – Position since April 2022 up to and including the drafting of this evidence.

2.2.4. At the time of writing, officers of LCC and National Highways have continued to communicate with Vectos with the aim to reach agreement on several matters. Unfortunately, limited progress has been made.

2.3. Description of the Appeals Sites and Proposals

2.3.1. I refer to the Appeals sites as, "the site". The site is located to the south of Penwortham, South Ribble. It is bound by Penwortham Way (A582) to the west, existing residential development to the north (Kingsfold), the West Coast Mainline

railway to the east (followed by residential area of Lostock Hall/Tardy Gate) and agricultural fields to the south (land which is also safeguarded land in the South Ribble Local Plan). The site comprises of a mix of land uses including agricultural land, a pylon corridor and a network of adopted roads (APPENDIX 13) and public right of ways (PROWs)(APPENDIX 14). There are approximately 45 premises (businesses) and residential properties in the area of the site, a number are accessed via private roads.

2.3.2. The TA produced by Vectos on behalf of Taylor Wimpey and Homes England outlines the proposals including the demolition of existing buildings and a residential-led mixed use development comprising of:

- Up to 1,100 dwellings (use class C3 and C2), including 30% affordable housing (separated by 2 planning applications as referenced above);
- A local centre including retail, employment and community uses, mobility hub and third place working environment space (Use Classes E and sui generis);
- A two-form entry primary school (use class F1);
- Green spaces; and
- Associated infrastructure.

2.3.3. **Vehicular Access Proposal**

2.3.4. Paragraph 1.6 of the TA states that

'Private vehicle access is predominately from Penwortham Way , with a small parcel from Bee Lane, and existing serviced properties continuing to be accessed from Flag Lane. There is no private connectivity between these accesses, without prejudice to through connectivity being provided in the future.....'

2.3.5. In addition, the Access section (4.14) within the Supporting Planning Statement states that:

'All development-related motor vehicle traffic (with the exception of a small parcel of land in the north east corner of the Sites with an estimated capacity of some 40 homes) will utilise the new access off Penwortham Way and will

not be permitted to use the existing Lanes. Instead, an internal network will provide a suitable hierarchy acknowledging national design criteria to promote enhanced streets, informal streets and pedestrian-priority streets with appropriate active frontage to reinforce a low speed residential environment.'

2.3.6. As presented, it is not established how this strategy can be delivered and maintained (and enforced) prior to the delivery of the CBLR as I will set out in my evidence below, under reason for refusal 5.

2.3.7. In addition, within the Access section (4.18) within the Supporting Planning Statement it states:

'The existing Lanes, many of which are already adopted highway and PRow, provide an exciting and unique opportunity to create an active travel network within the Sites which respects the local setting and retains much of the rural character. This can be achieved by ensuring there is no increase in motor vehicular traffic using the existing Lanes through infrastructure and alternative routeing arrangements. The Lanes can therefore continue to be used predominantly by pedestrians and cyclists in a low-speed environment, supplemented by a number of new internal pedestrian and cycle routes to enhance connectivity.'

2.3.8. As presented, I do not agree that the Appellants have demonstrated that their proposal can be delivered as presented whilst having full regard to safety and guidance. I will set out these matters in my evidence below, under Reasons for Refusal (RfR) 3, 4 and 5.

2.3.9. **Development Access 1: New Junction from Penwortham Way**

2.3.10. Paragraph 5.11 of the TA states that:

'The primary vehicular access is proposed at a new signalised junction off Penwortham Way providing access to an internal residential estate road to the

majority of residential dwellings (i.e. 1,060 dwellings), the school and the local centre'.

2.3.11. The suitability of the junction type as described is not disputed as highlighted in LCC's Highway Statutory Comments. However, the footway/cycleway proposed within the site towards the junction goes no further and so does not provide continuous provision onto the wider network. This is highlighted on the Vectos plan titled VN211918-D109 RSA Wider Plan - Single Lane. This issue was raised with Vectos in an email of the 1st June, see APPENDIX 3H. No response has been provided by the Appellants on this matter.

2.3.12. Development Access 2: Bee Lane

2.3.13. A new priority junction is proposed to be provided onto the existing Bee Lane to serve 40 dwellings (with Bee Lane maintaining priority) and to support other existing motorised movements (existing properties within the site only), as well as pedestrian and cycle provision for the whole site.

2.3.14. Between the site access and Leyland Road roundabout there is a narrow rail bridge that crosses the West Coast Main Line (WCML). The bridge is 6.5m wide between brick parapet walls. The parapet walls are circa 50m in length (with some limited tapering at the eastern end. Bee Lane varies in width and near the bridge is currently circa 3.5m wide with an existing field access to the west of the bridge close to the parapet wall on the north side of the road.

2.3.15. Bee Lane connects to Leyland Road currently via an existing roundabout with limited visibility to/from Bee Lane and no formal pedestrian crossing provision or cycle provision (except on The Cawsey). The current layout of the junction and its safety is not an issue based on current levels of usage from Bee Lane. However, any proposed intensification of vehicular traffic or pedestrians/cyclists would be a concern. In light of concerns at the roundabout, Vectos proposed a signalised option on the 30 May 22 as highlighted in Drawing No. VN211918-D107 Rev B. Initial comments and concerns on the layout were provided on the 1 June 22, see APPENDIX 3H.

2.3.16. The proposed new school is proposed in the Masterplan located off Bee Lane.

2.4. **Description of the Highway Network and its operation**

2.4.1. The following section provides a description of the highway network surrounding this site and includes observations of operation.

2.4.2. **Penwortham Way A582**

2.4.3. Penwortham Way is an 'A' classified road forming part of the A582, a principal distributor road extending for approximately 8km from the M65/A6/A582 junction to the A582/A59 junction. The A582 connects/links to other local principal roads that provide connectivity to the M6, M61, M65 and A59 and A6 corridors. Penwortham Way borders the site to the west with single-carriageway in a north/south alignment.

2.4.4. It is approximately 7.3 metres wide plus circa 1m hard strips (in total approx. 9m) and has no footways or cycle provision along the site boundary. A 50mph speed limit is in operation along the A582 towards the A582/A582/A59 roundabout north of the site. Approximately 250 metres south of the Penwortham Way/Chain House Lane junction, this increases to 60mph.

2.4.5. To the north of the site access, Penwortham Way forms a signal-controlled junction with Pope Lane and Golden Way. To the south of the site access, Penwortham Way provides connections to Chain House Lane with a four-arm signalised cross-roads. Street lighting is provided along the length of the carriageway between the A582 Penwortham Way/Chain House Lane signalised cross-roads and the A582/A59 Golden Way roundabout north of the site and continues onto Penwortham Bypass.

2.4.6. The A582 is currently subject to a planning application (LCC/2020/0014), as set out below. Discussion on the proposed dualling application is ongoing. As such LCC Highways Development Control statutory comments have not yet been provided. The A582 dualling modelling and the Central Lancashire Highways and Transport Model

accounts for the Pickering's Farm allocation (this being 1350 dwellings). The proposed A582 scheme is described as follows.

Description of Application: LCC/2020/0014

Improvement of existing A582 and B5253 in Leyland to four lane dual carriageway standard with segregated combined cycle track between broad oak roundabout and the Stanifield Lane / Watkin Lane roundabout (A582) and Flensburg Way roundabout to Longmeanygate junction (B5253).

The development includes new carriageways, upgrade of existing Croston Road, Sherdley Road and Longmeanygate junctions to fully signalised operation, new railway bridges, retaining structures and fences, alteration / extension of subway, bridges and culverts and temporary contractor access and compounds.

Land adjoining the A582 and B5253 highways from A582 Broad Oak roundabout, Penwortham to Stanifield Lane/Watkin Lane roundabout, Lostock Hall and the B5253 from Flensburg Way roundabout Farington to Longmeanygate junction, Leyland, Lancashire.

2.4.7. A number of improvements to junctions along the A582 corridor were made in advance of the dualling application providing network relief and improved pedestrian and cycle provision. These are:

- The Penwortham Way/Pope Lane junction in Penwortham has now been converted into a signalised 'crossroads' junction. Additional lanes have been provided on each of the four approaches as well as safer facilities for cyclists and pedestrians (works completed 2017);
- Tank Roundabout and A582 Flensburg Way, improvements have been made to increase the capacity of the junction, install traffic lights and a new spine road has been built to provide access to a new housing development site to the south (works completed 2016);
- Improvements have been made to the A582 Penwortham Way/Chain House Lane junction to provide additional lanes at the signalised junction. Improvements were also provided to the pedestrian and cycle facilities (works completed 2014);

- Improvements have been made at the A582 Lostock Lane/Stanifield Lane junction to widen the existing roundabout to create extra lanes and to install traffic lights. Cycle and pedestrian facilities have also been made safer by providing on and off-carriageway cycle lanes, 'shared use' cycle/footways and controlled crossings (works completed 2015).
- In addition to the above, Penwortham bypass and Broad Oak roundabout were completed and opened in 2019 providing relief to the A59 in Penwortham.

2.4.8. The A582 scheme is included in the Preston, South Ribble and Lancashire City Deal programme. The programme is managed by a partnership which includes South Ribble Council, Preston City Council, Lancashire Enterprise Partnership (LEP), Homes and Communities Agency (HCA) and Central Government. The A582 scheme is still subject to:

1. being granted a planning permission (the county council has approved use of its powers of compulsory land purchase in instances where land cannot be assembled by agreement)
2. a business case for funding through the Government's Major Road Network/Large Local Majors Programme

On satisfying the above construction of sections that aren't subject to compulsory land acquisition is currently anticipated to start in late 2023.

2.4.9. LCC consider that dualling is necessary on the A582 to accommodate future traffic levels and the associated safety risks and harm that can arise from excessive congestion. The improvements are also necessary to better facilitate sustainable users and encourage modal shift.

2.4.10. At present there remains significant concerns with the section of A582 between Tank Roundabout (Penwortham Way/Flensburgh Way) and Sainsbury's Roundabout (A6 London Way/Lostock Lane) and the levels of queuing and congestion (both eastbound and westbound) that arise during peak hours. Queues are a combination of stationary traffic and slow-moving vehicles (circa 5-10mph).

- 2.4.11. Traffic is also regularly observed to queue back from the Chain House Lane junction to Tank Roundabout.
- 2.4.12. In addition, I have observed aggressive driver behaviour associated with 2-1 lane merges at a number of locations on the A582 (drivers accelerating at inappropriate speeds into slow moving traffic and pushing in). Much of this observed behaviour is likely to be as a consequence of congestion-related frustration.
- 2.4.13. I have considered collision data on the A582 corridor. Whilst accidents have occurred, they are not at a level that requires intervention in isolation of the planned changes. At locations where there is greater propensity for vehicle conflict such as at junctions, it is clear that a number of locations have recently been improved, as identified above.
- 2.4.14. The A582 does not currently accommodate active travel with dedicated provision. For this reason, the proposed dualling includes works providing for these users along its length and across junctions.
- 2.4.15. **Leyland Road**
To the east of the site, Leyland Road (B5254) runs along a north to south alignment between the Stanfield Lane/Farington Road/Lostock Lane/Watkin Lane junction to the A59/Leyland Road roundabout junction. It passes through a local centre with good levels of amenity provision, with residential and retail development fronting directly onto both sides of the carriageway. Leyland Road provides connections to Tardy Gate, Penwortham Way and Lower Penwortham, as well as the initial length of the Cross Borough Link Road (The Cawsey, Bee Lane to A6 London Way).
- 2.4.16. In the vicinity of the Bee Lane and Flag Lane junctions, there are footways and street lighting provided along both sides of the carriageway. These footways provide connections to the bus stops located along this road. Both controlled and uncontrolled crossing facilities are provided along the Leyland Road corridor to facilitate movement.

2.4.17. Leyland Road suffers from high levels of congestion and Tardy Gate is defined as an AQMA. The access route to Leyland Road from the proposed development is Bee Lane (40 units), utilising the Bee Lane Bridge. The Leyland Road corridor is used by traffic as a route to and from Preston to access destinations to the south including those that use the strategic network.

2.4.18. **Bee Lane**

2.4.19. Bee Lane forms a western access from the B5254 Leyland Road and crosses the West Coast Mainline. It is a single-lane rural road extending for approximately 1.2 kilometres along an east-west alignment from the B5254 Leyland Road/Bee Lane/The Cawsey four-arm roundabout.

2.4.20. Bee Lane is currently very lightly used by pedestrians, cyclists and equestrians for recreational purposes, and has low levels of traffic serving existing residential properties and businesses within the Pickering's Farm site. It is predominantly an unlit rural lane with no footways and therefore no separation between different users along this route.

2.4.21. **Flag Lane**

2.4.22. Flag Lane also provides a western access from the B5254 Leyland Road and crosses the West Coast Mainline. It is a single lane residential/rural lane and extends for approximately 600 metres from the priority-controlled T-junction with Leyland Road and continues in an east-west alignment parallel to Bee Lane. There is a small section of Flag Lane between Leyland Road and the West Coast Mainline that is residential in nature with a carriageway width between 4.7 metres and 5 metres. Footways and street lighting are provided along both sides of the carriageway along this section of Flag Lane. Residential properties also front onto Flag Lane to the east of the railway line with driveway accesses situated along both sides of the carriageway. There is limited forward visibility due to a bend in the road between the two bridges. In addition, traffic can only operate in single file between and across both bridges with limited opportunities for vehicles to pass. This is not unreasonable for the current level of usage.

- 2.4.23. The TA indicates that Flag Lane will only provide motorised access to existing properties which will be encompassed within the new community.
- 2.4.24. **The Cawsey/Cross Borough Link Road (CBLR)**
- 2.4.25. The Cawsey is the initial section of the CBLR between the A6 London Road and Leyland Road. The road is circa 7.3 metres in width with some right turn provision. The standard delivered is suitable to support South Ribble's local plan development and local routeing to access other corridors. The Cawsey has no direct access from private driveways. The Cawsey includes off carriageway pedestrian and cycle provision providing links to other key sustainable routes.
- 2.4.26. The concept of a road along the line of the Cross Borough Link Road (CBLR) is not new. In the 1970's with Central Lancashire Development Corporation (now Homes England) acquired parcels of land within the Pickerings Farm. A link road through the site was first proposed as part of the Central Lancashire New Town.
- 2.4.27. In 1982 the Central Lancashire Development Corporation obtained planning permission from the Secretary of State for residential development for the Walton Park area, which incorporated a safeguarded corridor to permit construction of the road through to the former gasworks site. The same section of the proposed CBLR from the Carrwood Road roundabout to the eastern perimeter of the gasworks site was included in the Walton-le-Dale/Bamber Bridge/Lostock Hall Local Plan, which was adopted in 1986. The 1996/97 Public Inquiry into the South Ribble Local Plan also considered the proposed CBLR which would connect Carrwood Road in the east to a new roundabout with Leyland Road in the west.
- 2.4.28. The current Local Plan has provision for the continuation of the CBLR through from Leyland Road to the A582 Penwortham Way.
- 2.4.29. I have provided the Appellants with what I consider to be the minimum acceptable standard for the section of CBLR that will traverse through the Appeal site, between the A582 and Leyland Road (See APPENDIX 27).

2.5. **West Coast Mainline**

- 2.5.1. The West Coast Mainline runs along the eastern boundary of the site and connects London to Glasgow. It is heavily used for freight as well as passenger trips nationally. Any impact on the West Coast Mainline such as damage to the Bee Lane bridge would have implications for national rail journeys and freight until they are remediated. Any works on the Bee Lane Bridge require approval and consent of Network Rail and LCC.

2.6. **Current Congestion on the Network**

- 2.6.1. Current network congestion is still influenced by the impacts of Covid19. APPENDIX 11 shows current congestions levels based on Google Map data and Photographs in APPENDIX 10 clearly shows observed queuing that occurs on the network.
- 2.6.2. The level of queuing and delay at times on sections of the A582 and Leyland Road are a concern and are expected to increase as flows return to levels not influenced by Covid19, but also as a consequence of further development (without the influence of network improvements such as those planned and linked to the A582).

3.0 Policy, Guidance and Plans

I consider that the following policy, guidance and plans are relevant to the determination of these Appeals.

3.1. National Planning Policy Framework (NPPF) (CD 4.1)

3.1.1. The following paragraphs of the NPPF 2021 are considered to be of particular relevance:

3.1.2. Paragraph 92. Planning policies and decisions should aim to achieve healthy, inclusive and safe places which: a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages; b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of attractive, well-designed, clear and legible pedestrian and cycle routes, and high quality public space, which encourage the active and continual use of public areas; and c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.

3.1.3. Paragraph 104. 'Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;

- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places'.

3.1.4. Paragraph 110 states:

'In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- b) safe and suitable access to the site can be achieved for all users; and
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code;
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost-effectively mitigated to an acceptable degree'.

3.1.5. Paragraph 111 states:

'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

3.1.6. Paragraph 112 states:

Within this context, applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

- c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
- d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

- 3.1.7. Paragraph 130. 'Planning policies and decisions should ensure that developments:
- (a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;
 - (b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;
 - (c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);
 - (d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;
 - (e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and
 - (f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.'

- 3.1.8. Paragraph 134. 'Development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents which use visual tools such as design guides and codes. Conversely, significant weight should be given to:

- (a) development which reflects local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents which use visual tools such as design guides and codes; and/or
- (b) outstanding or innovative designs which promote high levels of sustainability, or help raise the standard of design more generally in an area, so long as they fit in with the overall form and layout of their surroundings'.

3.2. National Design Guide (10.20) and National Model Design Code (NMDC) (CD 10.21)

- 3.2.1. Paragraph 110 of the NPPF requires that the design of streets, parking areas, other transport elements reflect current national guidance, including the National Design Guide and the National Model Design Code. I would highlight the following:
- 3.2.2. National Design Guide paragraph 80 states that 'A clear layout and hierarchy of streets and other routes helps people to find their way around so that journeys are easy to make. Wider, more generous spaces are well-suited to busier streets, including streets served by public transport. They have enough space to create an attractive place for all users. Narrower streets are more suitable where there is limited vehicle movement and speeds are low. Mews, courtyards and culs-de-sac will generally only be appropriate at the most local level where there is little vehicular movement'.
- 3.2.3. National Model Design Code Part 2 paragraph 17 stated that. 'A connected network and hierarchy of routes for all modes of transport form the circulatory system of any settlement and its design will determine how easy and safe it is to get around for all and how it links destinations to public transport. These issues are particularly important when coding for large sites but may also influence local design codes for smaller infill sites and their physical connectivity'.
- 3.2.4. Paragraph 18 states that. 'The street network is important because it sets a long-lasting framework for moving around. In most cases, it will outlive the buildings it originally served.'

3.3. **South Ribble Local Plan**

The Adopted Local Plan 2015 sets out key policies. These have been referenced in the reasons for refusal.

3.3.1. Policy C1 – Pickering's Farm, Penwortham (CD 5.2)

Planning permission will only be granted for the development of the Pickering's Farm site subject to the submission of:

- a) an agreed Masterplan for the comprehensive development of the site. The Masterplan must include the wider area of the Pickering's Farm site which includes the safeguarded land which extends to Coote Lane as shown on the Policies Map, and make provision for a range of land uses to include residential, employment and commercial uses, Green Infrastructure and community facilities;
- b) a phasing and infrastructure delivery schedule;
- c) an agreed programme of implementation in accordance with the Masterplan and agreed design code.

