

# Harrogate District Local Plan: Transport Background Paper

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# Harrogate District Local Plan Transport Background Paper

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## **1. Introduction**

- 1.1. This paper has been produced by Harrogate Borough Council (HBC) to provide transport evidence to support the proposals included in the draft local plan. It provides information on:
  - the national, regional and local policy context
  - an overview of the current situation
  - the expected transport networks in 2035
  - key transport measures required to support the key growth areas identified in the draft local plan
- 1.2. The council's emerging local plan is seeking to deliver a step change in housing delivery in order to meet the housing needs of the District and support a sustainable and resilient economy. In line with this, over the period of the plan (2014-2035), a minimum of 14,000 new homes will be built alongside 38ha of new employment land. The local plan is based around a growth strategy that seeks to deliver as much of this growth as possible in those parts of the district that are well related to the key public transport corridors. The key public transport corridors comprise the rail line connecting Harrogate to York and Leeds alongside a number of strategic bus routes.
- 1.3. Harrogate, Knaresborough and Ripon are the district's main urban areas and over the life of the local plan will accommodate most of the district's growth. In Harrogate and Knaresborough this will largely be through the release of land on the edge of the settlements to deliver urban extensions; in Ripon through the re-development of military barracks on the north, western edge of the city. The draft local plan also identifies a broad location for growth at green Hammerton/Cattal within which a new settlement will be developed. A key influence on the location of a new settlement has been its location within the Leeds-Harrogate-Leeds rail corridor.

## **2. Policy Context**

### **National Policy & Transport**

- 2.1. There are a number of elements of national transport policy that have potential to impact on the local plan and conditions within Harrogate District throughout the plan period. For instance the construction of High Speed Two (HS2) has potential in particular to significantly reduce journey times between Yorkshire and the West Midlands and London. This may make the area around Leeds more attractive and thereby including Harrogate. Other factors include the banning of the sale of petrol and diesel powered vehicles by 2040. This measure has potential to accelerate development of cleaner fuels and potentially autonomous vehicles to a point of changing the way people travel far beyond how they do so currently. As a result future revisions of the local plan will consider changes in travel behaviour and vehicle levels.
- 2.2. The NPPF has been covered in detail elsewhere within the evidence base however the presumption in favour of sustainable development has transportation implications which the transport work associated with this plan is mindful of.

### **Regional Policy & Transport**

- 2.3. Much of the regional transport policy is being established by Transport for the North (TfN) through their Strategic Transport Plan and associated corridor studies. At the time of writing any specific schemes to be proposed by TfN are unknown and therefore any potential impact during the Local Plan period is difficult to assess. Given the absence of guaranteed funding and definite plans as to what interventions TfN views as being required across Northern England the local plan should not be required to consider this work at this stage. Once the interventions become clear, should there be an impact on Harrogate District this will be considered as part of a review of the local plan.
- 2.4. The only potential project that has more certainty surrounding it within TfN is Integrated Smart Public Transport Ticketing. This work will effectively look to introduce a similar product to the London Oyster card in the north and is a specified work stream. A Northern England-wide smart public transport ticket could be expected to provide increased uptake in rail and bus patronage. As the highway modelling for the local plan allocations does not incorporate a reduction in vehicle trips associated with this type of scheme it adds further robustness to the assessment.