3.3.2. Policy A2 – Cross Borough Link Road (Development Link Road) (CD 5.2)

Land will be protected from physical development for the delivery of the Cross Borough Link Road. The Cross Borough Link Road comprises:

- a) A road to be constructed from Carrwood Road to The Cawsey, as shown on the Policies Map.
- b) A road to be constructed through the major development site at Pickering's Farm as shown diagrammatically on the Policies Map

3.3.3. Supporting text associated with the Policy includes the following:

Paragraph 4.20 states that 'A road is to be constructed from Carrwood Road to The Cawsey in order to open up land for development (Lostock Hall Gas Works) and to serve as a key part of the Cross Borough Link Road. This section of the link road will continue through the major development site of Pickering's Farm. Once both elements of the road are complete, they are to be linked to provide the full Cross Borough Link Road. The link road will improve accessibility in an east-west direction through the borough, increase community access to the range of services within the

borough and help traffic flow on existing roads. The completion of the link road is to be delivered in the Plan period'.

Paragraph 4.21 states that; 'The section of link road through the major development site at Pickering's Farm (see Policy C1) will be implemented in accordance with an agreed phasing and infrastructure delivery schedule. It will be provided through developer contributions and completed within an agreed timescale.'

Paragraph 4.22 states that; 'Traffic management measures are required on and around Leyland Road and within Tardy Gate District Centre in order to reduce through traffic and to improve the attractiveness and accessibility of the District Centre for its users. Traffic management measures will also be required for other existing roads which the proposal supersedes for through traffic'.

Paragraph 4.23 states that; 'The proposed link road also provides an opportunity to improve public transport, to help increase accessibility across this part of the borough'.

3.4. Compliance with Policy

- 3.4.1. I have highlighted key Policy, Guidance and plans that relate to transport and sustainability, which I consider relevant to the Appeals.
- 3.4.2. Planning Policy at a national, regional and local level seeks wherever possible to ensure that development takes place in appropriate locations with good access by all modes of transport.
- 3.4.3. The Local Plan allocation of this site is accompanied by specific policies that enable the allocation to be delivered appropriately. These policies recognise the importance of a properly planned approach.
- 3.4.4. I consider the Appeals schemes, in combination with the submitted masterplan, fail to satisfy the highway and transport matters in regard to both local and national policy. I will demonstrate this in the following sections of my evidence by addressing the relevant reasons for refusal.

4.0 Highways and Transport – Reasons for Refusal

4.0.1 In the following section of my evidence I will provide relevant information and comment on how the proposed applications and submitted Masterplan do not satisfy LCC as highway authority with direct reference to the Reasons for Refusal (RfR) referenced below:

Reasons for Refusal 1:	Modelling Methodology
Reasons for Refusal 2:	Transport Assessment and Technical Evidence
Reasons for Refusal 3:	Highway Infrastructure Bee Lane Bridge
Reasons for Refusal 4:	Cross Borough Link Road Delivery
Reasons for Refusal 5:	Policy C1 and Masterplan
Reasons for Refusal 6:	Phasing and Infrastructure Delivery Schedule
Reasons for Refusal 7:	Policy A2 and Cross Borough Link Road Delivery

4.0.2 Clearly there will be a number of subjects that will be common to several of the Reasons for Refusal. I will set out my approach to deal with these intrinsically linked reasons for refusal below in paragraph 4.1. For example, the issue of public transport routing is an important factor in Masterplanning (RfR 5) but is also influenced by the Infrastructure provision on Bee Lane Bridge (RfR 3) as well as delivery of the Cross Borough Link Road (RfR 4 and RfR 7). To limit as much as possible any repetition in my evidence I have, in general, sought to set out an issue in detail under the Reason for Refusal that I consider most relevant.

4.1. Reason for Refusal 1 (Modelling Methodology) and Reason for Refusal 2 (Transport Assessment and Technical Evidence)

4.1.1. I consider RfR 1 and RfR 2 are intrinsically linked. The modelling methodology is underpinned by all the assumptions and technical evidence that have been used by the Appellants to develop their Transport Assessment, for example, the assumptions on the use of traffic data, traffic generation and traffic distribution.

4.1.2. Ultimately, the analysis needs to allow the relevant highway authorities to reach the conclusion that what is presented is a reasonable basis for assessment of the impacts of the development. In both RfR 1 and RfR 2 it states that "as such it has not been demonstrated that the proposed development would not have a severe adverse impact on the local highway network". My evidence, predominately set out under the heading RfR 2, provides the detail in support of both RfR 1 and RfR 2.

4.1.3. To eliminate the repetition of evidence across RfR 1 and RfR 2, I limit comment under RfR 1 to two matters. Firstly, I provide brief comment on the work undertaken by LCC Highways and National Highways (WSP) to review the acceptability of the modelling work (again the more detailed comment in regard to this review is presented under RfR 2). Then, I cover a further matter that I consider strongly influences the modelling methodology and associated assumptions within the TA; this being the Appellants "Vision and Validate" approach.

4.1.4. Reason for Refusal 1: Modelling Methodology

4.1.5. LCC have been working with National Highways and their consultants (WSP) with regard to the Appellants' agent's (Vectos) microsimulation model (LCC Development Control does not have this software in-house).

4.1.6. National Highways commissioned consultants WSP on 9 March 22 to review the Vectos microsimulation model. This was done with a view to determining whether the base model could be used as a basis for completing and agreeing the traffic impact assessment of the development. This WSP review and report was provided to Vectos on 13 May 22. The report as included in APPENDIX 3G highlights many issues and concludes, in para 5.1.13:

'Given the comments raised during this review we cannot conclude that the model accurately reflects the operation of the wider model network and therefore the model is not suitable for assessment use.'

4.1.7. It is also worth noting that National Highways considered:

'that the level of additional work required to revise the traffic model would have run to a few months' worth of work.'

- 4.1.8. As stated above more detailed comment on the highway authorities review of the modelling is provided within RfR 2.
- 4.1.9. The Weakness Underpinning the Appellants Approach
- 4.1.10. The fundamental idea that underpins the Appellants' transport modelling methodology is their "Vision and Validate" approach. This approach introduces the concept of 'traffic evaporation' (in simple terms, do not provide for motorised users and people will not drive). As a result of this approach the Appellants' modelling methodology is not considered reasonable as the assumptions they have made are not clearly based on local evidence and known travel behaviour. The result is that I consider the Appellants' modelling does not: replicate existing conditions; acknowledge existing concerns; fully report impacts (with development) or mitigate against impacts to maintain a safe and reliable network for all users (motorised and non-motorised).
- 4.1.11. I consider the Appellants' failure to assess and provide for realistic levels of vehicle demand is as a direct result of their insistence that their approach ("Vision and Validate") is the only scenario that needs to be considered.
- 4.1.12. I do not believe "Vision and Validate" can be delivered in isolation by a single development within an existing built environment with established travel patterns. There are limitations with the existing public transport and pedestrian and cycle networks, while the location of South Ribble and this site benefits from proximity to the strategic highway network (M6, M61 and M65). This is likely to be a factor that influences comparatively high car ownership and use for travelling to work in South Ribble, (APPENDIX 18). Demand on the surrounding highway network will always be present from local and more distant movements.
- 4.1.13. South Ribble is ranked 12th highest nationally in terms of commute to work with around 47% of journeys made by car or van (2011 Census Table CT0015). South Ribble has excellent connections to the Strategic Road Network (M6, M65, M61, M55) and Major Road Network (A6) and lends itself to people working further afield.

This propensity to drive has not been acknowledged by the Appellants. The general methodology adopted by the Appellants fails to consider local circumstances and characteristics.

4.1.14. The Appellants' approach in isolation is considered aspirational. The "Vision and Validate" approach requires a step change in behaviour and a clear policy transition. I consider it requires a top-down approach rather than an isolated bottom-up approach by a developer. To succeed, the approach would require strong new policies with wider buy in from planning and highway authorities, politicians and existing/future residents. The policies would need to apply to wider areas such as town/districts that can deliver the necessary step change over the wider area, for example, significant levels of change delivering improvement to public transport and other suitable transport modes. A "Vision and Validate" approach as with a masterplan (such as that proposed for this site) must also consider and make provision for those with mobility impairments or not confident to use the limited infrastructure provided.

4.1.15. The Appellants' "Vision and Validate" approach does not limit residential parking provision for dwellings within the development site. The Appellants are proposing the use of maximum parking standards.

4.1.16. Lancashire County Council clearly supports sustainable development. This needs to be supported with highway and transport infrastructure where appropriate. LCC does not operate a 'predict and provide' model of assessment. However, we do require a Transport Assessment that can be considered a reasonable basis for assessment of the impacts of the proposal. The assessment of development is guided by local and national policy. The NPPF specifically states in paragraph 110:

- ensuring 'appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location';
- ensuring 'safe and suitable access to the site can be achieved for all users';

- ensuring 'the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code';
- requiring 'any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, to be cost-effectively mitigated to an acceptable degree'.

4.1.17. As presented the Transport Assessment with its "Vision and Validate" approach does not have clear regard to impacts on the local or wider network or the consequences on safety and reliability.

4.1.18. Notwithstanding the bottom-up approach being promoted by the Appellants for "Vision and Validate", the other fundamental issue that I have is the infrastructure proposed is not adequate, for example, that proposed at Bee Lane Bridge, the poor proposals for public transport, or the limited measures proposed beyond the site.

4.1.19. The Appellants' approach, linking with the supporting masterplan as presented, also conflicts against NPPF paragraph 112, which states:

- give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

Reason: The Appellant's approach delivers limited provision from the site, poor public transport routeing, and limited pedestrian/cycle provision on the principal desire lines from the site. This will result in greater use of the private car. This is not reflected in the Appellants' modelling approach.

- create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

Reason: The Appellants' approach results in conflict between users of the lanes whether sustainable or motorised. This will result in greater use of on the private car. This is not reflected in the Appellants' modelling approach.

4.1.20. Vectos have failed to appropriately consider the consequences of their "Vision and Validate" approach. Their approach uses further congestion on the surrounding highway network as the catalyst for modal use change. However the approach fails to consider how further congestion impacts the attractiveness of public transport with greater journey times and less reliability. The approach also fails to consider the impact on driver behaviour and resulting safety for pedestrians and cyclists. Without real improvement for sustainable transport within and beyond the site, conditions will only get worse for all users. This will not encourage a modal shift. The result will be greater use of the private car than assessed. This is not reflected in the Appellants' modelling approach.

4.1.21. As part of the Vision and Validate approach, a Mobility Hub is to be provided and also a community concierge. I do not consider that the mobility hub or concierge will deliver a step change to sustainable modes.

4.1.22. The more specific details of the Appellants' modelling methodology in regard to Transport Assessment and Technical Evidence are addressed under Reason for Refusal 2 below to minimise duplication of evidence.

4.1.23. **Reason for Refusal 2: Transport Assessment and Technical Evidence**

4.1.24. No pre-application advice was sought by the Appellants in respect of the current planning applications (unlike the previous application on the same site by the Appellants' transport consultant at that time, Croft Consulting). In our Statutory Comments on the Appeal applications we concluded that there was insufficient information for the highway authority to reach a conclusion. The Transport Assessment and modelling submitted differed substantially from the extensive work that LCC had undertaken to support Croft during the previous application submission.

The Transport Assessment and modelling undertaken for these applications failed to make use of the previous work to present a similar level of information to enable the LHA to reach a conclusion. I should note that LCC had reached agreement with Croft on a number of key matters, in particular in regard to the gravity model.

4.1.25. I have a number of issues with all aspects of the technical elements within the Transport Assessment and Technical Notes as presented for the Appeal schemes; in particular with reference to traffic modelling (microsimulation model), base traffic data, trip rates, distribution committed development, traffic growth, modelling results and the need for a clear auditable trail to definable impacts and necessary mitigation.

4.1.26. Traffic Modelling

4.1.27. Clearly, modelling is a fundamental element of the Appellants' Transport Assessment and Technical Evidence.

4.1.28. At the stage of Appeal Notification on the 20 January 22, the issues set out in the RfR 1 and RfR 2 remained unresolved. At the time of writing I am not aware of correspondence from Vectos fully addressing the issues raised. However, I have been informed by WSP that Vectos have made some changes to the input parameters on the base model. However, at the time of drafting this evidence National Highways and their consultants WSP have not reviewed the changes. It is understood, given the conclusion of the report as set out above in paragraph 4.1.6 and also because ("NH") have indicated they fundamentally disagree with the approach underpinning the modelling and the continued use of 2021 data, that they have focused on the joint assessment work with LCC in order to ensure they were in a position to understand the potential impacts of the development proposals.

4.1.29. To be clear, I consider the modelling as presented is not acceptable to LCC. I consider the assumptions in the base scenario are flawed. The base model does not replicate known congestion and queueing.

4.1.30. In a letter from Vectos to South Ribble dated 12 November 21 (APPENDIX 3I), in the section 'Base Date and Trip Rates', and referring to a scenario with increased base flows of 20%, Vectos states:

'the network is not sensitive to changes in mathematical demand flows of these magnitudes....'

I am surprised at this statement given my understanding of local congestion and observed queuing. I believe this statement would surprise local users and appears to show a lack of understanding by Vectos of the base traffic conditions. The current network between the Tank Roundabout and Sainsburys roundabout is very sensitive to current demand levels, as highlighted by the queuing photographs and congestion levels shown in APPENDIX 10 and 11. The assessment LCC has undertaken and that I present in section 5 of this evidence supports this view.

4.1.31. Microsimulation Modelling

4.1.32. As stated above in regard to Reason for Refusal 1 – Modelling Methodology, NH commissioned WSP to review the Vectos microsimulation model. The review stated that:

' we cannot conclude that the model accurately reflects the operation of the wider model network and therefore the model is not suitable for assessment use'.

4.1.33. The NH/WSP Microsimulation Base Model Report dated April 2022 (see APPENDIX 3G) highlighted many issues in regard to the base model (notwithstanding the traffic data which is not accepted by LCC or NH and which is also addressed in more detail below).

4.1.34. The issues highlighted with the base model are set out in the table below. The issues are graded by WSP in their report to reflect the severity of the concern, increasing from yellow through amber to red. The report included 7 Yellow (Minor change required to the model), 21 Amber (Narrative required/review required within the

model and make necessary changes) and 11 Red (Requires action and changes within the model).

Table 1: Vectos Base Model Review Coding Review Summary by WSP			
Table 20 – Coding Review Summary Coding Element	Yellow (minor change required)	Amber (review required within model)	Red (requires action)
Model Overlay	0	1	0
Link Coding	0	2	3
Visibility	0	1	0
Stopline Coding	1	0	2
Lane Points	0	2	0
Roundabout Lanes	0	0	1
Signal Coding	2	3	4
Standalone Pedestrian Crossings	0	2	1
Signpost Distance	0	2	0
Hazard Overrides	0	6	0
Priority Coding	0	2	0
Public Transport	3	0	0
Model Observations	1	0	0
<i>Total</i>	<i>7</i>	<i>21</i>	<i>11</i>

4.1.35. The above table highlights many technical coding issues. In simple terms these generally relate to network / junction layout, geometric parameters and traffic signal control / timing inputs.

4.1.36. The WSP report highlights 11 red issues relating to model coding, and 4 red and 3 amber relating to signal coding. Signal specifications do not match that modelled. Also, 3 red and 2 amber link coding issues, where the input is not matching that from satellite images. All have the potential to significantly influence model performance. A large number of red and amber issues bring into question the reliability of the model to replicate the base scenario.

- 4.1.37. It is surprising and a concern that WSP indicate that actual signal timings have not been used in the base model, whether at signalised junctions or signalised roundabouts. The accuracy of the junctions modelled has been brought into question by the NH review for example where a number of approach lanes have not been included correctly.
- 4.1.38. Base data
- 4.1.39. Vectos have utilised data collected in May 2021 when coronavirus restrictions were in place as opposed to the previously agreed extensive data collected by the Appellants' previous consultant Croft for this site.
- 4.1.40. This point was noted within the LHA statutory comments where it was stated that:
'The collection and use of 2021 data is not acceptable to LCC, traffic levels are much lower than the historic, Consultants who undertake TA's in Lancashire are aware of this position', See APPENDIX 2.
- 4.1.41. Data collection during the Covid19 pandemic is not acceptable to LCC to represent typical traffic levels. Unfortunately, Vectos did not consult LCC or National Highways prior to its collection in May 2021. Appendix 19 shows this position in 2020 and 2021, and Appendix 20 shows tank roundabout data from 2022 which demonstrates that traffic levels are not yet back to pre-covid levels.
- 4.1.42. Whilst traffic conditions are increasing, they have still not returned to pre-pandemic levels. For example, I must note and highlight LCC, a significant employer in Preston (County Hall), put in place the necessary provision to allow all office-based staff to work from home. To date there has been no requirement to return back to the workplace permanently. The majority of staff still work from home with some workplace attendance. LCC senior management is now encouraging the greater use of County Hall and other office base establishments having less reliance on home working and TEAMS meetings.

4.1.43. Covid19 Timeline

4.1.44. The following table highlights key dates in regard to the Covid19 pandemic and support why I consider the pandemic is still impacting on traffic flows.

Description	Date	Day
First National Lockdown Starts	24/03/20	Tue
Restrictions Eased	13/05/20	Wed
Non-Essential Retail Opens	15/06/20	Mon
Hospitality Restrictions Eased	04/07/20	Sat
Lancashire Enters Tier 3	19/10/20	Mon
Second National Lockdown Starts	05/11/20	Thu
Second National Lockdown Ends	02/12/20	Wed
Lancashire Enters Tier 4	31/12/20	Thu
Third National Lockdown Starts	05/01/21	Tue
Schools Reopen	08/03/21	Mon
Hospitality Restrictions Eased	12/04/21	Mon
Many Businesses start to Reopen, however many office based employers still operate Home Working	17/05/21	Mon
Third National Lockdown Ends	19/07/21	Mon
Plan B Measures Begin	10/12/21	Fri
Plan B Measures End	26/01/22	Wed

4.1.45. LCC have been monitoring traffic levels during the Covid19 pandemic and have observed the network. In the vicinity of the site, observations have been recorded on the A582 Penwortham Way north of the Tank signalised roundabout.

4.1.46. The table below shows traffic Flow Monitoring on A585 Penwortham Way.

Table 3: Traffic Flow Monitoring on the A582 between 2019-2022				
Time	May 2019	May 2021	April 2022	May 2022
7:00-8:00	1,923	1,609	1,661	1,847
8:00-9:00	1,919	1,766	1,725	1,931
7:30-8:30*	1,921	1687	1,693	1,889
16:00- 17:00	2,228	1,967	1,998	1,977
17:00-18:00	2,,208	1,876	1,892	1,929
16:30-17:30*	2,218	1,921	1,945	1,953
5-day average	25,884	22,919	22,783	23,315
24h total				
Percentage Difference from May 2019 to all other survey periods				
7:30-8:30	-	88%	88%	98%
16:30-17:30	-	86%	88%	88%
5 day average	-	88%	88%	90%
24h total				

*Note: As the peak hours fall within 2 hours (i.e. 7-8 and 8-9), the average was calculated for the peak hour shown

4.1.47. As can clearly be seen on the A582 at this location, which is in close proximity to the site access, traffic flows are increasing but have still not reached pre Covid19 levels. The May 2021 data as used by Vectos in the AM and PM peaks is significantly lower than that in 2019 (and 2022). Traffic levels can be expected to increase further as confidence increases and office-based staff return back to the office.