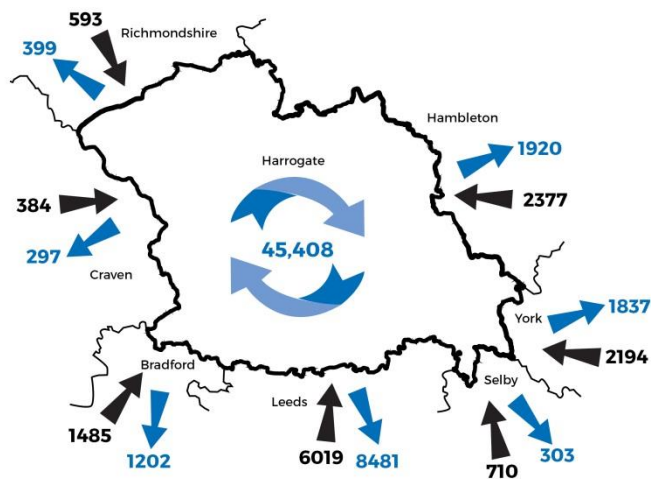
### **Local Policy & Transport**

- 2.5. Local transport policy is the responsibility of North Yorkshire County Council (NYCC) and as such joint working is required to ensure that land use planning and transport are aligned as closely as possible. NYCC has produced two key pieces of transport work to help inform both policy and locally held aspiration, which could form part of TfN strategy as NYCC holds a seat on the board and is an integral part of the organisation as one of the Local Transport Authorities in the region. The two key pieces of work are the fourth Local Transport Plan and the NYCC Strategic Transport Prospectus.
- 2.6. The Strategic Transport Prospectus outlines NYCC aspirations for transport improvements across the county but has no defined funding attached to the schemes. What it does do is to set out the ambitions of NYCC. HBC has, with some allocations, aimed to support these ambitions, for instance the proposed broad location for a new settlement links in well with the east-west connectivity theme and the aspiration to dual the A59 between Harrogate and York. A new settlement of approximately 3000 homes will provide outputs for any future funding bid and contributions towards infrastructure in the area to enable a quality business case to be established. Especially given bids to deliver major transport infrastructure are often strengthened by the ability to unlock or enhance residential or employment development. The strategic transport prospectus also contains some detail in regard to aspirations around rail connectivity, such as a conditional output that 85% of the North Yorkshire population are within 40 minutes travel time of a HS2 hub. The growth strategy of centring growth on key public transport corridors neatly coexists with the NYCC aspiration. In particular, the success of this aspiration is boosted by the allocations at Station Parade and Dragon Road in Harrogate, sites to the north of Pannal and the proposed new settlement as they could assist in supplying passengers to boost rail patronage and enhance any business case for investment.
- 2.7. The fourth Local Transport Plan (LTP4) covers a wide range of transport related priorities to 2045. LTP4 is built around a 'maintain, manage, improve' hierarchy and prioritises improvements to east-west connectivity and enhancing reliability of the county transport network. One key commitment with significance to this local plan is the commitment to developing proposals for improvements to east-west connections from the east coast of the county to the border with Lancashire. There are a range of strategies and sections to the

local transport plan, from highway maintenance to rail and walking and cycling. The document provides a context by detailing the various roles and priorities of the various services provided through the transport function of the county council.

### 3. Overview of the current situation

- 3.1. The main travel to work catchments from the 2011 census is shown in Appendix A (Commute destinations of Harrogate residents) and Appendix B (Residences of those commuting into Harrogate District) below. It can be seen from the journeys to work made by residents of Harrogate District that Leeds and Wetherby are the strongest pulls outside of the district itself, in which the focus mostly lies within the Harrogate urban area and to the West of Harrogate. Other areas to note include central York, parts of central Leeds immediate to the city centre and the Hambleton Medium Level Super Output Areas (MSOA) bordering Harrogate District. The key destinations identified above, with the exception of parts of Hambleton that are rural in nature all have excellent public transport connections with Harrogate District thereby providing further foundation to the selected growth strategy.
- 3.2. In terms of those travelling into Harrogate District for work relatively clear delineation can be seen in the patterns across Yorkshire MSOAs. Those living on the western side of Hambleton, northern side of Leeds and east side of York have among the highest numbers of resident travelling into Harrogate District for work.
- 3.3. These patterns can be aggregated into the following;



#### Highways

- 3.4. Harrogate District has a broad mix of highway types and coverage from the relatively dense urban networks of Ripon, Harrogate and Knaresborough to lightly trafficked rural routes through to the strategic A1(M). Whilst these routes carry differing numbers and types of vehicle the main concern centres on congestion in Harrogate. To illustrate traffic levels in the area the AADF (Annual Average Daily Flow) values<sup>1</sup> for approaches to Harrogate are shown in the plan below. The data is from 2015 which is consistent with the base year of the traffic model;

<sup>1</sup> Data sourced from the NYCC C2Web resource through the Harrogate Congestion Review Stage One Paper.