4.1.48. Notwithstanding the above, what is clear is that the trend is not network wide. When consideration is given to the Vectos Technical Note 3 (TN3) (CD10.39), this includes a number of locations where data is collected on a wide network both beyond and within the built environment. In locations within a more built-up environment traffic flows have increased, which is not surprising. This is likely to be as a consequence of regular additional short return trips being made from the home such as those between 8:00-9:00 that includes journeys to school or to local shops then returning back home (influencing trip rates). I must note the AM peak hour is 7:30-8:30 as determined by surveys and agreed with the Appellants' previous transport consultants Croft. It also must be noted that this proposal has its main exit on A582 to support 1060 units with only 40 accessing the local road network directly. The

A582 in the location of the proposed main site access is clearly in the non-built environment.

4.1.49. I am of the opinion that the highway network was influenced by the impacts of the Covid19 pandemic in 2021 (and remains influenced by those impacts in 2022).

4.1.50. Finally, it is important to note that NH are also not satisfied with the use of May 2021 data.

4.1.51. Trip Rates

4.1.52. The Vectos approach includes the use of TRICS which is an industry accepted database. However, in my statutory comments I highlighted that the trip rates used in the TA are slightly lower than I would expect.

4.1.53. The transport assessment applies an approach that estimates person trips to determine vehicle impact from the proposed site. This approach uses the industry standard TRICS database, Census and National Trip Survey (NTS) information. The use of person trips or local travel information is not opposed in general. However, the suitability of data needs to be closely reviewed to ensure it is reasonable to represent the development. In this case:

- Census data that has been used is now over 10 years old and may not represent site specifics with development.
- The peak hours are 7:30-8:30 and 16:30-17:30 (as agreed with the Appellant's previous consultants), Vectos *have considered 8:00-9:00 and 17:00-18:00*
- National Travel Survey is very generic and not local or site specific.

4.1.54. I consider that an approach that applies additional local or other national data to factor trip rates should include a sense check that validates against local observed data, otherwise this could result in an underestimation of impacts.

4.1.54.1. For example, the data for journey purpose as identified in the TA Table 6.2 provides a summary of the National Travel Survey (NTS) and indicates that 20% of

all trips undertaken between 7:00 and 8:00 are for education. However, to use this statistic for this site is surprising as many education establishments are accessible within a short journey from the site for primary, secondary and also tertiary education. I would note that all local primary and secondary schools as defined in the TA have pupil registration time between 8:45-8:55, outside the network peak. Therefore, my concern is that the generic national profile used by the Appellants does not match that of the site for time of travel for education. I consider in reality a much greater proportion of trips would be for other purposes, such as employment.

4.1.54.2. This matter is further highlighted when consideration is given to the total percentage of education trips that are undertaken outside traditional start (8:00-9:00) and finish (15:00-16:00) times which equates to 43% for this analysis. When consideration is given for an area like South Ribble and Preston with all levels of education being available and accessible by a comparatively short journey, this percentage seems very high.

4.1.54.3. This issue with NTS proportions as highlighted in Table 6.2, applies to all trip purposes. For example there are many major employers locally, however, Table 6.2 of the TA (between 8:00 and 9:00) suggests that more trips are for leisure purposes (26%) than commuting to work (23%). In the evening between 17:00-18:00 Table 6.2 suggests that 59% of all trips are for recreational leisure purposes; this proportion is even higher between 16:00-17:00 at 63%. I question the suitability of the NTS to specifically represent this area with no supporting evidence, justification or sense checking.

4.1.54.4. The Appellants' trip rates used in their assessment are based on assumptions in regard to percentage mode use share, i.e. by car, cycle, walk, taxi, public transport etc. The Transport Assessment (Figure 6.1 and Table 6.4) sets out the rationale behind the Appellants' assumptions. Table 6.4 highlights historic census modal use proportions for the area (journey to work). In regard to public transport (PT), percentage of mode share, I do not consider these figures will represent this site, particularly when consideration is taken for walk distances to bus stops on Leyland Road.

4.1.54.5. The Pickering's Farm site is offering a 30min PT service linking to Penwortham Way only, for a limited period of time that the funding will permit. I consider this provision allied to the routeing via the A582 will have limited impact in attracting those living on this site to use PT. As a consequence it is likely that in both the short and long term car usage within the site will be higher than that highlighted in the Transport Assessment.

4.1.55. To determine the significance of the Appellants' assumptions on vehicular trip rates, I have compared the rates presented by Vectos with those agreed with Croft. I have also carried out surveys at two modern residential development sites, with similar house types and density which I consider would closely reflect expected trip rates on this proposed site (Appendix 12). One of the comparison sites is close to Bee Lane roundabout and another in North West Preston. These are highlighted in the following table:

Table 4: Trip Rates and Development Peak Hour Flows										
Time	Vectos		LCC observations						As agreed with Croft	
	Arr	Dep	Recent Dev near Bee Ln R'bout		Recent Dev near Bee Ln R'bout		Recent Dev NW Preston			
			Collected 30/03/22		Collected 15/6/22		Collected 15-16/5/22			
			Arr	Dep	Arr	Dep	Arr	Dep		
Based on 1100 units/dwellings										
7:00-8:00	61	284								
7:30-8:30	77*	284*			191	440			165	473
8:00-9:00	107	392	308	660	235	513	254	708	165	473
16:00-17:00	246	126								
16:30-17:30	269*	126*	293	352			454	215	374	264
17:00-18:00	292	126					546	292	374	264
Trip Rates (per unit/dwelling)										
7:30-8:30	0.07	0.26			0.17	0.40			0.15	0.43
8:00-9:00	0.10	0.36	0.28	0.60	0.21	0.47	0.23	0.64	0.15	0.43
16:30-17:30	0.24	0.11	0.27	0.32			0.41	0.20	0.34	0.24
17:00-18:00	0.27	0.11					0.50	0.27	0.34	0.24

Differences between Vectos and observed and Croft (agreed)									
7:00-8:00									
7:30-8:30				114	156			88	189
8:00-9:00		201	268	128	121	147	316	58	81
16:00-17:00									
16:30-17:30		24	226			185	89	105	138
17:00-18:00						254	166	82	138

- Notes:
- 1 Development on Saxon Place, 75 units
 - 2 Development on Maxy House Road, west of Harvester Drive, 143 units
 - 3 Vectos trip rates derived from TA T6.14 based on 1100 units I have
 - 4 TN 3 Nov21 Trip Rates for the 40 unit site are: 8:00-9:00 0.1(A) 0.37(D) 17:00-18:00 0.37(A) 0.17(D)
 - 5 TN 4 Nov 21 refers to trip rates and uplift, but no detail is provided to review
 - 6 * flows derived as an average of 2 hours

4.1.56. I must note both surveys were undertaken in 2022 while still under the influence of Covid19. These recent surveys would indicate that additional local trips are being undertaken, for example, people working from home dropping children off at school by the private car then returning home (am peak).

4.1.57. The above Table highlights the clear difference between the trips applied to the network by the Appellants and those that I have accepted previously from Croft in regard to this site, in a non Covid19 situation.

4.1.58. Distribution of Development Traffic

4.1.59. The Appellants have clearly stated that 1,060 units will exit onto the A582 (which is part of the Major Road Network) and 40 units will exit onto Leyland Road (within the built environment) and this is what has been assessed (i.e., with no through movement for motorised traffic via any of the existing lanes). The Appellants' access strategy excludes the residents desire to route via a more direct, shorter distance to, for example, Lostock Hall local centre (except for 40 units). Under a CBLR as set out in local policy, the true unconstrained distribution desired by end users from this 1,100 dwelling proposal will be redistributed with very different impacts. No assessment has been reported on within the TA that would demonstrate impacts from this development with CBLR in place. The Appellants' strategy leaves the impacts of a redistribution from their large site for others to overcome when the CBLR is delivered. I address this issue under RfR 4 (CBLR delivery).

4.1.60. I have concerns with regard to the Appellants' distribution for the development as proposed. I highlight below a number of issues that will influence the actual distribution realised from this development, and therefore the impact at specific locations on the network. As I consider the distribution is incorrect, the development impact at specific locations cannot be fully understood. The consequence is the underestimation of impact at a number of locations on the congested network.

4.1.61. The TA states that:

'the development trips have been assigned to the network using a similar pattern to the trip generation exercise with the distribution split between commuting, education and recreational/leisure'.

The approach provides 4 distributions, those being:

1. Commuting trips to zones external to the microsimulation modelled area
2. Commuting trips to zones within the microsimulation modelled area
3. Education trips to zones within the microsimulation modelled area
4. Recreational/Leisure trips to Zones within the microsimulation modelled area

4.1.62. However, the Appellants provide no clear evidence to allow the information to be scrutinised in a way that provides a step by step approach to understand the resultant trips for each zone (for example information set out in an Excel worksheet for each of the 4 distributions).

4.1.63. With regard to Recreational/Leisure trips (Table 6.13), the Vectos analysis is incomplete and therefore flawed. For example the analysis surprisingly does not include, Nuffield Health and Active National Gym both located at the Capitol Centre (Walton-le dale), Tennis Club and Fitness Centre (Bamber Bridge) and Capital Centre retail (including food). The inclusion of the above examples would change the distribution pattern, in this case the result would be an increase demand to the south of the site on the congested sections of the A582, to which I have already highlighted my concerns.

- 4.1.64. I also have a number of other concerns with regard to the Vectos distribution analysis. These are set out below in paragraphs 4.1.65-4.1.68. Paragraphs 4.1.69-4.1.70 describe the consequences of these issues.
- 4.1.65. An example further impacting on the distribution as referred to in paragraph 4.1.63 is that the whole of Preston City Centre represents 25% of the leisure trips from this development, this does not seem unreasonable. By comparison however, Penwortham Leisure Centre constitutes a significant 12.5% of all leisure trips. I do not consider this logical when the scale of the two destinations are taken into consideration.
- 4.1.66. Further concerns with the levels of trips being distributed to zones in a manner that I consider was not logical were identified following further information provided by Vectos on the 5 November 21. Again, this information does not provide a transparent audit to allow consideration of the approach that was used to derive development trips. LCC provided comments back to Vectos on the 17 November 21; no further information has been provided on this matter for zonal queries as raised in November 2021).
- 4.1.67. The Vectos distribution has no regard to changes since the collection of the Census data in 2011 which would take account of new employment opportunities likely to be available during the Appeal sites buildout. Since the 2011 Census, I am aware of several sizeable employment locations in South Ribble that are now constructed and available (or that have seen significant expansion) as well as those now committed, including:
- Leyland Business Park;
 - Samlesbury Enterprise Zone (EZ);
 - Moss Side Industrial;
 - Leyland Test Track (as included as a committed development); and
 - Cuerden Site (as included as a committed development)
- 4.1.68. There are other existing employment areas in South Ribble (such as that served off Golden Hill Lane, Leyland) that have been explicitly excluded, and there is no way to

understand (given the way the Appellants have presented the information) whether they have been included.

4.1.69. I consider a number of the assumptions in the Vectos distribution analysis upon closer scrutiny are not logical. I consider the distribution is incorrect and therefore the development impact at specific locations cannot be fully understood. However I consider the consequence of the issues that I have identified would highlight that the Appellants are underestimating the impact at locations on the congested network. Overall my own assessment would highlight greater demand to the south of the site on the congested sections of the A582.

4.1.70. For the above reasons, LCC working with National Highways have been required to undertake its own assessment of impact on the traffic network to understand the impact of the development as proposed. In addition to the above assessment, I have also considered a further scenario. This considers the likely redistribution effect if an unconstrained access was available to residents i.e. that which is likely to be desired by motorised users. LCC's assessment and the findings are set out in section 5.

4.1.71. Committed Development

4.1.72. The TA suggests that the following development has been included:

- Croston Rd 07/2012/0627/ORM 174 (350) dwellings;
- Croston Rd North 07/2014/0184/ORM 400 dwellings;
- Land at Penwortham Mills 07/2014/0190/ORM 385 dwellings;
- Gas works 07/2015/0315/REM 248 (281) dwellings;
- Cuerden Strategic Site 07/2017/0211/ORM 210 dwellings 205,600 sqm employment; and
- Aston Way, Test Track 07/2017/3361/ORM 950 units 28000sqm employment.

The above developments are consistent with those as used by Croft and LCC.

4.1.73. Again, the information provided by the Appellants is not fully available for scrutiny. It is unclear how traffic from the committed developments have been applied in the Appellants' assessment. This is a direct result of the Appellants' approach which does

not allow scrutiny. This is a consistent issue with the Appellants technical evidence. This was highlighted in our statutory comments but no further detail has been provided by the Appellants. By contrast the LCC assessment follows an industry standard approach, where the application of committed development and all other assumptions are clearly set out and can be examined through individual worksheets and flow diagrams.

4.1.74. Traffic Growth

4.1.75. No traffic growth has been included in the Appellants' Transport Assessment. The Appellants' approach is not supported as it assumes there is no other growth beyond that of the proposed site and the committed sites highlighted above. Therefore it excludes:

- Other development within South Ribble irrespective of size
- Other development in neighbouring authorities.

4.1.76. The approach adopted is not realistic and is a concern.

4.1.77. All of the issues raised above relating to trip rates, distribution, committed development and traffic growth lead to the underestimation of the Appeals Schemes' impact on the network.

4.1.78. Modelling Results and Supporting Audit Trail

4.1.79. As stated I consider the Appellants' modelling approach is unacceptable and results are not accepted to represent the network with development. It is noted that the Vectos microsimulation model has not been verified or accepted by National Highways or LCC.

4.1.80. The Appellants' Transport Assessment (TA) paragraphs 7.17 to 7.52 provides a snapshot of modelling results under the heading 'Journey Time Analysis'. Unfortunately, there is limited information available to allow the results to be broken down. All that is provided are corridor wide journey times to allow an understanding of changes in journey times with and without development. This does not allow the identification of impacts at specific locations.

- 4.1.81. I have reviewed this available information and highlight below a number of surprising and concerning results.
- 4.1.82. I would note, in Table 7.3 of the TA, for a scenario with no dualling of the A582, when the development (1,100 unit scenario) is added to the network (with committed development – 2031, PM Peak) on Route 2, A582 Eastbound (Tank roundabout towards the motorway), traffic flows and average journey times reduce by 17 seconds.
- 4.1.83. Also in Table 7.3 of the TA, in the opposite direction (westbound) the model indicates that the journey time on this route is 1,158 seconds (19.3mins) to travel circa 4km (without development); this equates to vehicles driving at an average speed of circa 7.6mph for the whole corridor. The modelling indicates this increases to 1,310 seconds (22.8mins) with development (1100 unit scenario); this equates to vehicles driving at an average speed of circa 6.5mph for the whole corridor. These modelled results are not highlighted as a concern by the Appellants. The TA in paragraphs 4.18 onwards, states that a "Vision and Validate" approach has been adopted. The Appellants has been clear that the success of "Vision and Validate" is reliant on increased congestion and reduced network reliability to drive modal shift from the car. Therefore, the model results are not seen as a concern to the Appellants. However, it most certainly is a concern to the Highway Authority whose responsibility is for network reliability and safety of all users.
- 4.1.84. A further example of surprising results is found In Table 7.5 of the TA, on Route 4 (B5254 Leyland Road, Penwortham Bridge to Stanifield roundabout) in a no A582 dualling scenario. In the PM peak, Southbound, the modelled journey time is 771 seconds (12.85mins) to travel circa 4.2km in a without development scenario. This equates to vehicles driving at an average speed of circa 11.8mph for the whole corridor. With development (1100 units but having only 40 units served off Bee Lane), the journey time increases to 917seconds (15.29mins). This equates to vehicles driving at an average speed of circa 9.8mph for the whole corridor. Again for the reasons given above this is not a concern to the Appellants but is for the highway authority.

- 4.1.85. In Table 7.7 of the TA, on Route 6 (B5257 Coote Lane-Brownedge Road) PM peak, EB without development, the modelled journey time is 656 seconds (10.9mins) to travel circa 4km; without development this equates to vehicles driving at an average speed of circa 13.7mph for the whole corridor. With development (1100 unit scenario) this increases to 832 seconds (13.9mins); this equates to vehicles driving at an average speed of circa 10.8mph for the whole corridor. Again, this is not a concern to the Appellants.
- 4.1.86. The inconsistencies in the modelling results are further highlighted by Table 7.14. On route 6 (Coote Lane-Brownedge Road) in an eastbound direction, when the development scale increases from 1100 to 1350 (- without dualling) the model shows the route to be 49 seconds faster.
- 4.1.87. With regard to the Appellants assessment of journey times this clearly highlights concerns with their "Vision and Validate" approach. The Appellants own results show that on the A582 with average speeds as low as 7.6mph, this has not driven a step change towards sustainable modes in this area. Similarly on the B5254 (Leyland Road) with average speeds of 11.8mph, this has not driven a step change towards sustainable modes in this area.
- 4.1.88. This simple review of the Appellants TA 'with development' shows the slowest corridor speeds are on the 'A' classified road. My view is that this will not drive the step change for modal shift as suggested by the Appellants. It will in fact promote additional rat running, using parallel less appropriate routes, with potential resulting safety issues.
- 4.1.89. The Appellants' Transport Assessment (TA) paragraphs 7.53-7.55 provides a snapshot of network results.
- 4.1.90. The results presented in Table 7.16 of paragraph 7.53 in the TA, only cover Junction 29 of the M6 within the National Highways Strategic Network. There is no similar

information presented on the Local Highway Network. This again highlights concerns that I have raised with the lack of information presented to enable suitable scrutiny.

4.1.91. I would highlight that these results on the strategic network raise concerns. At a number of locations highlighted in Table 7.16, I question the results, as traffic levels reduce on the network when development is added (1100 unit scenario). This occurs during the PM peak, for example: South of M6 J29 where there is a reduction of 439 trips (with development scenario); North of M6 J29 shows a reduction of 212 trips; East of M6 J29 a reduction of 82 trips; and West of M6 J29 a reduction 111 trips. This concern is further compounded when the development scenario increase to 1350 units. This results in additional trip reductions (when compared to the 1100 unit scenario), which is again not logical.

4.1.92. Technical Assessment Conclusion

4.1.93. I consider the technical assessment does not represent the likely impacts of the proposal for the reasons highlighted above.

4.1.94. The assumptions in the base scenario are flawed. Our concerns with these assumptions are highlighted above. The base microsimulation model is not acceptable for the reasons highlighted above and in more detail within the WSP report. I consider well validated microsimulation models can be used to support a traditional approach of modelling individual junctions using traditional proprietary software. However, all base models need to be sense checked and validated to fully represent the network, including junction detail and observed queuing.