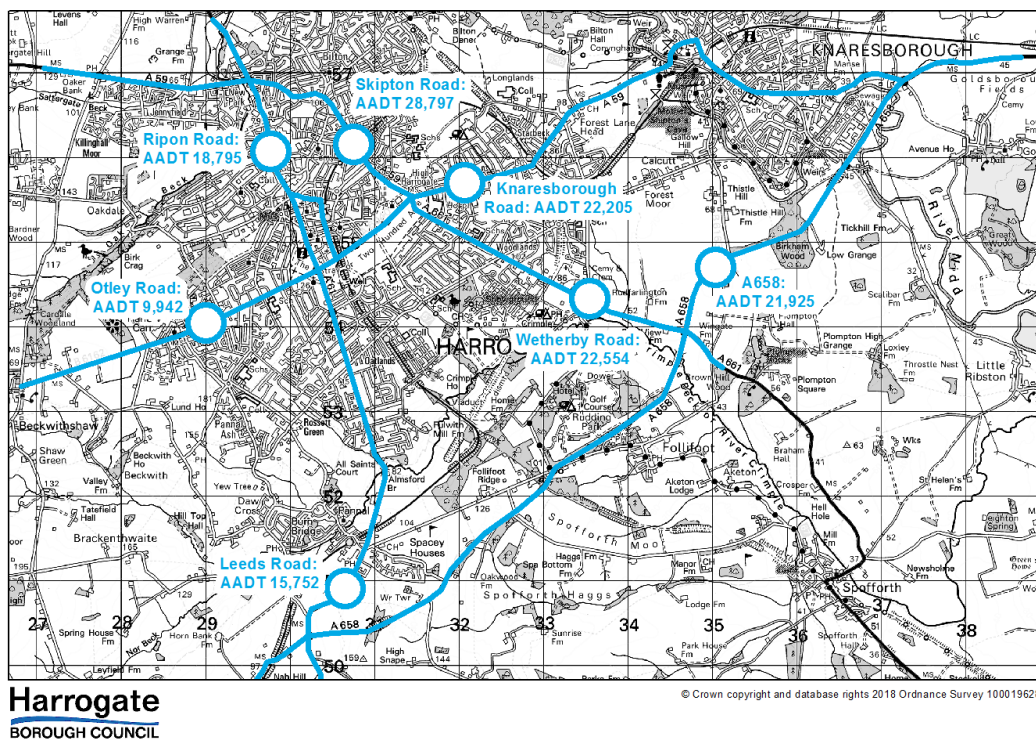


Figure One: Harrogate AADT, 2015. Source: NYCC Harrogate Congestion Study

- 3.5. AADF represents the overall number of vehicles using a specific route on a typical day. The data in the plan clearly shows that the routes to the west of Harrogate, where the majority of local plan growth in the Harrogate and Knaresborough area is planned for carries significantly fewer vehicles in a typical day than the other main approaches. Given all routes in the area are single carriageway in status (albeit with their own characteristics and additional lanes in defined, short sections) basing the growth in the least trafficked area represents a logical approach for early plan period development.
- 3.6. There are two key projects currently underway that could result in major highway infrastructure investment in Harrogate District. These are:

### Harrogate Congestion Study

- 3.7. NYCC is currently undertaking a study into congestion in Harrogate and Knaresborough. A significant amount of work has been undertaken to establish a baseline of traffic and transport conditions. The review has reached the stage of identifying options to be progressed for detailed consideration and public consultation. The two options broadly comprise a relief road plus complementary sustainable transport measures and a demand management package plus complementary sustainable transport measures. Highway modelling work associated with the local plan, outlined in section six has identified junctions that will be subject to an increase in congestion levels as a direct result of local plan allocations. The indications from this evidence suggest that all identified junctions can be mitigated without the requirement for more major highway intervention. Therefore, a relief road is not identified as being necessary to accommodate the impact of the proposed allocations in the local plan. It is important to note however despite this that NYCC is considering measures to improve existing highway conditions separate to any developer

mitigation accompanying the local plan so whether a relief road or alternatives there is an active intention to alleviate existing levels of saturation on the highway network.

### **Kex Gill Realignment Project**

- 3.8. A further piece of work currently being progressed by NYCC examines the potential for a realignment of the A59 through Kex Gill, between Harrogate and Skipton, which will provide significant benefits to the resilience of the local highway network. Whilst the A59 can be considered a Trans Pennine distributor route the commute links as outlined in Appendix A between Harrogate and Craven are relatively minor. That said, the improvements to the resilience of the network will be important and whilst the local plan will have a minimal impact on this corridor HBC officers are supporting the process to establish a suitable realignment.
- 3.9. Both the Harrogate Congestion Study and the Kex Gill Realignment work are still in development and no funding is as yet guaranteed to be able to deliver the outcomes of either study. As a result the local plan does not incorporate any of the emerging outcomes.