4.1.95. My fundamental concerns in regard to RfR 1 and RfR 2 with the Appellant's modelling methodology are:

- The use of a corridor-based microsimulation that is not supplemented with individual junction models/results;
- The lack of transparency and detail provided with the modelling inputs and outputs to allow a suitable level of scrutiny;

- The Appellant's' use of flawed assumptions as set out in my evidence above, under Reason for Refusal 2 - Transport Assessment and Technical Evidence; and
- The Appellant's use of traffic data influenced by Covid19.;

4.1.96. Consequently, Lancashire County Council has undertaken its own assessment at a cost to the authority. The technical assessment undertaken by LCC is presented in section 5 of this evidence.

4.2. Reason for Refusal 3: Highway Infrastructure Bee Lane Bridge

- 4.2.1. As highlighted earlier in my evidence under paragraph 4.0.2, there are a number of subjects within each of the Reasons for Refusal (RfR) that will be common to several of the other Reasons for Refusal. In this section I deal with Bee Lane bridge which clearly has a crossover with Masterplanning (RfR 5) and the Cross Borough Link Road (RfR 4).
- 4.2.2. LCC's statutory comments (October 2021) identified a number of concerns with the Bee Lane proposal as presented in the TA. These comments highlighted the pinch point and the lack of provision for sustainable users and those with additional mobility needs. A copy of these comments are provided in APPENDIX 2. At that time it was considered that the consequence of not addressing these matters would result in highway safety issues, with conflict between motorised and sustainable users.
- 4.2.3. Bee Lane bridge and its current use is described in paragraphs 2.4.18 – 2.4.20 above and also below.
- 4.2.4. The historic Bee Lane bridge is 6.5m wide between brick parapets and has no parapet protection in place; there is no separation of vehicles, pedestrians and cyclists. Photographs of Bee Lane, can be found in APPENDIX 9.
- 4.2.5. Bee Lane bridge is currently very lightly used by pedestrians and cyclists, mainly for recreational purposes. There are also low levels of traffic serving approximately 45 existing residential properties and businesses. The two way traffic flow across Bee Lane bridge in 2018 during the am peak was 29 vehicles and in the pm peak was 54 vehicles. The current bridge with no separation between users has not resulted in any recorded injury accidents in the last 5 years. This suggests the current provision is acceptable for the existing level of use.
- 4.2.6. Bee Lane will be the principal route for sustainable movements from this 1,100 unit residential site and will result in substantial uplift in use by pedestrians and cyclists accessing the wider built environment to bus stops, schools, and local amenities.

4.2.7. Based on the Appellants' TA (Table 6.14), between 8:00-9:00 there will be 264 (2way) pedestrians and cyclists for the whole site. This excludes those who may choose to use the high frequency PT services on Leyland Road. A high proportion of these pedestrians and cyclists will use Bee Lane Bridge. Over a 12h period this equates to 1,011 pedestrians and cyclists. Again, this excludes those who may choose to use the high frequency PT services on Leyland Road. The use by motorised vehicles (2 way) will also increase as a consequence of the 40 units proposed, by circa 23 in both the am and pm peaks. It is the proposed substantial increase in sustainable users across Bee Lane bridge that now requires appropriate infrastructure to satisfy the needs of all users safely.

4.2.8. In paragraph 4.2.2, I highlight that the statutory comments provided to the Appellants in regard to their proposal at Bee Lane bridge as presented in drawing VN211918-D105 Revision - , as per their TA. In my statutory comments and during discussions with the Appellants, I have highlighted the constraints of the Bee Lane bridge and due to these constraints I do not consider a satisfactory and safe layout can be achieved. This layout would need to fully consider appropriate segregated provision across the bridge for pedestrians, cyclists and all vehicle types that will require to use the bridge, whilst also ensuring adequate clearance for parapet protection. I have recently been made aware of a revision (Revision A) to drawing VN211918-D105, which shows a narrow 4.1m carriageway for 2 way movement. In line with previous comments this layout is not considered a satisfactory safe layout. In the table below I highlight typical widths of vehicles. These clearly demonstrate why 2 way movement is not achievable over Bee Lane bridge with regard to all users, safely segregated.

Table 5: Typical Vehicle Widths		
Vehicle type	Body Width, no wing mirrors	Total width of vehicle
Commercial vehicle (including tractors)	2.50m	3.00m
Van	2.00m	2.40m
Range Rover	2.07m	2.22m
Ford Fiesta	1.72m	1.97m
Bicycle (single file)	distance from kerb/verge 0.75m distance from cyclist to vehicle 1.5m	2.25m (kerb/verge to overtaking vehicle)

Note: the above table excludes tolerance between vehicles

4.2.9. In response to statutory comments from LCC, NH and NR, the Appellants prepared a note to consider infrastructure at Bee Lane bridge. The details of the Appellants' proposals for Bee Lane bridge are set out in the Vectos TN04 (CD 10.40), dated November 2021. The proposals, with priority working, are described as a possible layout, and the review concludes that the proposed development can be accommodated '*without having a significant impact on the operation of the network or road safety*'. There would appear to be no Road Safety Audit undertaken on the design in regard to the Bee Lane Bridge proposals. I will address this matter further under the heading 'Bee Lane Bridge Design and Road Safety Audit (RSA)', below. Vectos TN04 states that the proposed layout:

'assumes a pedestrian prioritised street arrangement, where vehicles are perceived as 'guests' in this environment.'

4.2.10. I consider the limited provision proposed in TN04 does not satisfy the needs for pedestrians or cyclists. The layout shows a 1.8m wide pedestrian area / parapet protection area on both sides of the bridge with a 3.0m wide traffic lane. These proposals do not provide any dedicated provision for cyclists. The proposals provide a give way priority system over the 3.0m wide traffic lane for vehicles and cyclists.

4.2.11. For a major development site with a "Vision" that proposes a step-change in the levels of sustainable travel, I would expect high quality infrastructure provision for sustainable users, particularly on this key route across Bee Lane Bridge. This is essential to ensure conflict between users is avoided and all users are adequately catered for. However, I consider that the Appellants' improvements proposed to the Bee Lane bridge, as identified in TN04, are not sufficient to satisfy the additional requirements (both the traffic generated by the proposal and the substantial increase in the numbers of pedestrians and cyclists that would use the bridge).

4.2.12. I consider the proposals will result in highway safety issues for cyclists

4.2.13. It has not been demonstrated how cyclists will be able to safely negotiate the proposed on-road priority give way system. This is intended to operate in close proximity (circa 30m) of the stop line at the Leyland Road junction. The proximity of the proposed traffic signals (Drawing No. VN211918-D107 within TN04) introduces

real safety concern over how the priority give way will operate in practice, in particular, vehicle compliance with opposing cyclists. For example, eastbound vehicles approaching the priority give way section and able to see a green light at the signals ahead may be less prepared to give way to oncoming cyclists. In the westbound direction vehicles having been given a green light through the signals could be expected to be less compliant when faced almost immediately with the give way priority. My view is that this give way priority is located too close to the proposed signalised junction. I consider the proximity of the junction significantly exacerbates the risk of vehicles not being compliant. The risk to cyclists given their vulnerable road user status is high. I consider the current proposals for Bee Lane bridge would result in significant harm and the impact with regard to sustainable users would be severe.

4.2.14. LTN 1/20 Cycle Infrastructure Design (CD 10.43) sets out design standards for infrastructure with regard to cyclists and other users. The proposals within TN04 in regard to cyclists are substandard in regard to this guidance. For the avoidance of doubt the proposals would be considered sub-standard for a much smaller development, let alone one that had set such weight on a "Vision" of delivering a step change for sustainable modes.

4.2.15. I consider the proposals will result in highway safety issues for pedestrians

4.2.16. The pedestrian provision is a 1.8m wide strip on both sides between the bridge parapet and the carriageway, separated only by plastic bollards, with no kerbing or raised footway above the carriageway to provide physical separation. The priority give-way arrangement increases the potential for vehicle-vehicle or vehicle-cyclist conflict and for errant vehicles to deviate and encroach into the pedestrian area. There is clearly no safe refuge for pedestrians, given the adjacent parapet wall. The carriageway width proposed is 3.0m. A larger vehicle, such as a fire appliance is 2.55m wide, plus additional width for wing mirrors (2x250mm), see APPENDIX 26 for typical widths of vehicles. These emergency vehicles, larger delivery vehicles or refuge vehicles etc. will be passing in close proximity to pedestrians constrained between the bollards and the parapet. I believe the resulting environment would be considered intimidating for many pedestrians.

4.2.17. I have concerns that there are real safety implications for sustainable users and the perception of safety is likely to be low, particularly when regard is given to the poor levels of lighting on Bee Lane and lack of lighting on the bridge, the Appellants has offered no details that will overcome this matter). I also do not consider that the proposals have given suitable consideration for vulnerable road users and their needs, such as those with mobility impairment and visual impairment.

4.2.18. It should also be noted that the School is proposed on land that can be accessed by Bee Lane. I consider insufficient information has been provided on this matter. Clearly the bridge proposals and the proposals for Bee Lane are not suited to parents with children and the vehicle movements (and parking issues) we see associated with school drop off and pick up. Clearly, the masterplan, phasing and access strategy should address the school in more detail to allow understanding of the true likely impacts of the proposals.

4.2.19. Given the concerns I have set out above, I highlight in below the requirements set out by NPPF (paragraphs 111 and 112) in regard to infrastructure:

'Paragraph 111. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

Paragraph 112. Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid

unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; ...

4.2.20. In relation to Paragraph 112 a) to d), it is clear to me that the Appellants' proposals for the Bee Lane bridge do not meet any of the requirements a) to d) above.

4.2.21. Bee Lane Bridge Design and Road Safety Audit (RSA)

4.2.22. A Road Safety Audit (RSA) was undertaken by the Appellants for the Bee Lane site access. I have concerns over the scope of the RSA which I address in more detail below.

4.2.23. The following documents are of specific relevance in relation to the Bee Lane Bridge alongside the Transport Assessment submitted:

Date	Document	
17/11/21	RSA Findings Designers Response (CD 10.57)	Vectos
26/11/21	Road Safety Audit (CD 10.58)- only considers site access with (no footway over bridge and full width being used for motorised users - as highlighted on Vectos Drg VN211918-D105	Grange Transport Consulting
Nov 2021	Technical Note 4 (CD 10.40)	Vectos

4.2.24. I would highlight that the Road Safety Audit site visit was undertaken on the 23 November 21, with publication of the Road Safety Audit on the 26 November 21. It is unclear why a designers response was prepared on the 17 November 21, in advance of the Road Safety Audit taking place, as it should respond to issues raised in the audit. Vectos TN04, which sets out the Appellants' proposals of a priority working over Bee Lane bridge, was also prepared in November 2021, following LCC statutory

comments that raised concerns with Bee Lane bridge proposals that were set out in the original TA.

4.2.25. The Road Safety Audit (26 November 21) identified four issues:

Limited visibility for pedestrians crossing on the site access road (visibility envelope into site access); eastern extent of footway on Bee Lane (southern kerb alignment); site access issue with swept path of refuse vehicles (vehicles intruding into opposing carriageway); and gated field access – right turning collision with new kerbing. A review of the RSA and the drawings attached would suggest the auditor has not reviewed TN04 despite it being included in the package of supplied documents. Accordingly, no consideration has been given to the priority working arrangement or the associated provision as highlighted on the Vectos drawing VN211918-D107 (as contained in TN04).

4.2.26. The issues raised in the RSA relate only to the proposed new access from the development (40 units) onto Bee Lane, and do not deal with the bridge proposals. I therefore have concerns about the scope and level of detail contained within the Road Safety Audit. If the bridge has been considered in the RSA and no issues have been identified, then I consider there has not been adequate regard for sustainable/vulnerable users and the potential substantial increase in these types of movements, the operation of the priority give way in such close proximity to the Leyland Road junction and particularly the safety issues presented for cyclists.

4.2.27. Other Concerns

4.2.28. I have further concerns with the proposals related to Bee Lane and Bee Lane Bridge that remain unaddressed at the time of writing.

4.2.29. The Appellants' proposals for Bee Lane bridge cannot be considered in isolation. The proposals must be considered in conjunction with the proposals at Bee Lane/Leyland Road junction and also the Bee Lane/new site access junction, as well as taking into careful consideration the characteristic of the existing Bee Lane to the west of the proposed site access.

4.2.30. Bee Lane / Leyland Road junction

4.2.31. With regard to the proposed new signalised layout at Bee Lane/The Cawsey and Leyland Road, I provided the following comments to Vectos on 01 June 22. These requested that Vectos:

- Include provision that support both on/off road cyclists negating against conflict with pedestrians.
- Include private driveways and that to support safe access and egress
- Forward swept paths of a large refuse vehicle making right turns as I am concerned that the layout as presented does not satisfy this movement.
- Indicate where all signal heads are to be located as the junction is compact in areas.
- Indicate lane widths.

The above needs to be agreed now, then satisfy a safety audit (of which LCC support). This layout as presented cannot be conditioned.

- Please can you forward modelling results and the model itself, once the above has been taken on board.

The Appellants has not provided a response. Based on the layout included in TN04 further information is required. To date it has not been demonstrated that the proposed development would not have a severe adverse impact on the local highway network at the Bee Lane Leyland Road. Based on current design there are safety issues as highlighted above, which if not resolved will result in a severe impact.

4.2.32. Proposed New Site Access with Bee Lane

4.2.33. The new site access with Bee Lane is shown in Plan, VN211918-D105-A Bee Lane Site Access.

4.2.34. Again, I provided the following comments on the proposals to Vectos on 01 June 22. These stated:

- For the avoidance of doubt what does this access support, 40units or provides your layout for the CBLR, what about other users on this using this local and wider corridor.
- Your road width at 5.5m at your priority junction does not support manoeuvring of PT or service vehicles (links back to the above)

- Not clear whether visibility to the left can be achieved and maintained at the junction.
- Ped provision over the bridge is on the north side, with simple crossing provision back onto the south side. I note limited visibility for those crossing to the right at oncoming vehicles.
- Issue with cyclists and conflict with pedestrians
- Not satisfied with the width at 1.8m as shown, (also does this width include or exclude the bollards). Bollards will be prone to damage and influence usable highway width when regard is had to wingmirrors.
- What are the pedestrian, cyclist and equestrian desire lines in the area, how does this link to the wider area now, during construction and post-delivery.
- What regard have you had to street lighting are you proposing any where will it be located
- The width over the bridge is not suitable for 2 way motorised movement satisfying the needs of the site and that of the local existing community
- What is Network Rails position and their requirements on the structure and its capacity to support development. Network Rail evidence is required.

The Appellants has not provided any adequate response. Based on the layout presented further information is required. To date access had not been agreed.

4.2.35. Bee Lane west of the new site access.

4.2.36. There is no proposed improvements to this section of Bee Lane. This section is a long straight road with no traffic calming and limited poor lighting. The implications of this need to be taken into consideration within the Road Safety Audit.

4.2.37. On the 10 June 22, Paul Whittaker (Vectos) agreed to provide an update on the above matters regarding Bee Lane/Leyland Road junction, Bee Lane Bridge and Bee Lane site access junction. At the time of writing, LCC are still awaiting the further information on the masterplan relating to how the access strategy will be achieved, and a response to the concerns raised on 1 June 22. The absence of pre-application

engagement and delay in providing information has been detrimental to the planning process. This inquiry is dealing with plans that are not fully developed and unclear.

4.2.38. Network Rail and the West Coast Mainline (WCML)

4.2.39. I am of the opinion that any proposal at the Bee Lane Bridge should be approved and agreed with both Network Rail and LCC Highways prior to permission for access being granted.

4.2.40. The Bee Lane bridge spans over the West Coast Mainline (WCML). This is a vital corridor for rail passengers and freight. APPENDIX 22 provides a short report on the WCML prepared by the Rail Freight Group.

4.2.41. Network Rail are clear in their statutory comments provided that Bee Lane bridge and Flag Lane bridge are owned and maintained by Network Rail and no works are to be undertaken to the bridge without consultation with and permission of Network Rail. Statutory comments provided also include a number of important statements:

"The proposed Cross Borough Link Road provision to include the provision of a new bridge over the West Coast Main line in due course as the Bee Lane bridge is not suitable for the proposed future increase in traffic."

"The notable increase proposed in mixed use traffic will increase the risk of accidents/ incidents occurring on the Bee Lane bridge. In the event that a vehicle strikes the structure it could be necessary for Network Rail to close the bridge/ highway while it undertakes safety inspections &/ or repairs. The duration of such a closure would be dependent on the severity and position of the impact. While the probability of an accident occurring on the bridge might be considered low, the subsequent disruption to all users could be significant."

"Use of the Bee Lane and Flag Lane bridges by construction traffic associated with the project proposals should not be permitted as the risk of traffic conflicts/ accidents would increase. Should any exceptions be proposed these

should be pre-agreed with NR and be required to avoid peak travel and school drop-off/collection times"

- 4.2.42. The full statutory comments provided by Network Rail are included in APPENDIX 23. LCC Highways fully supports the position of Network Rail.
- 4.2.43. Network Rail clearly express the view that a new bridge is required in order to provide the CBLR.
- 4.2.44. The Construction Environmental Management Plan does not set out the access strategy for construction. This is required to demonstrate that Network Rail's requirements are complied with in regard to prevention of construction traffic over the Bee Lane bridge.
- 4.2.45. The WCML is significant national infrastructure. Damage to the bridge stemming from conflict between users could have a wide impact on transport of people and goods by rail.
- 4.2.46. I have offered a potential solution to the issues raised but this has not been taken up by the Appellants. I consider the potential solutions for the issues raised are a separate bridge to accommodate sustainable users, or a new bridge entirely. LCC Public Transport have confirmed that they support either proposal and that this would safely and adequately accommodate public transport, subject to the internal layout being suitable for PT movement.

4.3. Reason for Refusal 4 and 7: Cross Borough Link Road Delivery (RfR 4) and Policy A2 and CBLR Delivery (RfR 7)

4.3.1. As highlighted earlier in my evidence under paragraph 4.0.2, there are a number of subjects within each of the Reasons for Refusal (RfR) that will be common to several of the other Reasons for Refusal. In this section I deal with Cross Borough Link Road Delivery which is the common to both RfR 4 and RfR 7. The CBLR Reasons for Refusal's clearly has crossover with Bee Lane bridge (RfR 3) and Masterplanning (RfR 5). Therefore my evidence, presented in this section sets out the detail in support of both RfR 4 and RfR 7.

4.3.2. In Paragraphs 2.4.24 – 2.4.29, I briefly describe some of the early history to the CBLR. In addition, the 2000 South Ribble Local Plan safeguarded land at Pickerings Farm for development needs, beyond that plan period but this required comprehensive development of the land. The Local Plan (2000) also highlighted the need for the link road to serve not only the site but the wider local area.

4.3.3. The current Local Plan, policy A2 and its justification as written reads as follows:

Policy A2 – Cross Borough Link Road (Development Link Road)

Land will be protected from physical development for the delivery of the Cross Borough Link Road. The Cross Borough Link Road comprises:

- a) A road to be constructed from Carrwood Road to The Cawsey, as shown on the Policies Map.
- b) A road to be constructed through the major development site at Pickering's Farm as shown diagrammatically on the Policies Map

Justification for Policy A2

Paragraph 4.20. A road is to be constructed from Carrwood Road to The Cawsey in order to open up land for development (Lostock Hall Gas Works) and to serve as a key part of the Cross Borough Link Road. This section of the link road will continue through the major development site of Pickering's Farm. Once both elements of the road are complete, they are to be linked to provide the full Cross Borough Link Road.