### **Access Fund**

- 3.10. NYCC was successful in acquiring Central Government funding from the Access Fund in order to promote sustainable travel. Work is underway to implement travel plans at selected schools, to increase cycle training and to work with employers to increase the levels of sustainable travel in the Harrogate and Knaresborough area.



## 4. Transport Background and Context by Mode of Travel

### Walking

- 4.1. Walking is the cheapest and easiest way of getting around over shorter distances for many people. It is also extremely difficult to measure and to assess the level of usage. There are good walking networks in the more urban parts of Harrogate District and the primary consideration in relation to the local plan for walking infrastructure will be to ensure that developments contain excellent pedestrian provision within their boundary and connect conveniently into existing pathways. Where there is a pedestrian desire line outside a site allocation that offers a weak or unsafe connection to a key destination, such as a walking route to an off-site primary school then appropriate crossing points and additional measures will require examination. This will occur through the traffic assessment process rather than being considered at the more strategic plan level in detail.
- 4.2. The most recent data that is comparable across all authorities on walking comes from the Department for Transport<sup>2</sup> and this shows walking levels by the percentage of adults undertaking the activity, split by leisure and for travel purposes;

	Percentage of Adults Walking (both leisure and travel)				Percentage of Adults Walking for Travel			
	Once per month	Once per week	Three times per week	Five times per week	Once per month	Once per week	Three times per week	Five times per week
<b>Harrogate</b>	81.7	74.4	48.3	35.5	47.2	40.9	21.6	16.2
<b>North Yorkshire</b>	78.8	71.1	44.4	32.0	40.9	34.8	18.1	12.5
<b>Yorkshire and the Humber</b>	75.4	66.0	40.2	29.7	45.4	38.8	20.8	15.7

**Figure Two: Walking Levels Comparison**

- 4.3. These statistics show that Harrogate District compares favourably to the county and regional levels of walking across all indicators in the table. A good level of walking suggests there are opportunities to minimise the level of vehicle trips through walking access to jobs and services through effective planning and locating of development. Further opportunity exists to expand the five times per week walk rate given the level walking once a week.

### Cycling

- 4.4. Cycling is important on a number of levels. As well as the important public health benefits cycling can contribute significantly to reducing congestion by creating more efficient use of road space. There have been a number of projects in recent years designed to develop a structure for improving the local cycle network across the district. The previous core strategy work outlined a very comprehensive aspirational cycling network for Harrogate and Knaresborough. This work has been taken into account when producing local plan sustainable transport proposals (shown in the maps in section seven) though it is now more focussed to individual development areas and will be further attached to specific

<sup>2</sup> Derived from, DfT Statistics: Table CW0303 Proportion of adults that walk, by frequency, purpose and local authority, England, 2015-16

developments in due course. The requirements of the residents or employees at the allocations and ensuring that developments justify the trip rates foreseen by the highway modelling and aim for a high sustainable travel mode split have been prioritised. This approach provides greater certainty over delivery rather than risking piecemeal delivery of sections of route.

- 4.5. HBC chair and hold the secretariat function of the Harrogate District Cycle Forum. Priorities for infrastructure improvement in Harrogate have been identified<sup>3</sup> and, in several cases, progressed to implementation or funding acquired. The proposed cycle routes from major sites builds on these outline priorities and connect new development with key journey destinations, such as schools or workplaces, or rail stations.
- 4.6. NYCC is well advanced in developing a cycling infrastructure plan for Harrogate. This identifies key strategic routes that will potentially have an external funding source. It is mindful of previous work undertaken and further information will be available in due course. There are opportunities for authorities to work with the Department for Transport to develop Local Cycling and Walking Investment Plans currently. Having these fundamental route requirements that developers can contribute towards or deliver themselves will be valuable throughout the plan period.
- 4.7. There is little evidence in relation to cycling trends across Harrogate District however there are some indicators which suggest there is potential for significant uplift in cycling numbers in the urban areas of the district if the appropriate infrastructure is in place.
- 4.8. Similar to the walking data the most recent level of data in relation to cycling on a district wide basis is from Department for Transport Statistics<sup>4</sup>;

Local Authority	Percentage of Adults Cycling (both leisure and travel)				Percentage of Adults Cycling for Travel			
	Once per month	Once per week	Three times per week	Five times per week	Once per month	Once per week	Three times per week	Five times per week
Harrogate	17.6	13.4	5.9	3.2	5.4	3.7	0.9	0.3
North Yorkshire	17.6	12.3	5.5	2.5	5.3	3.9	1.5	0.8
Yorkshire and the Humber	14.9	10.6	5.0	3.0	6.5	4.9	2.6	1.7

**Figure Three: Cycling Levels Comparison**

- 4.9. This data shows a good level of propensity to cycle within Harrogate but that this is not being translated into regular utility trips (17.6% cycling once per month but only 0.3% five times per week for travel). One of the main obstacles to encouraging uptake of cycling is to get people onto the bicycle in the first place. However, whilst currently there is a low mode share for cycling to work, if the right infrastructure can be provided through developer led

<sup>3</sup>Harrogate Cycle Forum Cycling Delivery Plan

<sup>4</sup> Derived from, DfT Statistics: Table CW0302 Proportion of adults that cycle, by frequency, purpose and local authority, England, 2015-16

schemes combined with wider routes then there can be a level of confidence to suggest that cycling can become a far more prominent method of travel. Particularly where there are a high number of shorter trips, effectively within the Harrogate and Knaresborough areas and Ripon.

## Rail

4.10. For context the plan below shows the Leeds-Harrogate-York rail line and the stations on it.



Figure Four: Leeds-Harrogate-York Rail Line

4.11. The chart below shows data from the Office of Road and Rail in relation to rail station usage estimates. These estimates are the most accurate information available on the number of people using rail stations and the 2016-17 data has been compared against records from previous years. As can be seen from the chart all stations, particularly Harrogate, have substantially greater numbers of passengers using them than in 2007-2008.

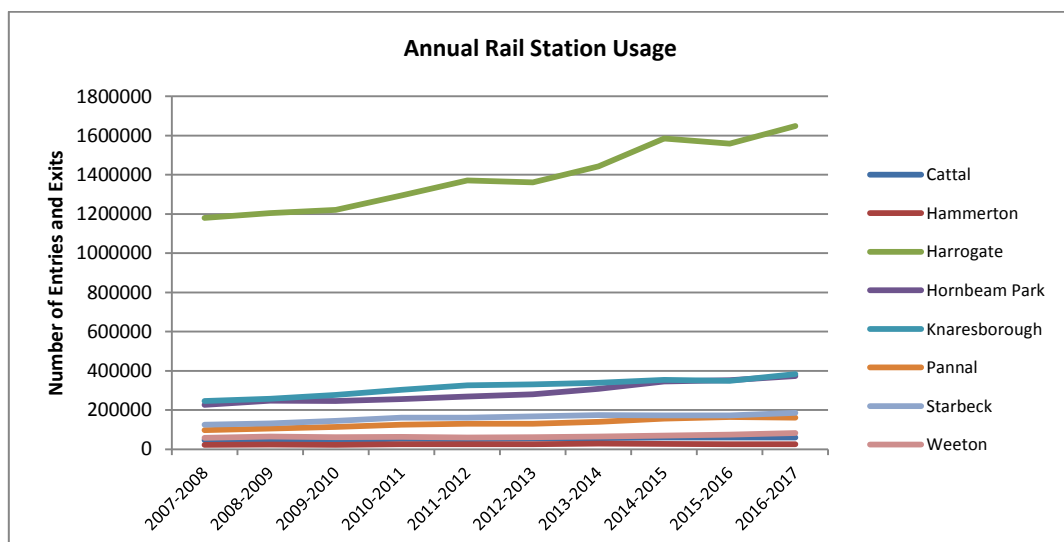


Figure Five: Harrogate Line Rail Station Usage 2007-2017

4.12. The figures associated with this data for the last two years are shown below;

	2015-2016	2016-2017	% Change
Cattal	60234	60646	0.68%
Hammerton	25918	26086	0.65%
Harrogate	1558124	1649306	5.85%
Hornbeam Park	352614	373670	5.97%
Knaresborough	349516	383118	9.61%
Pannal	164590	162026	-1.56%
Starbeck	172940	186198	7.67%
Weeton	74096	82462	11.29%