The link road will improve accessibility in an east-west direction through the borough, increase community access to the range of services within the borough and help traffic flow on existing roads. The completion of the link road is to be delivered in the Plan period.

Paragraph 4.21 The section of link road through the major development site at Pickering's Farm (see Policy C1) will be implemented in accordance with an agreed phasing and infrastructure delivery schedule. It will be provided through developer contributions and completed within an agreed timescale.

Paragraph 4.23 The proposed link road also provides an opportunity to improve public transport, to help increase accessibility across this part of the borough.

4.3.4. The policies map clearly shows the CBLR extending from the Bee Lane/Leyland Road/The Cawsey junction (east of the Bee Lane bridge) to the A582.

4.3.5. I consider the design of the CBLR should follow the design characteristics of The Cawsey, which is already completed. The link road when delivered is expected to carry a B road classification, as a continuation of B6230 Hennel Lane.

4.3.6. The justification for policy A2 clearly states this should be provided through developer contributions and completed within an agreed timescale. The completion of the link road is expected in the plan period.

4.3.7. The Pickering's Farm site is identified in paragraph 5.26 as a Strategic Location in the Central Lancashire Adopted Core Strategy (July 2012) (CD 5.1). The Core Strategy at paragraph 5.28, states that:

"it is imperative that these Strategic Sites and Locations are accompanied by the timely delivery of infrastructure, otherwise the sites would not be acceptable".

The Core Strategy in Paragraph 5.51 is clear that there needs to be:

"a comprehensive assessment of the transport network improvements", identifying a "strategic and integrated solution through the provision of major additional transport infrastructure"

- 4.3.8. In the following section I will explain the importance of the CBLR and why it is necessary, including why the Appeals fails to provide certainty that the CBLR will be delivered.
- 4.3.9. CBLR – Road Hierarchy and Connectivity
- 4.3.10. In assessing the overall site and masterplan, with specific regard for movement, it is essential that there is an understanding of the road network surrounding the site and how it is intended to function and what function the CBLR will have.
- 4.3.11. The A582 is located to the west of the site and the built environment. It forms part of the Major Road Network (MRN). The MRN comprises the most economically and regionally important 'A' roads that sit between the Strategic Road Network (SRN) and Local Road Network (LRN). These roads are designed in a manner which reflects their regional and economic importance.
- 4.3.12. The MRN is referred to as 'Strategic inter-urban non-trunk roads' in MfS2 (CD 10.38). This terminology captures the function of the A582 and its strategic use to satisfy inter-urban journeys (i.e. those between settlements rather than local movements).
- 4.3.13. In line with this strategic function the existing A582 predominately does not include any frontage access or any access provision for individual cul-de-sac residential developments. The motorised access strategy for this site undermines the MRN function with its cul-de-sac approach for all motorised journeys.
- 4.3.14. I do not consider the single motorised vehicle access at the A582, proposed onto the MRN, is suitable or logical to cater for development needs from a local journey perspective. The CBLR would address appropriate local access for this site.
- 4.3.15. The following table shows minimum distances (from the site access) and maximum distances (from dwellings furthest from the site access). The column titled 'A582' is that proposed by the Appellants, with the A582 being the primary access. This is compared with the column titled 'Bee Lane' that considers an appropriately designed CBLR and bridge over Bee Lane.

4.3.16. Minimum / Maximum Distances to Amenities

Table 7: Minimum / Maximum distances to Amenities				
Location	A582		Bee Lane	
	Constrained As Proposed(1,060 Units)		Unconstrained With CBLR (1,100 Units)	
	Min	Max	Min	Max
SPAR Victoria Terrace(Lostock H)	2.3km	3.6km	1.2km	2.5km
Co-Op Food (Lostock Hall)	2.5km	3.8km	1.4km	2.8km
Tesco (Penwortham)	3.8km	5.1km	3.7km	5.0km
Booths (Penwortham)	2.2km	3.5km	3.0km	4.3km
Lostock Hall Medical Centre	2.6km	3.9km	1.5km	2.9km
Kingsfold Medical Centre	1.8km	2.1km	2.4km	3.7km
New Lane Dental Care	2.4km	3.7km	1.6km	2.9km
Penwortham Lane Post Office	3.0km	4.3km	950m	1.25km
Bus Stop (Service 111 Preston – Leyland) (Service 714 Penwortham All Hallows) (Service 767 Hutton Grammar)	2.3km (Lockstock Hall Pleasant Retreat)	3.6km	600m (Bee Lane)	1.9km
Bus Stop (Service 119 Chorley – Preston)	800m (Brook Lane)	2.1km	2.3km (Brook Lane)	3.6km

4.3.17. The Table above highlights that for journeys by vehicle, the route over the WCML is shorter (as the main local centre(s) is to the east). Without the CBLR these example local journeys require:

- Direct use of the MRN
- longer journeys to be travelled which is not consistent with the NPPF which seeks to minimise the length of journeys.

It has to be acknowledged that there are individuals who are not confident in driving on the MRN, for example some elderly or those with health or mobility issues. I consider the single access onto the A582 may present difficulties for many residents to access amenities. This is not a fully inclusive approach and not in line with the NPPF (paragraph 112b).

- 4.3.18. I would accept that the journey to the Booths foodstore and Kingsfold Medical Centre are shorter using the A582 MRN. However I would also note that these amenities can be accessed by the LRN (with CBLR) and for the reasons given above this would be attractive to a significant number of residents within this proposed site. When consideration is then given to journeys that include multiple purposes to other amenities (i.e. school drop off/pick up, dentist, hairdressers, café, local shop, takeaway etc) the desire to use the LRN is even greater and clearly more efficient, (with potential shorter and fewer journeys).
- 4.3.19. As proposed, drivers will still inevitably use the shortest route from the A582 to access local amenities within Lostock Hall/Tardy Gate and others nearby, such as the Capitol Centre, Bamber Bridge, Walton Le Dale. This will involve the use of local lanes, such as Chain House Lane and Coote Lane and present issues that I expand on below.
- 4.3.20. Coote Lane is narrow in sections and includes a section of priority give way; it also has a level of on-street parking. Coote Lane does not have a bad accident record. However there has been a fatality near the Tardy Gate Trading Estate involving one car in 2018. I have a concern when considering the potential uplift in vehicle movements associated with the site (all served off the A582) that conditions for existing residents on Coote Lane will deteriorate, impacting on highway safety and amenity to what is generally a safe lane. No traffic calming measures/management measures are proposed for Coote Lane to manage traffic increases, or to deter its use as a consequence of the development. No mitigation is proposed by the Appellants.
- 4.3.21. I have previously highlighted the modelling results from the Vectos Transport Assessment in RfR 2 above. These results indicate speeds for Coote Lane are faster than the competing A582 and therefore there is potential for an even greater level of use until the A582 improvement/dualling scheme is delivered.
- 4.3.22. Under RfR 3 I highlight where I have multiple concerns with regard to safety across Bee Lane bridge. For this reason, I consider a further consequence of a no CBLR scenario will result in parents from the development site also having safety concerns. These concerns will be in regard to the use of the existing lanes and Bee Lane bridge by unaccompanied children to access local amenities, schools and bus stops. In this

circumstance, the likelihood is that parents will make that journey by car to drop a child off at a bus stop or school. Again using the shortest route, Coote Lane.

4.3.23. For some activities such as shopping, or purchasing food from a takeaway, the car is often the mode of choice, even for short local journeys due to issues carrying purchases or the need to get purchases home expediently.

4.3.24. Longer routeing would have a disproportionate negative impact on those with children and those with disabilities, where vehicles may be a requirement as opposed to a lifestyle choice. This will result in harm with higher fuel use and greater levels of congestion directly impacting on those users who cannot choose to shift mode of transport due to personal circumstance. In line with the NPPF (paragraph 106) it is important to minimise length of journeys needed for journey purposes for employment, shopping, leisure, education and other activities.

4.3.25. Connectivity

4.3.26. The Appellants characterise the proposed masterplan using the MRN as beneficial, and argues that it encourages active travel to the east. In practice the site is situated as such that safe access to both the Major Road Network (MRN) and Local Road Network (LRN) could be possible for both motorised and non-motorised users, with the appropriate infrastructure. This would see pedestrian and cycle provision on A582 (as proposed with the dualling scheme) and address the limitation within the Appellants TN04 proposals over Bee Lane Bridge

4.3.27. Notwithstanding all the points raised above and the wider benefit to the borough when it comes to the east-west connectivity that a CBLR would bring, there are also significant benefits when considering public transport, servicing, routing and accessibility. The local plan justification for policy A2 states:

'4.23 The proposed link road also provides an opportunity to improve public transport, to help increase accessibility across this part of the borough'

4.3.28. Without proper integration into the LRN with appropriate highway infrastructure, I do not consider the proposed development will adequately meet any of the criteria A-D

of Paragraph 112 (these are highlighted in paragraph 3.1.6 above) or meet criteria A of Paragraph 106 of the NPPF set out below, which states:

- a) support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities

4.3.29. Road Hierarchy and Design

4.3.30. Paragraph 110 of the NPPF requires the following:

Paragraph 110 c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46;

4.3.31. In regard to the National Model Design Code Guidance Notes, the following extracts are of particular note:

Paragraph 18. The street network is important because it sets a long-lasting framework for moving around. In most cases, it will outlive the buildings it originally served.

Paragraph 19. A connected street network is one that provides a variety and choice of streets for moving around a place. It is direct, allowing people to make efficient journeys. Direct routes make walking and cycling more attractive and increase activity, making the streets feel safer and more attractive. Connected street networks form the basis of most of our beautiful and well-used places. They are robust, flexible, consider environmental impacts and have been shown to stand the test of time.

Paragraph 20. In a well-connected network, each street has more than one connection to another street. This applies both within a development or local area and in relation to streets outside it. Cul-de-sac are only found at the tertiary level of street type (see P1:3) for accessing development rather than for wider movement.

- 4.3.32. Tertiary streets are used for access to small groups or clusters of homes. For a site of this size and scale this is not acceptable. An 1100 dwelling cul-de-sac is inappropriate and not compliant with the NMDC, and therefore NPPF paragraph 110.
- 4.3.33. Road classification, appropriate hierarchy and connectivity are important steps towards making road transport more efficient and safer. It helps in the adoption of measures to increase safety, in particular to discourage excess and inappropriate speed. This should be a fundamental consideration for an Appellants who wants to deliver a step change in how movement occurs. The CBLR would help to ensure the appropriate hierarchy of roads is maintained.
- 4.3.34. RfR 4 states: 'the application fails to provide adequate certainty that the section of the CBLR within the site, together with the necessary physical upgrading works to the Bee Lane bridge, will be delivered.'
- 4.3.35. I have set out above the weaknesses of the current application and the infrastructure proposed. I have set out that the application as presented only provides a cul-de-sac estate road for the vast majority of the dwellings. Under RfR 3 I have highlighted that the infrastructure across Bee Lane bridge as presented would give rise to serious safety concerns and that these have not been adequately addressed by the Appellants.
- 4.3.36. In addition, if further development were to come forward that exceeds the 1,100 dwellings on the Appeal sites, I consider the infrastructure proposed by the Appellants would not ensure delivery of the CBLR. By way of example, I consider below the parcel of land located between the 40 dwellings in the northeast corner and main 1,060 dwellings on the Appeal site accessed from A582. This land not within control of the Appellants. The highway access to this parcel of land could be achieved by a number of options, for example:
- By providing a through route of a similar standard that would connect the Appellants 1,060 unit site and on through to the existing Bee Lane bridge (creating a through route);

- By extending the access road from the proposed Appeal site from the A582 into the parcel of land, but not providing connection through to Bee Lane; or
- By extending the access road from the proposed Appeal site of 40 dwellings from the east (Bee Lane) into the parcel of land and not providing connection through to A582;

I consider none of the scenarios above would result in delivery of infrastructure that is appropriate to support a CBLR. Indeed, these scenarios would give rise to even greater concerns. The proposed provision over Bee Lane bridge would present severe safety concerns. All the concerns raised in RfR 3 and RFR 4 above would only be made worse. Therefore, even with further development, as presented, it can only be concluded that the current Appeal site fails to provide adequate certainty that the CBLR can be delivered.

4.3.37. The Appellants' access strategy is clear. Their view is that they do not need the CBLR and the improved through connectivity (for vehicles between the A582 and Leyland Road), including public transport, in order for this major site to come forward. I have set out clearly above why I consider this position is incorrect and not in line with NPPF with reference to:

- Road hierarchy
- Appropriate connectivity and efficient access to local amenities
- Highway safety
- Inclusive design with consideration for all users, including those with mobility impairment; and
- Public transport routing and accessibility

4.3.38. I consider the Appellants position in regard to their access strategy has influenced their consideration for, and limited assessment of, the CBLR requirements as a cul-de-sac is being promoted.

4.3.39. As a result the Appellants' only present a strategy with access via the MRN for 1,060 units from their site. The Appellants Transport Assessment does not set out what the

impact would be if consideration was given to a CBLR scenario with vehicular through routeing available between the A582 and Leyland Road/The Cawsey (at /Bee Lane junction). I have carried out further analysis to understand the likely expected routing that would take place from the proposed site under this scenario. I consider the CBLR scenario with new junction at Bee Lane/Leyland Road would attract circa 49% of development traffic (my analysis is presented in APPENDIX 15). From the 1100 total dwellings, this equates to an attraction of 380 trips (2way) in both the am and pm peaks to Leyland Road. My analysis excludes redistribution of existing traffic which could be attracted to the CBLR as a result of journey time benefits or reduced journey length.

4.3.40. The simple analysis I present above shows that the location of the impacts from this major site will be very different under a CBLR scenario. However, the Appellants has not presented adequate evidence to understand the impact and therefore infrastructure requirements of a CBLR. It is therefore clear that the Appellants has failed to provide adequate certainty that the section of the CBLR within the site, together with the necessary physical upgrading works to the Bee Lane bridge, will be delivered.

4.4. Reason for Refusal 5: Policy C1 and Masterplan

- 4.4.1. Given the scale and strategic importance of the site, the SRBC Local Plan sets out how comprehensive development of the site is crucial to ensure delivery of essential infrastructure and local services.
- 4.4.2. Policy C1 sets out that planning permission will only be granted for the site subject to the submission of:
- a) An agreed Masterplan for the comprehensive development of the site;
 - b) A phasing and infrastructure delivery schedule; and
 - c) An agreed programme of implementation in accordance with the Masterplan and agreed design code.
- 4.4.3. From a highways perspective I consider the Masterplan for the comprehensive development of this site is fundamental to ensure development in this location does not simply come forward in a piecemeal manner. I consider the current proposals submitted by the Appellants (Applications A and B) to represent piecemeal development. This is a direct result of their failure to present clearly how a comprehensive Masterplan can and will be delivered.
- 4.4.4. I consider that the necessary Masterplan can only be considered acceptable if it can be concluded that the highway and transport impact for the comprehensive development of the site has been fully assessed and that it can be delivered, with consideration for sufficient detail in regard to infrastructure design/deliverability, planning requirements/deliverability and funding mechanism/viability.
- 4.4.5. The submitted documentation provided is insufficient in detail to clearly explain how the site will be delivered; the phasing plan does not provide sufficient detail and no programme of implementation has been agreed. As a result, this will cause harm by prejudicing the proper planning of the wider allocated site.
- 4.4.6. I am aware that others experts will be representing South Ribble as Local Planning Authority and will be presenting evidence to this Inquiry with regards planning

requirements/deliverability and funding mechanism/viability. Therefore my evidence will focus only on highway and transport matters.

4.4.7. Transport Assessment and the Appellants Masterplanning

4.4.8. Policy C1 sets out that a masterplan is required for the comprehensive development of the site. The justification for policy A2 in regard to the CBLR as set out above in paragraph 3.3.3 of my evidence is equally clear. Therefore the comprehensive development of the site must include appropriate consideration of the CBLR. There is, to date, no agreed Masterplan provided by the Appellants' for the comprehensive development of the site. As a result there has been no agreed Transport Assessment of the comprehensive development of the site, including CBLR. This is needed to understand the impacts and infrastructure requirements and to ensure delivery is not prejudiced by early phases of the site development.

4.4.9. In their TA, the Appellants have carried out an assessment for 1,100 dwellings as the submitted applications (A and B). They have also assessed 1,350 dwellings and a potential full site build out of up to 2,000 dwellings. With regard to the two outline Appeal Schemes, the Appellants states clearly that all but 40 dwellings will take access from a proposed new signalised junction of A582 Penwortham Way. As part Appeal A, only 40 dwellings in the north eastern parcel of the site will take access via Leyland Road and Bee Lane. A new priority junction is proposed to connect with Bee Lane. Therefore, the Appellant's Transport Assessment and subsequent modelling seeks to reflect this position and subsequent level of impact. The TA states the same trip generation and distribution assumptions were used for the 1,350 dwellings assessment except for some minor alterations. It is unclear what approach has been taken with the assessment of 2,000 dwellings.

4.4.10. Notwithstanding the position I have set out above under section 4.1 'Reason for Refusal 1 and 2: Modelling Methodology (RfR 1) and Transport Assessment and Technical Evidence (RfR 2)', where I provide evidence to show that it has not been demonstrated that the scoping and composition of technical supporting evidence of the submitted Transport Assessment is acceptable, I am also concerned that the information provided to date does not provide appropriate, clear and auditable

evidence to support the comprehensive Masterplan and necessary CBLR with the resulting impacts from the two Appeal applications onto Leyland Road and the adjacent local road network. The Appellants would appear to consider this is for development that comes later to assess and address. This is unacceptable and not a properly Masterplanned approach.

4.4.11. While LCC/NH have been forced to undertake a level of analysis, in advance of this Public Inquiry, in order to gain a clear understanding of the impacts of the two applications submitted, we have not been in a position to produce a comprehensive assessment in line with that which the Appellants should have progressed to support a Masterplan for the comprehensive development of the entire site, including CBLR.

4.4.12. Below I set out why the Masterplan as presented is not agreed and the key concerns raised by the failure of the Appellants to present adequate information in regard to the Masterplan proposals to support the Appeals. The Masterplans that have been provided by the Appellants fail to fully consider implications and assess potential impacts, these include, land required to deliver the completion of the CBLR and access and egress issues for existing premises within the site. I address these issues below.

4.4.13. Land required to deliver the completion of the CBLR including site compound and construction of a new bridge over the West Coast Mainline (WCML) Railway.

4.4.14. The Appellants suggests they do not prejudice the delivery of the CBLR and therefore the comprehensive development of the site; I disagree. I consider that in order to produce a coherent masterplan that will support delivery of the comprehensive development of the whole of the allocated site it is necessary to understand what infrastructure is to be delivered and how this will be delivered.