**Figure Six: Rail Passenger Numbers 2015-2017**

4.13. The large increase at Weeton and the reduction at Pannal are likely to be related as charges were introduced at Pannal Station car park which appears to have resulted in people driving on to the next station, Weeton, to access rail services without a parking charge. It should be noted, however, that there is also additional growth at Weeton on top of the reduction at Pannal. Overall there has been a general increase in usage with strong growth at the urban stations and fairly constant levels of users at the more rural sites. The table shows that Cattal and Hammerton have the lowest levels of usage and that their growth has been slowest (Pannal excepted for the reason above). Therefore a new settlement in the vicinity of these stations will provide a catalyst for increased patronage which can also support improved facilities. Platform length and basic facilities should not be an issue, aside from crossing the line, at Cattal or Hammerton to cope with a reasonable level of growth though over time should passenger levels escalate then work will be required. As can be seen from the level of usage at Hornbeam Park where there are limited facilities there is sufficient headroom for growth at smaller stations within the existing level of provision. That said, there will be an assessment and discussions held with Network Rail and Northern through the new settlement master planning work to establish the required level of infrastructure to be provided at smaller stations should they be generating significant volumes of new passengers.

## **Bus**

4.14. Harrogate district, as with similar predominantly rural districts, has a rather varied bus network. There are strong commercial services within Harrogate and Knaresborough and between Ripon, Harrogate and Leeds. The Yorkshire Tiger service operates between Harrogate and Leeds via Leeds Bradford Airport at an hourly frequency. There are also numerous other services in operation, some at useable frequencies and times for commuters connecting various settlements within and around Harrogate District. The growth strategy has focussed on development along key, well established commercial bus corridors as there is an element of risk associated with subsidised bus operations given the continued revenue savings demanded of local authorities.

4.15. In terms of trends; an indication as to changes in bus patronage was provided to NYCC by Harrogate Bus Company as part of the Harrogate Congestion Study. Extracted from the project evidence base; the following table shows an index of passenger usage on bus routes in the Harrogate and Knaresborough area between 2012 and the local plan base year, 2015;

Service	2012	2013	2014	2015
1/1A/1B/1C	1.000	0.919	0.935	0.950
2A/2B	1.000	0.946	0.933	0.904
3	1.000	0.937	0.923	0.895
6	1.000	0.886	0.603	0.574
36 Harrogate – Leeds	1.000	0.986	0.975	0.952
36 Harrogate – Ripon	1.000	1.026	1.063	0.951
36 Combined	1.000	1.002	1.011	0.951

**Figure Seven: Bus patronage levels by service.** Source: NYCC Harrogate Congestion Review

- 4.16. The data shows unanimous reductions in usage to the local plan base year of 2015 from 2012. This reduction is similar to national trends in bus use outside London which has consistently shown reductions in bus patronage. However, within Harrogate District there has been significant investment on these routes since to turn this reduction around.
- 4.17. There are a number of improvements to routes and services that have been implemented or have been secured recently and these can be built on to develop a high quality bus network well into the future. It is important that the local plan supports commercial bus routes wherever possible and can help support the ability of these routes to remain without subsidy in future. Service one variations between Harrogate and Knaresborough have recently received high quality vehicle refurbishments as part of a project financed by the national Clean Bus Technology Fund. This funding was secured by HBC in partnership with Harrogate Bus Company and ensures that the buses are as clean as new vehicles and can be operated for another five years.
- 4.18. The flagship 36 service between Ripon, Harrogate and Leeds has recently seen major investment in new buses and a frequency increase on the Harrogate to Leeds section, taking the service to every ten minutes. The remaining services in the table are short loops linking Harrogate Town Centre with outlying areas. These services, from summer 2018 are to be operated by brand new, fully electric buses as part of the Low Emission Bus Scheme.

### **Air Quality and AQMAs**

- 4.19. There are four Air Quality Management Areas within Harrogate District. These are located at Woodlands junction in Harrogate, the High/Low/Water Skellgate/Skellbank junction in Ripon and around Bond End and at York Place in Knaresborough. The predominant reason for the designation of these AQMAs is due to the combination of traffic queues and the close proximity of buildings to the highway.
- 4.20. Bond End junction in Knaresborough is to be subject to a significant overhaul during the summer/autumn of 2018 and therefore cannot be assessed in terms of both capacity and air quality impact from local plan traffic. These junctions will require consideration through traffic assessments created for planning applications associated with nearby site allocations.
- 4.21. An air quality action plan is currently being updated by HBC in collaboration with NYCC. This will be consulted on prior to the end of 2018 and is intended to consider a range of measures to address air quality at the specific locations. The local plan can contribute towards a wider improvement in achieving a cleaner overall vehicle profile on Harrogate District roads through the policies in relation to electric vehicle charging provision at sites. Should the trajectories