4.4.15. The failings of the current Masterplan and the Appellant's current approach are highlighted when consideration is given to the Appeal A, in particular the parcel of 40 dwellings located in the Northeast corner in close proximity to the existing Bee Lane Bridge. The Appellants has not presented any detail to demonstrate how the new bridge over the WCML railway, considered necessary to support the CBLR, will be

delivered, and therefore the land that this will require. Alternatively, if it is their position that a new bridge is not necessary, they have provided no details to satisfy the highway authority or the planning authority on this matter. This presents a clear unaddressed issue whereby land, in the northeast corner, that may be required to deliver the full CBLR and new bridge over the WCML, could potentially be given permission for development in advance of fully understanding what the requirements are in respect to the design of the new bridge.

4.4.16. It is not only an understanding of the bridge design and the land required for this new bridge that is required, but also the land that may be needed to undertake the construction, for example: creation of the site compound; storage of materials and plant; appropriate access requirements for construction traffic; and siting of large crane potentially required to remove the existing Bee Lane Bridge and lift in new a new bridge. I consider the failure to consider this above issue is a direct result of the Appellant's approach in failing to consider comprehensive development of the site including the CBLR. They appear to consider this to be a matter for development that comes latter to address.

4.4.17. Given the above, the Appellants clearly cannot suggests they do not prejudice the delivery of the CBLR and therefore the comprehensive development of the site.

4.4.18. Piecemeal Development, Cul De Sacs and Lack of Through or Emergency Access

4.4.19. As presented, the Appeals, in effect, provide two separate piecemeal developments. They provide one large cul-de-sac development of 1060 dwellings, accessed off the A582 Penwortham Way and one small cul-de-sac development of 40 dwellings accessed of Bee Lane. Emergency access has not been agreed for the new development parcels. The large cul-de-sac in particular is a concern and presents issues as highlighted under RfR 4 (in particular, paragraphs 4.3.9 – 4.3.14) where I highlight the issues with a single motorised vehicle access onto the A582 MRN from a large cul-de-sac and that this is not suitable or logical to cater for development needs from a major development site from a local journey perspective. Not only does the single access present issues for servicing, maintenance, refuse collection as well as resulting in a poor standard of routing for public transport into this major site, it

does not provide an appropriate alternative with regard to emergency access. If there were to be a major incident at the proposed A582 junction or on the access road that closed the access this would present a major access issue for all residents of the 1100 dwelling site. Appropriate emergency access is an important consideration in all major development sites. The Appellants has not addressed this matter in their Masterplan.

4.4.20. Loss of Existing Access Options for Existing Premises

4.4.21. As previously stated the allocated site contain around 45 existing residences and businesses. These are accessed off a combination of Bee Lane or Flag Lane. The characteristics of these existing rural lanes are set out under paragraphs 2.4.18 - 2.4.23. Under paragraph 2.4.23 I highlight that the TA indicates that Flag Lane will only provide motorised access to existing properties which will be encompassed within the new community.

4.4.22. The Appellants Masterplan proposals will inevitably result in existing premises within the site losing access that they currently enjoy from at least one of the current site access points i.e. Bee Lane or Flag Lane. This is inevitable if they are to control access from the wider site onto the existing lanes. However, this highway detail on what is required, can it be delivered, how it will be managed and operate has not been provided. Disappointingly, at the time of writing, despite requests, the Appellants has failed to provide adequate details as part of their Masterplanning in order for the local Highway Authority or existing local residents and businesses to understand the impact of the proposals and how access will be managed. These Appeals are in outline except for access. Therefore, I consider that not only does access for the new dwellings on the Appeal site need to be addressed, but also access to existing premises.

4.4.23. Movement and Masterplanning

4.4.24. In addition to the issues raised above it is clear that the Comprehensive Masterplan will be fundamental in influencing all forms of movement to/from and within the site and therefore the necessary supporting infrastructure, its design and deliverability. Movement issues, that are directly influenced by the current flaws within the

inadequate Masterplan proposals provided to date, are addressed under key headings below.

4.4.25. Access and Egress and Connectivity for Existing and Proposed Development

4.4.26. The current Masterplans for Appeals both show unconstrained access to the existing lanes in a number of locations. The current Masterplans simply show the new site local access roads crossing existing lanes. While the Appellants has stated there is to be no access to the lanes from the new development, there are no details showing how the Appellants intends to address this issue. As presented in the current plans (Illustrative Masterplan App. A, Drawing No. MP_00_1004 and Illustrative Masterplan App. B, Drawing No. MP_00_2004) this show connectivity from A582 to Leyland Road via existing lanes A clear example of the current lack of detail within the masterplan is highlighted in the northwest parcel where the new access road crosses the unadopted western section of Bee Lane.

4.4.27. It could be assumed that the Appellants could seek to address some of these issues through the use of road (lane) closures. This would require traffic regulation orders and would certainly require turning heads at appropriate locations. However, no detail has been shared at this stage. While the Appellants might argue that this is a reserved matter issue, from my perspective this and other matters set out below are fundamental.

4.4.28. Access Rights for Existing Premises off Private Lanes (Bee Lane and Nib Lane)

4.4.29. There is insufficient detail presented within the current Masterplan to highlight to owners of existing premises how their access rights will be impacted. Where roads are private (not adopted) there will be existing access rights. I would highlight that Nib Lane and the western section of Bee Lane is not adopted highway. For example a residence on the unadopted section of Bee Lane may have access rights that clearly state they have access to Leyland Road via Bee Lane. I am not privy to individual properties access rights. This information will be known by local businesses and residences and would be for the owners of those premises to highlight. However, with the limited detail presented in the current masterplan, residents are not able to understand if their access rights are being impacted. Clearly,

the information within the masterplan needs to be sufficient at this stage to allow those impacted by the proposals to understand what the implications are for them and for those making decisions to understand whether the proposals can be delivered. Uncertainty over existing access rights raises questions over the ability to control through movement.

4.4.30. Public Rights of Way and Equestrians

4.4.31. There is an extensive network of Public Rights of Way that run through, or are adjacent, to the Appeal site and improvement of these existing facilities as well as provision of new links could be expected to deliver sustainable development.

4.4.32. The current Masterplans for Sites A and B are inadequate to demonstrate how multiple public rights of way, crossed by new access roads, are to be maintained.

4.4.33. Sufficient detail is required to satisfy PROW and highways safety requirements.

4.4.34. It is not clear what if any consideration has been given to equestrians as part of the Masterplan. There is a large equestrian centre with stables located off Flag Lane and known equestrian use of the existing lanes within the site (see appendix 9 for photographs of the lanes and evidence of use by equestrians).

4.4.35. Parking

4.4.36. The potential impacts of on-street parking on PT routing should be considered in the development of the Masterplan. As a minimum, adequate parking provision will be required to ensure PT service reliability can be maintained.

4.4.37. The TA makes reference to South Ribble parking standards. It appears that maximum parking standards are being progressed. This promotes access and use to the private car for all land uses including residential dwellings.

4.4.38. Public Transport

4.4.39. The TA indicates that the Appellants have had early direct discussions with a commercial operator. An operator is willing to provide a new 30min service with the

point of access and egress being off the new access onto Penwortham Way. The new service will have a bus turnround somewhere within the site and operate a service between the site and Preston City Centre (including Preston Railway Station). The TA goes on to suggest 'flexibility for the route to be extended providing an internal loop around the wider masterplan area in due course'.

- 4.4.40. As highlighted in my statutory comment, I have concerns with that which is being proposed, this being a service of limited frequency which has limited destinations on route and isolated/not integrating with the neighbouring built environment. This will not satisfy customers' needs with the likely result that residents from the Appeal site, will use their private cars for many journeys.
- 4.4.41. In addition PT use is influenced by many other factors including, free or cheap parking charges at destinations, such as workplace or leisure, recreational locations and the availability of the private car, see APPENDIX 18 for CENSUS data including car availability. These matters cannot be addressed by the Appellants.
- 4.4.42. The Appellants have indicated the provision of service funding however no evidence is presented that post use of available funds any PT service provided within the Appeal site can be sustained indefinitely.
- 4.4.43. In conclusion of the above and in regard to the Masterplan proposals for PT, I consider that the proposals do not ensure that PT is an attractive alternative to the private car. I consider the Appellant's Masterplan proposals place the long term provision for public transport serving this site in serious doubt. This would lead to a major development that is car dependant, with much higher car use than has been assessed. The impact of this would lead to harm, increased congestion; this is not a scenario assessed by the Appellants.
- 4.4.44. I have been informed by South Ribble Council that a meeting has been arranged to discuss the content of the S106 and it is expected that public transport will be one of the topics for discussion.

4.4.45. Shared Space

4.4.46. I do not accept that the approach presented has fully considered all potential impacts on sustainable users.

4.4.47. The approach presented by the Appellants is to deliver all their site (1,100 dwellings) in advance of the Full CBLR and hence generate significant intensification of sustainable movements on these existing lanes.

4.4.48. These lanes do not have safe pedestrian footways to cater for existing and new users for:

- Children going to the nearest schools (Penwortham Broad Oak Primary School and Kingsfold Primary School both to the north, Lostock Hall Academy, Lostock Hall Community Primary School, Our Lady and St Gerards RC Primary School to the east and Farington Moss St Pauls C of E Primary School - to the south of the site;
- Elderly, mobility impaired, visually impaired users and those with non-visible disabilities; and
- Parents with pushchairs.

4.4.49. The Masterplan as presented gives rise to serious safety concerns for potentially high numbers of vulnerable road users on Bee Lane, where vehicle movements and speeds, based on the Appellants' current Masterplan would be greater than presented.

4.4.50. The signed traffic speeds on the predominantly long straight Bee Lane is 30mph. This lane will remain semi-rural for many years - even after development has commenced from the western edge. The lanes are not designed like modern estate roads with changes in horizontal alignment to encourage self-enforcing speed limits. Clearly, the Masterplan currently indicates that much of the site will not be developed until much later in the development build out. Many of these lanes are unlit or have limited lighting provision and therefore do not present suitable provision for sustainable users at all times of day and throughout the year.

- 4.4.51. The desire lines via the existing lanes (Bee Lane, Lords Lane and Flag Lane) do not present acceptable shared use routes. The Masterplan needs to demonstrate that the site can be brought forward in a safe and suitable manner from the early stages. I consider the current Masterplan fails to do this.
- 4.4.52. I consider that the Appellants need to review their approach and give much greater consideration to the current use of existing lanes and current accesses for existing properties and how these may need to be altered to create the necessary safe pedestrian environment. The approach will need to identify how pedestrians can be segregated from vehicular traffic (footpaths or off-road provision on desire lines).
- 4.4.53. Consideration must also be given to the latest government advice in regard to shared space and LTN 1/20 (CD 10.59) in regard to appropriate provision for sustainable users. The Department for Transport's Inclusive Transport Strategy advised authorities to pause schemes that include shared space, as set out below.
- 4.4.54. Shared space schemes which often incorporate level surfaces and limited separation have had a significant impact on vulnerable users (parents with prams/visually impaired/mobility impaired) and have created no-go areas for the disabled. There are concerns that inadequately considered shared space schemes with level surfaces are a violation of public sector equality duty. Inclusive design is therefore now considered to require an appropriate degree of separation between users.
- 4.4.55. In July 2018, the Department for Transport (DfT) called a pause to all development schemes featuring streets with level surfaces, issuing the following statement:
'we are requesting that local authorities pause any shared space schemes incorporating a level surface they are considering, and which are at the design stage.'
- 4.4.56. The National Design Guide/NMDC states:
Paragraph 102. In well-designed places, streets are public spaces that are open to all. They encourage people to walk and cycle rather than to depend upon cars, particularly for short, local journeys. They are accessible to all and designed to meet the needs of their most vulnerable users. They are places

where the design of shared space schemes, that remove or reduce the distinction between the pavement and carriageway, takes into consideration the needs of people with disabilities particularly visual impairment.

4.4.57. Consideration of the School site and the Current failings of the Masterplan

4.4.58. The Masterplan and mobility strategy as presented do not demonstrate delivery of infrastructure necessary to support the scale of development proposed. This is highlighted with the Appellant's proposals for shared use of existing lanes, particularly Bee Lane.

4.4.59. Access to the school site in its new location, utilising Bee Lane would be a very attractive proposition for parents dropping of a child. Given the Masterplan approach presented, there would be nothing preventing cars driving along Bee Lane to access the school and walk the last few metres. This would prove very difficult to control and could result in even greater issues at the Bee Lane/Leyland Road junction and with the proposed give-way priority over the bridge in such close proximity to this junction.

4.4.60. Consideration for a drop off parking facility for the school was considered as part of the previous application but I am unaware of any details as part of the current proposals and masterplan.

4.4.61. In the Appellant's shared space 'Vision' there will be many more sustainable users on the narrow Bee Lane, but with no footway or safe harbour for users i.e. no separation, poor lighting, long straight sections where there is no traffic calming other than the presence of walkers, cyclists, and equestrians to inhibit driver speed. Given the above, I consider the location of the school site is a concern given the limited information available in the Masterplan. As is common at most school sites, for both the AM and PM 'school peak' traffic period, significant vehicles numbers can be expected (as part of drop off and pick up of children). The school catchment area will not just be the proposed Appeal development site but also Lostock Hall and Penwortham and other adjoining areas to the south of Preston.

4.4.62. Given the issues highlighted above it is clear that access to the proposed school site needs to be fully addressed and understood in the Masterplan.

4.4.63. Summary of Reason for Refusal 5: Policy C1 and Masterplan

4.4.64. In summary, I have highlighted above where I consider the Appellant's Masterplan for the comprehensive development of the site is not acceptable at this stage and where further information is considered necessary.

4.4.65. The Masterplan should ensure development of the site follows a properly planned approach and establishes the principles of how this site can be brought forward in a sustainable way. The Masterplan must ensure that piecemeal development does not compromise the comprehensive development of the site and as such limit the opportunities to deliver a sustainable site or undermine the ability to secure/deliver highway changes.

4.4.66. At present the masterplan cannot be agreed, there is inadequate information to demonstrate that the issues I have raised above in paragraphs 4.4.3 to 4.4.65 can be overcome and suitably addressed. Many of these issues are fundamental to the Appellants assumptions for their movement Strategy and subsequent Technical Assessment. If the Appellants is unable to demonstrate these matters can be resolved then it cannot be concluded that many elements fundamental to the Masterplan, can be delivered. The Appeal site would then come forward in a very different way to that presented and assessed by the Appellants. If the masterplan cannot be delivered as presented by the Appellant's then their movement Strategy and Technical Assessment will be flawed.

4.4.67. If permission were granted under these circumstances the potential impacts of the development would be very different. These impacts would not have been assessed and it would not have been demonstrated that the development would not have a severe adverse impact on the local highway network.

4.5. Reason for Refusal 6: Phasing and Infrastructure Delivery Schedule

4.5.1. Policy C1 of the South Ribble Local Plan requires the submission of a phasing and infrastructure delivery schedule and an agreed programme of implementation. At the time of my statutory comments, the submitted documentation provided had insufficient detail on how the site will be delivered and no detailed phasing plan had been submitted, with no programme of implementation agreed. Therefore, the scheme was contrary to Policy C1.

4.5.2. In June 2022, Avison Young provided a draft 'Indicative Scheme Phasing and Implementation Plan' (APPENDIX 24). This document attempts to set out the delivery of the development, what each phase is expected to deliver and the expected periods of delivery. I summarise the documents, with particular regard to transport proposals below:

Phase 0 (Oct '22 – Dec '24)

- Discharge Conditions, Reserve Matters etc.
- Safeguard Land for Spine Road

Phase 1 (Jan '25 – Dec '27)

- Construct spine road junction with Penwortham Way
- Construct spine road from junction with Penwortham Way up to just beyond public open space/local centre (with swale alongside)
- Construct footpath and cycle links from spine road to Bee Lane and Moss Lane
- Enhance footpath link from Nib Ln to Moss Ln as crosses spine road corridor
- Enhance footpath link from Moss Ln to Mill Brook and then Penwortham Way
- Enhance adopted highway along Moss Lane north of Bee Lane
- Improvements to active travel infrastructure at Bee Ln/Leyland Rd junction
- Improvements to pedestrian and traffic management infrastructure at Bee Ln bridge

Phase 2 (Jun '26 – Dec '29) (Approx. 410 Dwellings)

- Enhance remainder of footpath link from Nib Lane to Moss Lane
- Construct road / footway and cycleway infrastructure from spine road into development parcels to east and west of spine road
- Make road / footway and cycleway connections between the east and west development parcels and adjoining networks and green infrastructure delivered as part of Phase 1
- Continue to safeguard land for spine road in future phases, east of Phase 2

Phase 3 (Jun 29 – Jun 32) (Approx. 426 Dwellings)

- Create footpath and cycle links to existing link to Kingsfold Drive
- Construct additional length of spine road and road / footpath / cycleway connections between existing and Phase 3 development parcels
- Enhance footpath links from Nib Lane to Mill Brook, the southern end of Moss Lane to Mill Brook and Mill Brook to Penwortham Way
- Deliver permanent Local Centre including mobility hub before the end of Phase 3
- Continue to safeguard land for spine road in future phases, east of Phase 3

Phase 4 (Jan 31 – Dec 33) (Approx. 224 Dwellings)

- Construct additional length of spine road and road / footpath / cycleway connections between existing and Phase 4 development parcels
- Continue to safeguard land for spine road in Phase 5 land

Phase 5 (Jun 33 – Dec 33) (Approx. 40 Dwellings)

4.5.3. In addition to the above, Avison Young provided a Draft Section 106 Head of Terms document in June 2022. Within this document, in terms of contributions towards highway and transport matters the Appellants proposes the following:

- Updated Infrastructure Delivery Plan with each Reserved Matters application
- Sustainable Travel Scheme (essentially a Travel Plan)
- Mobility Hub and Interim Mobility Hub
- Sustainable Bus Service
- Flexible Travel Fund (No detail has been shared to consider)
- Delivery of Spine Road
- Travel Network Improvements
 - Highways Improvements
 - improvements to the Bee Lane/Leyland Road junction, as shown on Plan [X];
 - introduction of traffic control measures on, and on the approaches to, the Bee Lane bridge, as shown on Plan [Y];
 - the provision of a pedestrian crossing on Leyland Road to facilitate access to Moor Hey School, as shown on Plan [Z], and
 - improvements to the A582, as shown on Plan [AA]
 - Highways Improvements

- improvements, as appropriate, to adopted highway connection retained linking to the residential area of Cloughfold providing active travel access to the west of the site including facilities in Penwortham, as shown on Plan [A];
- improvements to part of Footpath 7-9-FP43 linking to the adopted highway at Cloughfold to provide improved surfacing, lighting and upgrade to bridleway status, as shown on Plan [B];
- improvements to part of Footpath 7-9-FP42 connection towards Kingsfold Drive to the north to provide improved width, surfacing, lighting and upgraded to bridleway status to facilitate active travel links to the existing Kingsfold community, as shown on Plan [C];
- improvements to footpath 7-9-FP46 connection retained between Bramble Court and Moss Lane to facilitate pedestrian links to the Kingsfold community, as shown on Plan [D];
- improvements to footpath 7-9-FP49 connection retained between Queens Court Avenue and Bee Lane to facilitate pedestrian links to the Kingsfold community, as shown on Plan [E]; and
- improvements to footpath 7-9-FP52 connection retained between Sumpter Croft and Bee Lane to facilitate pedestrian links to the Kingsfold community, as shown on Plan [F].

4.5.4. Highways Improvements

4.5.5. It is clear from the above, that in terms of improvements to the wider highway network beyond the site, proposed improvements are limited. This is not unexpected, given the concerns highlighted in RfR 1 and RfR 2 in regard to the Vectos Transport Assessment that has been presented. LCC Highways do not consider this to be a reasonable assessment to allow a clear understanding of the impacts. Section 5 of my evidence sets out the results of the assessment that LCC Highways have felt it necessary to undertake. This assessment highlights that much further mitigation is required to overcome the impacts of this development.

4.5.6. While the Draft S106 document highlights *'improvements to the A582, as shown on Plan [AA]'*, this plan is yet to be formally presented to LCC. I do not consider the proposed mitigation to be sufficient.

4.5.7. Pedestrian, Cyclists and Equestrian Improvements

4.5.8. LCC Highways welcome the proposed improvements for pedestrians, cyclists and equestrians. However, I do not consider that there is sufficient analysis of, or improvements to, the safety of users over the Bee Lane bridge. While the proposals suggest that only 40 of the proposed 1,100 dwellings would have vehicular access from Bee Lane, it is clear that all of the proposed 1,100 dwellings will have non-vehicular access to Bee Lane. With the optimistic approach to sustainable movements presented in the TA, I do not consider Bee Lane bridge, as proposed, to be sufficient to accommodate this level of sustainable movements.

4.5.9. Public Transport

4.5.10. The Appellants suggests that site would be served by public transport and proposes a 'Sustainable Bus Fund'. The level of funding has not been identified, and this is required to ensure that sufficient services will be provided until the service becomes self-sustaining.

5.0 LCC Highways Traffic Assessment

5.1.1. Traffic Figures and Traffic Forecasts

- 5.1.2. The impact of future traffic through and within South Ribble, particularly on the A582 and B5254, is considered in the section below.
- 5.1.3. Given the scale and location of the Appeals, it is important to understand the level of impact that the development has on the surrounding network i.e. that to be mitigated as a consequence of development. The NPPF is clear on mitigation requirements in paragraph 110 d) that states:

"any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree".

- 5.1.4. The Highways and Transport SoCG, when signed will detail areas where agreement has been reached with the Appellants, however, a key area where agreement has not been reached is in respect of traffic modelling and network capacity (as detailed in RfR 1 and RfR 2).
- 5.1.5. I do not agree that the Vectos assessment provides a clear, accurate and auditable representation of the typical network conditions or a realistic forecast of the future conditions. I have therefore conducted my own assessment of the network and the development, in order to identify the true impacts of this development.
- 5.1.6. My concerns are further strengthened, given sections of the local network currently suffers from high levels of congestion at peak times as highlighted in APPENDICES 10 and 11. As highlighted in Vectos's own modelling results as referenced in paragraph 4.1.83 – 4.1.85 above, this congestion is not a concern to the Appellants. The future operation of the highway network around the Appeal site will be of great importance to residents and all users of the Local Highway Network in this area.
- 5.1.7. My assessment and the approach presented builds upon the earlier transport assessment presented for this site in the previously withdrawn application by the

current Appellants (PA: 2020/00015/ORM). At that time the Appellant's Transport Consultant was Croft.

- 5.1.8. While the elements of the transport assessment were not fully agreed with LCC, the principles of the approach was agreed, and much progress was made with Croft on many elements. The approach underpinning the Croft TA was a detailed and clearly auditable Excel Spreadsheet, where the traffic assessment and all assumptions were built up across multiple worksheets within the spreadsheet.
- 5.1.9. In undertaking my assessment I have addressed those elements that had not been agreed previously with Croft, in order to develop an assessment that I consider is a fair and reasonable basis upon which to assess the transport impacts of the Appeal applications.
- 5.1.10. The assessment work sets out the assumptions underpinning the analysis in a clear and auditable manner.
- 5.1.11. Traffic Counts
- 5.1.12. Normally, up to date traffic survey information is required to be collected for key junctions on the local transport network during an agreed neutral month. As I have highlighted earlier (within RfR 2), due to ongoing impacts of the Covid19 pandemic, LCC does not accept the use of 2021 survey data as used by Vectos. My analysis has therefore made use of the 2018 traffic survey information previously agreed with Croft on behalf of the Appellants.
- 5.1.13. The turning count traffic surveys that Croft used covered key junctions in the study area and were generally collected in September 2018. The raw traffic survey summary is included in APPENDIX 16 and a reference map is provided in APPENDIX 16. A summary of the survey data between the periods of 07:30 to 09:30 and 16:30 to 18:30 is provided in APPENDIX 16 that clearly shows the peaks hours to be 07:30 to 08:30 (AM) and 16:30 to 17:30 (PM). The peak hour flows diagrams are shown in APPENDIX 16.

5.1.14. Assessment Years

5.1.15. In line with what was agreed with Croft, I have considered the future assessment year of 2035. The design year is reasonable, it would equate to approximately 12 years build out with an additional year to have all detailed matters agreed and delivered and all site preparation completed. This equates to the site delivering circa 92 units per year. The Vectos' assessment presents a future year 2031, which does not reflect a realistic build out year, particularly given they also assessed the full allocation scale of 1350 dwellings. This would equate to delivering circa 168 dwellings per year (commencing in 2023). I am not aware of any site in Lancashire delivering this annual build out rate (from what is essentially a single access point with one house builder).

5.1.16. Growth Factors

5.1.17. The approach in regard to traffic growth was previously agreed with the Appellants and Croft consulting. The growth factors that Croft presented however, were not considered fully acceptable by LCC. As part of this latest work, I have therefore derived more suitable growth factors using the Trip End Model Program (TEMPro) local growth factors.

5.1.18. Within Appendix F of the Vectos TA, it is stated that:

'On the basis that the inclusion of the committed development sites alone exceeded the level of growth predicted up to 2035, it was determined that no further traffic growth would be assigned to the model for the purposes of this assessment.'

5.1.19. In my analysis I include the use of growth factors, that have been adjusted to ensure appropriate committed development sites are not double counted, within the assessment I present below. The TEMPro growth factors applied are shown in the Table below, and included in APPENDIX 16.

Table 8: Growth Factors			
Area Description		All purposes	All purposes
Level	Name	AM	PM
<i>Region</i>	<i>NW</i>	<i>1.1699</i>	<i>1.1655</i>
<i>County</i>	<i>Lancashire</i>	<i>1.1621</i>	<i>1.1566</i>
Authority	South Ribble	1.1344	1.1264

Source: Based on TEMPro (Version 7.2)

5.1.20. The TEMPro version used is not the latest. LCC IT service who manages software updates has not yet made the update available to officers. If the latest version was applied would result in slightly higher growth rates.

5.1.21. Committed Development and Emerging Development

5.1.22. Again, the list of committed developments to be include within the assessment was previously agreed with the Appellants and Croft. The Table below sets out the list of committed developments that have been included.

Table 9: Committed Development applied		
Ref	Application No.	Proposal
A	07/2012/0627/ORM	Land off Croston Road, Farington Moss
B	07/2014/0184	Land off Croston Road, Farington Moss
C	17/2017/3361	Test Track, Aston Way, Moss Side Ind Estate, Leyland
D	07/2017/0211/ORM	Cuerden Strategic Site, Lostock Hall
E	07/2015/0315/REM	Land Formerly Gas Works Leyland Road Lostock Hall
F	07/2014/0190/ORM	Vernon Carus Ltd, Penwortham Mills, Factory Lane

5.1.23. The applications in the above table are also highlighted by Vectos as those they included. However, they have provided no clear auditable evidence of how they have been included in their assessment.

5.1.24. In the assessment that I have produced, all flow diagrams for the individual committed developments and future scenarios are clearly shown in APPENDIX 16. While Vectos have listed the committed developments included in their analysis, there are no flow diagrams or any similar information included in their TA. It is therefore not possible to identify if the correct levels of traffic have been applied to the networks and distributed appropriately.

5.1.25. In line with what was the previously agreed approach with the Appellants and Croft, the redistribution of traffic due to the opening of the The Cawsey and the Penwortham Bypass has been applied to my assessment.

5.1.26. While the Croft assessment sought to include the committed developments, LCC did not fully agree with their traffic flows and the distributions they applied across the network. My assessment therefore, updates this element of the work to more closely align with the committed developments and their respective TA's and permitted traffic flows.

5.1.27. Trip Generation

5.1.28. I do not agree with the trip generation presented by Vectos for reasons I have set out under RfR 2 of my evidence. Within my assessment, I have applied trips rates that are in line with that previously agreed with Croft. The peak hour trip rates and forecast trip generation, based on 1,100 dwellings is shown below. I would note that that these trips rates are lower than those that LCC have recently observed in 2022. This is described under RfR 2 in paragraph 4.1.55.

Table 10: Trip Rates and Trip Totals					
Land Use:	Houses	AM Peak		PM Peak	
No. of Units	1100	Arrivals	Departures	Arrivals	Departures
Trip rate per unit		0.145	0.429	0.343	0.236
Development Trips		159	472	377	260
Two Way		631		637	

5.1.29. Distribution / Assignment

5.1.30. The approach to development distribution and assignment of traffic is in line with what was previously agreed with Croft. Development traffic has been assigned to the local highway network in line with Travel to Work Census Data from 2011 that represents the site and the Kingsfold area to the north (Medium Super Output Area - MSOA 006). This Census 2011 MSOA is identical to that used by Vectos.

5.1.31. Employment destinations were used where journey totals from the MSOA area to an employment destination or town exceed 4 journeys (in total) and within a 60min travel time. This resulted in a total of 1,461 journey to work trips being considered.

5.1.32. As stated in paragraph 4.1.53 and highlighted again in paragraph 4.1.67 the Census data is now 11 years old and not fully up to date. To address this issue I have included

a nominal number of trips to 6 destinations in my analysis thus totalling 1,551 to represent the MSOA area. These journey to work trips were converted to percentages and multiplied by the trip total for the development site, then assigned to the network using the direct routes available on the highway network. The distribution percentages of the development across the network are shown in APPENDIX 16 and the resultant flows across the network are shown in APPENDIX 16.

5.1.33. Assessment Scenarios

5.1.34. In line with what was agreed with Croft, in my evidence, I only consider assessment scenarios in the observed year and the expected design year with development in place, these being:

- A. 2018 Observed Year – (APPENDIX 16)
- B. 2035 Future Year Base (including committed) – (APPENDIX 16)
- C. 2035 Future Year Base (including committed) and development – (APPENDIX 16)

5.1.35. Junction Operational Assessments

5.1.36. To demonstrate my concerns with regard to Network capacity I have focused my attention on seven key junctions that are located within South Ribble, these are:

- 1. B5254 Leyland Road/Bee Lane/The Cawsey roundabout
- 2. B5254 Watkin Lane/Brownedge Road and B5254 Leyland Road/Coote Lane linked signalised T-junctions
- 3. A582 Flensburg Way/A582 Croston Road/Fidler Lane/Croston Road roundabout
- 4. A582 Croston Road/A582 Farington Road/Centurion Way roundabout
- 5. A582 Lostock Lane/A582 Farington Road/A5083 Stanifield Lane/B5254 Watkin Lane signalised roundabout
- 6. A582 Penwortham Way/Chain House Lane Signalised Crossroads
- 7. M65/A6/A582 signalised roundabout

5.1.37. The future operation of these junctions will be of great importance to residents and all users of the Local Highway Network in this area.

5.1.38. When assessing standard priority junctions, the main modelling output to be considered is the RFC (Ratio of Flow to Capacity). This provides a basis for judging the acceptability of junction operation and designs, typically an RFC of less than 0.85 is considered to indicate satisfactory performance and is referred to as 'practical capacity'. An RFC of 1.0 or more indicates saturated conditions and is referred to as 'theoretical capacity, with arrivals on an arm greater than the capacity to discharge vehicles past the give way line. When an arm exceeds an RFC of 1.0 then queues will build exponentially and in these instances the queue and delay values should not be interpreted as absolute values, but an indication of poor performance.

5.1.39. Where assessing roundabouts, a Level of Service (LoS) is also reported. The LoS is a measured result based on average vehicle delay and is defined as follows:

- A – free flowing
- B – reasonably free flowing
- C – stable flow
- D – approaching unstable flow
- E – unstable flow, operating at capacity
- F – forced or breakdown flow.

5.1.40. Where LoS are reported I have highlighted in red those which are E and F which signifies that the arm of the junction is operating at or above capacity and intervention is required.

5.1.41. For junctions that include the use of signal operation, the industry standard LinSig modelling software has been utilised in my assessment. This provides a basis for judging the acceptability of junction operation and designs, in terms of "Degree of Saturation" (DoS). The DoS is a ratio of the vehicle flow against capacity of the arm. A DoS of 90% is considered to be the point at which the junction has effectively reached capacity and where the junction becomes susceptible to increased queuing and delays.

5.1.42. Within the results tables below, I have highlighted results of concern in red.

5.1.43. B5254 Leyland Road/Bee Lane/The Cawsey roundabout

5.1.44. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 16.

Table 11: B5254 Leyland Rd/Bee Ln/The Cawsey roundabout								
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 Observed Year								
Leyland Road North	1.6	7.77	0.61	A	2.8	11.91	0.74	B
The Cawsey	0.2	3.73	0.16	A	0.1	3.59	0.07	A
Leyland Road South	8	26.26	0.9	D	2.7	10.26	0.73	B
Bee Lane	0.1	16.4	0.1	C	0	10.28	0.03	B
2035 Future Year Base (including committed)								
Leyland Road North	7.4	27.62	0.89	D	20.2	66.24	0.99	F
The Cawsey	0.7	5.44	0.4	A	0.7	5.76	0.42	A
Leyland Road South	72.4	181.52	1.1	F	11.3	40.35	0.94	E
Bee Lane	0.2	28.09	0.18	D	0.1	19.38	0.06	C
2035 Future Year Base (including committed) and development								
Leyland Road North	7.8	29.16	0.9	D	22.1	71.37	0.99	F
The Cawsey	0.7	5.49	0.41	A	0.7	5.83	0.43	A
Leyland Road South	73.8	184.89	1.11	F	12.4	44.01	0.95	E
Bee Lane	0.4	32.39	0.3	D	0.1	20.27	0.1	C

5.1.45. The results indicate that the junction is already close to capacity in the AM in the observed year 2018. As the results are for the junction in isolation and assume free flow conditions downstream, they do not reflect the queuing that currently occurs at Tardy Gate signalised junction. This queuing causes blocking back through the Bee Lane roundabout during the PM peak.

5.1.46. The results in 2035 highlight without development that the junction will be over capacity. This modelling excludes the impact of existing pedestrians and cyclists who will need to cross at the junction where no formal provision is provided. In the scenario with the Appeal site with the impacts of 40 units, there would still be queuing and delay but only slight increases. However when regard is had to the increase in

pedestrian and cycle demand from the Appeal site, with no formal provision, this will clearly result in safety issues as pedestrians will have no option but to cross in between stationary queuing cars. This is a safety issue and unacceptable.

5.1.47. I consider the impact of the Appeal Scheme at Bee Lane roundabout, without improvement, would be considered a severe impact for the reasons given above.

5.1.48. The Appellants has provided in TN04 (CD 10.40) a signal layout, which indicates formal crossings for pedestrians/cyclists which I would support. However, in regard to the scheme presented in TN04 I do have a number of issues as highlighted in paragraph 4.2.31 above. These comments were provided to Vectos, however no response to date has been received. I consider the current proposals for Bee Lane as presented in TN04 would result in significant harm and the impact with regard to sustainable users would be severe.

5.1.49. B5254 Watkin Lane/Brownedge Road, B5254 Leyland Road/Coote Lane, and B5254 Watkin Lane/Jubilee Road linked signalised T-junctions

5.1.50. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 17.

Table 12: B5254 Watkin Ln/Brownedge Rd, B5254 Leyland Rd/Coote Ln & B5254 Watkin Lane/Jubilee Road (linked) -Tardy Gate						
	AM Peak			PM Peak		
Tardy Gate junctions	Deg of Sat (%)	MMQ (pcu)	PRC (%)	Deg of Sat (%)	MMQ (pcu)	PRC (%)
2018 Observed Year						
Coote Lane junction	94.3%	13.4	-4.8%	91.2%	12.4	-1.3%
Brownedge Road junction	88.6%	10.5	1.5%	98.0%	16.8	-8.9%
Jubilee Road junction	76.2%	20.4	18.2%	90.3%	12.6	-0.4%
2035 Future Year Base (including committed)						
Coote Lane junction	98.0%	17.3	-8.9%	105.8%	24.1	-17.6%
Brownedge Road junction	84.0%	5.8	7.1%	96.9%	9.4	-7.6%
Jubilee Road junction	90.1%	10.1	-0.2%	115.6%	50.3	-28.4%
2035 Future Year Base (including committed) and development						
Coote Lane junction	98.8%	40.3	-9.8%	106.5%	25	-18.3%
Brownedge Road junction	84.8%	5.9	6.1%	98.5%	10.2	-9.4%
Jubilee Road junction	93.8%	13.1	-4.2%	115.6%	50.5	-28.5%

Note: The results shown for each junction display the arm with highest degree of saturation and Mean Max Queue (MMQ). Whilst all arms have been considered individually, the worst performing arm is displayed in this table to demonstrate overall impact on junction performance.

5.1.51. The results indicate that the Tardy Gate junction is already at capacity in the observed year 2018, which is not a surprise as highlighted above in paragraph 5.1.45 with queuing from this junction blocking Bee Lane roundabout. The junction modelling highlights that it would be operating with a negative theoretical practical reserve capacity (PRC) i.e. simple changes to signal phasing and staging will not overcome the congestion at this junction. For typical peak conditions see Appendix 10 for photographs and Appendix 11 for google congestion levels. This junction forms part of South Ribble's AQMA. The junction has some formal pedestrian provision across

the junction that satisfies current demand. The junction operation issue is known to highway officers at LCC and the proposed A582 improvements will provide an opportunity for traffic to reroute to the improved MRN allowing consideration for improvement schemes to support sustainable transport modes on the Leyland Road corridor.

- 5.1.52. The results in 2035 highlight without development that the junction is overcapacity with much increased negative PRC.
- 5.1.53. In the 2035 scenario with the Appeal site of 40 units queuing and delay only increases slightly. However the increase in pedestrian and cycle movements from the Appeal site will increase pedestrian demand at Tardy Gate signalised crossings. This will result in increased delays for motorised users as pedestrian all red stages are called more frequently.
- 5.1.54. This Appeal schemes will have an impact at this junction, especially from pedestrians and cyclists. In line with paragraph 110 of the NPPF this needs to be cost effectively mitigated to an acceptable degree. No highway scheme has been presented to mitigate the additional pedestrian and cycle impacts, i.e. to improve pedestrian desire lines/connectivity and crossing provision to and at the junction whilst maximising capacity for motorised users (within the highway boundary). With regard to demand from the Appeal site and using the Appellants own figures from the TA I would conservatively estimate the additional pedestrian numbers at Tardy Gate to be circa 115 in the AM peak and 85 in the PM peak.

5.1.55. A582 Flensburg Way/A582 Croston Road/Fidler Lane/Croston Road roundabout

5.1.56. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 17. This junction is in close proximity to that which follows in paragraph 5.1.59

Table 13: A582 Flensburg Way/A582 Croston Rd/Fidler Ln/Croston Rd roundabout								
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 Observed Year								
Croston Road	3.7	10.63	0.79	B	46.9	95.12	1.04	F
Fidler Lane	0	7.76	0.01	A	0	11.97	0.02	B
Croston Road	0.9	8.68	0.49	A	0.4	6.91	0.28	A
Flensburg Way	2	7.21	0.67	A	2	6.72	0.67	A
2035 Future Year Base (including committed)								
Croston Road	48.2	97.83	1.04	F	511.4	1082.16	1.45	F
Fidler Lane	0	11.79	0.02	B	0	12.43	0.03	B
Croston Road	3.9	27.79	0.81	D	0.6	8.12	0.39	A
Flensburg Way	52.2	113.08	1.05	F	12.1	30.92	0.94	D
2035 Future Year Base (including committed) and development								
Croston Road	137.6	291.74	1.16	F	614.2	1291.04	1.51	F
Fidler Lane	0	12	0.03	B	0	12.43	0.03	B
Croston Road	4.6	32.57	0.84	D	0.6	8.29	0.39	A
Flensburg Way	142.6	317.9	1.18	F	29.4	65.48	1	F

5.1.57. The simple results presented only consider this junction in isolation and indicates that the existing roundabout junction is already over capacity during the PM in the observed year 2018 at Croston Road. In the future scenario, the results show that the junction will be over capacity in both the AM and PM by 2035 (Base traffic and committed development), with unacceptable levels of delay for Croston Road in the PM peak. As such these simple results highlight that the proposed LCC works to the A582 and key junctions will be necessary.

5.1.58. The level of operation in 2035 with the inclusion of the Appeal site, as expected, further deteriorates, with Croston Road and also Flensburg Way having unacceptable

impacts. Until the works on the A582 are committed, I consider this site needs to provide mitigation. This scheme is necessary to negate against the significant impacts from the development at this location (in terms of capacity and congestion). The required scheme should cost-effectively mitigate the impact to an acceptable degree on the highway network, in line with NPPF paragraph 110.

5.1.59. A582 Croston Road/A582 Farington Road/Centurion Way roundabout

5.1.60. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 17. This junction is in close proximity to that reported on in paragraph 5.1.55 above.

Table 14: A582 Croston Road/A582 Farington Road/Centurion Way roundabout								
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018 Observed Year								
Croston Road	0.7	7.06	0.42	A	0.5	6.17	0.32	A
Farington Road	97.3	241.23	1.14	F	129.1	337.40	1.18	F
Centurion Way	0.3	3.69	0.20	A	0.8	5.51	0.43	A
Croston Road	39.6	99.24	1.03	F	19.0	55.91	0.98	F
2035 Future Year Base (including committed)								
Croston Road	1	8.4	0.49	A	0.6	7.22	0.38	A
Farington Road	411.1	1087.34	1.46	F	678.5	1741.38	1.67	F
Centurion Way	0.3	3.95	0.24	A	1	6.43	0.5	A
Croston Road	487	1224.44	1.5	F	256	672.38	1.32	F
2035 Future Year Base (including committed) and development								
Croston Road	1	8.6	0.5	A	0.6	7.33	0.39	A
Farington Road	469.7	1237.5	1.51	F	876.4	2353.3	1.77	F
Centurion Way	0.3	3.99	0.25	A	1.1	6.71	0.53	A
Croston Road	677.2	1679.56	1.64	F	342.4	883.13	1.39	F

5.1.61. The simple results only considers this junction in isolation and indicates that the roundabout junction is already over capacity in the AM and PM in the observed year 2018 at Farington Road and Croston Road. In the future scenario the results show that the junction will be over capacity in both the AM and PM in 2035 (Base traffic and committed development), with unacceptable levels of delay for Farington Road

and Croston Road in both the AM and PM peaks. As such these simple results highlight that the proposed LCC works to the A582 and key junctions will be necessary.

5.1.62. The level of operation in 2035 with the inclusion of the Appeal site, as expected further deteriorates with Farington Road and Croston Road having unacceptable impacts. Until the works on the A582 are committed, I consider this site needs to provide a mitigation. This scheme is necessary to negate against the significant impacts from the development at this location (in terms of capacity and congestion). The required scheme should cost-effectively mitigate the impact to an acceptable degree on the highway network, in line with NPPF paragraph 110.

5.1.63. A582 Lostock Lane/A582 Farington Road/A5083 Stanifield Lane/B5254 Watkin Lane signalised roundabout

5.1.64. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 17

Table 15: A582 Lostock Ln/Farington Rd/A5083 Stanifield Ln/B5254 Watkin Ln signal r'bout				
	AM Peak		PM Peak	
	Degree of Saturation (%)	Mean Max Queue (pcu)	Deg Degree of Saturation (%)	Mean Max Queue (pcu)
2018 Observed Year				
B5254 Watkin Lane	68.10%	6.5	97.30%	18.1
A582 Lostock Lane	58.90%	7.2	90.70%	14.1
A5083 Stanifield Ln	60.90%	5.3	70.60%	6.6
A582 Farington Rd	91.30%	13.7	97.30%	19.2
PRC (%) 50 sec cycle time	-1.40%		-8.10%	
2035 Future Year Base (including committed)				
B5254 Watkin Lane	103.90%	39.5	102.60%	33.4
A582 Lostock Lane	54.80%	6.1	64.30%	8.1
A5083 Stanifield Ln	78.20%	6.8	92.60%	10.6
A582 Farington Rd	88.70%	10.9	99.50%	18.7
PRC (%) 50 sec cycle time	-15.40%		-14.00%	
2035 Future Year Base (including committed) and development				
B5254 Watkin Lane	110.70%	67.3	126.70%	124.3
A582 Lostock Lane	56.50%	6.6	96.40%	22.1
A5083 Stanifield Ln	78.20%	6.8	84.90%	8.2
A582 Farington Rd	82.10%	9.5	97.10%	16.4
PRC (%) 50 sec cycle time	-23.00%		-40.80%	

Note: The results shown for each arm display the lane with the highest degree of saturation

5.1.65. The results indicate that the junction is already operating beyond practical reserve capacity (PRC) in both the AM (-1.4%) and PM (-8.1%) peaks in the observed year 2018. In the AM peak, the model suggests that only Farington Road suffers from delay and in the PM peak Watkin Lane, Lostock Lane and Farington Road suffer from delays. Local observation of junction operation would highlight that Lostock Lane in the AM peak suffers from high levels of delay and queuing which can extend back to

Sainsburys roundabout and beyond towards the M65. In the PM peak queuing extends towards the Croston Rd roundabout.

5.1.66. In an attempt to better model this complex junction site based saturation flows have been included (these are the maximum number of vehicles that has been observed that can pass the stop line of the junction), rather than a default standard parameter that may not reflect local conditions. However, the modelled results presented do suggest limited congestion issues at the junction, which is not the case. I expect the reason for why the modelling is underestimating the queuing is due to a number of factors that need to be more closely observed on site, such as:

- driver behaviour within the roundabout
- speed of vehicles manoeuvring for certain movements
- inclusion of cycle lanes within the roundabout and on approaches
- inefficient limited lane usage and
- lane starvation on approaches and within the internal circulating lanes of the roundabout.

5.1.67. As a consequence of the limitations of the model, with the knowledge that the results in this case do underestimate the significance of the junction delay, they have limited merit. However the results can be used to consider the step difference between each scenario. It is clear that with the development matters will be much worse than reported on above. The solution to this issue would be the use of a microsimulation model that is validated based on site observations and reliable traffic data. Unfortunately, this approach is time and resource hungry and was not possible to undertake with the time available.

5.1.68. In the future scenario the results show that the junction will be over capacity in both the AM and PM in 2035 (Base traffic and committed development), with unacceptable levels of delay at -15.3% PRC in the AM peak -14% PRC in the PM peak. When development is added these values increase significantly to -23%PRC in the AM peak and -40%PRC in the PM peak. As such these simple results highlight that the proposed LCC works to the A582 and key junctions including this, will be necessary.

5.1.69. Until the works on the A582 are completed (that extend to include this junction), I consider this site needs to provide mitigation. This scheme is necessary to negate against the significant impacts from the development at this location (in terms of capacity and congestion). The required scheme should cost-effectively mitigate the impact to an acceptable degree on the highway network, in line with NPPF paragraph 110.

5.1.70. A582 Penwortham Way/Chain House Lane Signalised Crossroads

5.1.71. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 17.

Table 16: A582 Penwortham Way/Chain House Lane Signalised Crossroads				
	AM Peak		PM Peak	
	Degree of Saturation (%)	Mean Max Queue (pcu)	Degree of Saturation (%)	Mean Max Queue (pcu)
2018 Observed Year				
A582 Penwortham Way Southbound	58.40%	9.3	67.00%	11.9
Chain House Lane Westbound	52.90%	4.8	43.90%	6.6
A582 Penwortham Way Northbound	68.40%	16.3	59.30%	13.9
Chain House Lane Eastbound	66.70%	6.7	64.30%	6.3
PRC (%) 120 sec cycle time	31.70%		34.30%	
2035 Future Year Base (including committed)				
A582 Penwortham Way Southbound	72.90%	13.1	85.30%	20.5
Chain House Lane Westbound	63.90%	5.9	49.60%	3.2
A582 Penwortham Way Northbound	88.90%	26.7	74.80%	20.5
Chain House Lane Eastbound	91.00%	11.6	86.30%	10
PRC (%) 120 sec cycle time	-1.10%		4.30%	
2035 Future Year Base (including committed) and development				
A582 Penwortham Way Southbound	88.10%	19.7	89.20%	23.9
Chain House Lane Westbound	67.60%	6.3	65.80%	4.9
A582 Penwortham Way Northbound	93.20%	32.3	80.60%	23.8
Chain House Lane Eastbound	91.00%	11.6	93.40%	11.9
PRC (%) 120 sec cycle time	-3.60%		-3.80%	

Note: The results shown for each arm display the lane with max degrees of saturation

5.1.72. The results indicate that the junction operates within capacity in the observed year 2018. The results also show that the junction will be operating at capacity during the AM peak with some residual capacity in the PM peak in 2035 (base traffic and committed development). Considering the further scenario with the Appeal site in 2035, the junction will be operating slightly worse in both the AM and PM peaks just exceeding PRC. As the increases are marginal it is likely that minor junction changes should be sufficient to manage traffic flows as a consequence of development in 2035.

5.1.73. Sainsburys Roundabout M65/A6/A582 signalised

5.1.74. LCC modelling results for all scenarios are summarised in the Table below. The full results are provided in APPENDIX 17.

Table 17: Sainsburys Roundabout M65/A6/A582 signalised				
	AM Peak		PM Peak	
	Degree of Saturation (%)	Mean Max Queue (pcu)	Degree of Saturation (%)	Mean Max Queue (pcu)
2018 Observed Year				
A6 London Way	62.40%	6.0	80.00%	8.0
A6 Lostock Lane	82.80%	8.3	105.20%	9.1
M65	85.00%	9.4	83.60%	8.2
A582 Lostock Lane	77.70%	9.8	83.30%	9.8
PRC (%) 50 sec cycle time	5.80%		-16.90%	
2035 Future Year Base (including committed)				
A6 London Way	87.90%	9.3	94.10%	12.4
A6 Lostock Lane	99.90%	8.1	117.50%	63.5
M65	82.20%	9.7	87.70%	10.2
A582 Lostock Lane	116.00%	80.7	120.70%	77.7
PRC (%) 50 sec cycle time	-28.80%		-34.20%	
2035 Future Year Base (including committed) and development				
A6 London Way	82.50%	8.3	88.50%	10.4
A6 Lostock Lane	100.50%	9.2	131.40%	71.2
M65	81.30%	9.5	94.80%	14.1
A582 Lostock Lane	127.40%	119.1	123.90%	87.4
PRC (%) 50 sec cycle time	-41.50%		-46.00%	

Note: Results shown for each arm display the approaches lane with the highest degree of saturation

- 5.1.75. The results indicate that the signalised roundabout junction is operating within capacity in the AM Peak in the observed year 2018. There is however some delay on approach from the east (A6 Lostock Lane) in the PM Peak, with overall PRC for the model at -16.90% as a result of this. Whilst this junction is similar in layout to Stanifield Lane, it has a larger diameter with a greater number of approach lanes in all directions. These approach lanes are long and therefore the junction does not suffer as much from operational issues when compared to the Stanifield Lane signalised junction. However queuing is observed from the A6 Lostock Lane in the PM Peak, and on occasion queuing observed can be greater than that modelled.
- 5.1.76. In the future scenario the results show that the junction will be over capacity in both the AM and PM in 2035 (Base traffic and committed development), with unacceptable levels of delay at -28% PRC in the AM peak -34% PRC in the PM peak. With Lostock Lane A6 and A582 being at or beyond their theoretical capacity in the AM peak and London Way, Lostock Lane A6 and A582 also being beyond their theoretical capacity during the PM peak. When development is added these values increase significantly to -41%PRC in the AM peak and -46%PRC in the PM peak. With Lostock Lane A6 and A582 being at or beyond their theoretical capacity in the AM peak and London Way, M65 and Lostock A582 also being beyond their theoretical capacity during the PM peak. As a consequence of development impacts these results are unacceptable and I consider this site needs to provide mitigation. A scheme is necessary to negate against the significant impacts from the development at this location (in terms of capacity and congestion). The required scheme should cost-effectively mitigate the impact to an acceptable degree on the highway network, in line with NPPF paragraph 110.

6.0 Summary and Conclusion

- 6.1. Lancashire County Council takes its responsibility seriously with respect to the current and future use of the highway network whilst also giving a high priority to supporting growth, including supporting private sector led economic growth, the creation of jobs and access to employment, education and training.
- 6.2. The existing highway conditions on the network surrounding the site have been assessed by LCC and it is clear that there are some locations on the A582 and B5254 Leyland Road corridors where traffic congestion occurs at peak times. Further to this, it has been demonstrated that the scale of development proposed will generate significant transport movements on the existing highway network.
- 6.3. To maximise the level of development that can be suitably accommodated with the comprehensive development of this local plan site, I consider necessary Infrastructure changes should be identified through, firstly:
- I. An agreed Masterplan; and then
 - II. An acceptable transport assessment that provides a reasonable basis to determine impacts and necessary highway/transport changes.
- 6.4. I consider an agreed Masterplan for the comprehensive development of the whole site has not been provided. The Masterplan would identify all changes necessary to support the scale of development appropriate for the comprehensive development of the site. This work has not been done. The Appellants approach has been that this is a matter to be picked by others that come forward later. This is not a properly planned approach or in line with Local Policy C1.
- 6.5. Under the Reasons for Refusal, I set out that the current Masterplan is insufficient in detail and that the comprehensive development of the site is not suitably addressed in the Appellants Transport Assessment. I then set out the key failings and flaws within the Appellant's current masterplan and what harm this results in, these include:
- Traffic and safety impacts for vehicles and sustainable users across Bee Lane bridge;

- The shortcomings of the access strategy comprising a large 1060 dwelling cul-de-sac for vehicular access; this undermines the existing road hierarchy; does not provide appropriate connectivity and efficient access to local amenities; is not considered inclusive design with consideration for all users, including those with mobility impairment; is not in line with NPPF;
- the failure to clearly demonstrate and understand what is required for the comprehensive development of the site and delivery of the CBLR;
- The Masterplan is not agreed; when agreed it would determine the movement strategy for all users across the site including vehicular through movement, pedestrians, cyclists, and Public Transport; without an agreed Masterplan the Appellant's movement Strategy and subsequent Technical Assessment is inconsequential;
- The shortcomings and safety concerns of the current Masterplan in regard to the Appellants shared space approach to the existing lanes (Bee Lane in particular); and;
- The lack of clear understanding and detail that the Appellants has given to the access and location of the school site, and the further potential traffic and safety impacts that can be expected to result along Bee Lane.

- 6.6. I consider the current Masterplan should be rejected as it fails to ensure current applications can be delivered without prejudicing future development.
- 6.7. The failings of the Masterplan in regard to identification of safe and suitable infrastructure is born out under Reason for refusal 3 – Highway Infrastructure Bee Lane Bridge. Under this RfR, I set out the constraints of the Bee Lane Bridge and the failings of the appellants' proposals to provide safe and suitable access for all users.
- 6.8. In regard to the Appellants proposals for Bee Lane, the Bee Lane Bridge and Bee Lane/Leyland Road junction, I consider these result in unacceptable impacts on existing and new users of the highway network. In my evidence I have highlighted safety concerns for vulnerable road users on the shared use lane, inappropriate level of infrastructure provision for cyclists across Bee Lane Bridge and at the Bee Lane/Leyland Road junction that I consider would result in severe impact and be contrary to the NPPF.

- 6.9. The Appellants has a very ambitious vision in regard to sustainable transport. However I consider their proposals for all modes over Bee Lane Bridge and for public transport are poor. I consider the proposals fail to meet NPPF in particular Paragraph 110 and 112.
- 6.10. Under Reason for Refusal 1 - Modelling Methodology and Reason for Refusal for Refusal 2 - Technical Assessment and Technical Evidence I present evidence to demonstrate that both LCC Highways and National Highways are in agreement that there was a lack of information available that would allow both highway authorities to reach an understanding of the impacts of the proposals.
- 6.11. The Appellants' Transport Consultant Vectos did not seek pre-application advice prior to development of the Transport Assessment and the submission of the applications.
- 6.12. In my evidence under RfR 1 and RfR 2 I set out the reason why elements of the information that was available was not acceptable to the highway authorities, including base traffic data, the modelling approach and assumptions underpinning the Transport Assessment that were not acceptable. The National Highways review of the Microsimulation model concluded that:
.....we cannot conclude that the model accurately reflects the operation of the wider model network and therefore the model is not suitable for assessment use'.
- 6.13. LCC Highways and National Highways considered view was that it was not possible to determine the impacts of the proposal from the Appellants Transport Assessment. The Appellant's TA was not considered a reasonable basis upon which to assess the applications.
- 6.14. Consequently, Lancashire County Council and National Highways have had no option and has been required to undertake its own assessment. The technical assessment undertaken by LCC/NH and presented in section 5 of this evidence is a clearly auditable assessment. This shows a clearer picture of the base situation and resulting greater impacts on the A582, particularly between Tank roundabout and the A6/M65

signalised roundabout. The LCC/NH assessment highlights the clear need for improvements on the A582 even without further development.

- 6.15. I consider the evidence that i have provided leads to the conclusion that the Appeal applications should be refused. It has not been demonstrated that the modelling methodology or the scoping and composition of technical supporting evidence of the submitted transport assessment is acceptable. As such it has not been demonstrated that the proposed development would not have a severe adverse impact on the local highway network. The proposed improvements to the Bee Lane bridge are not considered sufficient with the additional traffic, as well as increased numbers of pedestrians and cyclists resulting from the development, prejudicing highway safety and pedestrian and cyclist safety. The application fails to provide adequate certainty that the section of the CBLR within the site, together with the necessary physical upgrading works to the Bee Lane bridge, will be delivered. Contrary to policy C1 of the South Ribble Local Plan a Masterplan and design code for the comprehensive development of the site has not been agreed.
- 6.16. I therefore submit that the development should be refused on transport grounds.