suggested by government be realistic then by the end of the plan period there can be expected to be a significantly greener profile of vehicles on the roads. Local plan policies aim to contribute at a local level to this national ambition. To ensure that HBC has a plan in place to maximise the uptake of cleaner vehicles a borough council Ultra-Low Emission vehicle strategy has been developed and will be formally in place by 2019.

- 4.22. Woodlands junction and High/Low/Water Skellgate/Skellbank junctions are discussed in greater detail in the highway mitigation reports. These junctions will require amendment to accommodate the level of traffic generated by site allocations and the ability to positively affect air quality has been considered.

## 5. Harrogate District Transport in 2035

- 5.1. This section of the report will detail the expected transport networks and opportunities to 2035 and will present maps of the main growth areas to display the anticipated level of infrastructure that will be provided both by local plan sites and already committed improvements. The growth areas requiring the greatest consideration of transport infrastructure are West Harrogate, the A59 between A1(M) junction 47 and York, associated with the new settlement, and Ripon. Also important is the Harrogate to A1(M) corridor, whilst there is a lower amount of growth in this area, through traffic from the new settlement and busy traffic conditions on the Wetherby Road approach to Harrogate combine to create a transport infrastructure requirement as part of the local plan.

### Leeds – Harrogate – York Rail Line and Franchising

- 5.2. The underpinning theme of the growth strategy is to locate development close to quality public transport corridors. The rail corridor across the south of the district offers probably the most effective people moving transport system within Harrogate District. Journey times that are not subject to highway congestion both within the district and further afield to York and particularly Leeds will be invaluable in the future as time becomes more and more important to people. There are a number of transformative changes already committed that will significantly increase the attractiveness of rail travel to both those visiting Harrogate District and also those residing and doing business here. These are;
- 5.3. **Improved Leeds – Harrogate Frequency:** As part of the existing franchise requirements the rail service between Harrogate and Leeds will move from a train every half an hour to a fifteen minute frequency. This is expected to happen during 2019 and will therefore be in place before the vast majority of the local plan growth is delivered. Sites north of Pannal, those in West Harrogate and a new settlement in the Cattal/Hammerton area will support the ambition to make these additional services successful by providing additional passengers to the rail line.
- 5.4. **Improved Harrogate to York Frequency:** A scheme has been developed to enable the introduction of an additional train each hour between Knaresborough and York which will create a twice hourly frequency through from Harrogate to York. This scheme has a substantial funding allocation from the York, North Yorkshire and East Riding Local Enterprise Partnership and a further contribution from NYCC. From discussions with those involved in developing this scheme HBC has confidence that two trains per hour can be delivered within already allocated budgets and prior to the estimated start of construction on the new settlement. Delivery of the scheme is currently anticipated prior to the start of any construction work on the new settlement.
- 5.5. **New rolling stock for the area:** Class 170 trains are arriving into Leeds from ScotRail (the Scottish rail franchise holder) and will be deployed on the Leeds – Harrogate – York line. This will mean the end of the poorly perceived Pacer trains and also the end of two car units as all the new rolling stock to the area will be three cars in length as a minimum. Free wifi will also be provided on these trains and along with the refurbishment of existing rolling stock will significantly improve the travelling experience. The on-train environment is important to attracting commuters and business travellers where the ability to work on the train and to travel in comfort is important. The refurbished trains will provide three or four car units throughout the majority of the day but with the possibility of two car units at

quieter times. Trains on the line will be longer therefore offering significantly improved capacity.

- 5.6. **Additional Direct London-Harrogate Trains:** To further enhance the rail offer in the district Virgin Trains East Coast (VTEC) had a franchise commitment to introduce seven trains per day in each direction between Harrogate and London from the existing one per day. This commitment has been taken on by London North Eastern Railway (LNER) following changes to the franchise operation. These services will be operated using the new Azuma trains and will reduce the journey time between Harrogate and London by 15 minutes from 1 hour 52 minutes to 1 hour 37 minutes. In addition to providing improved, faster connections to the capital these services have the potential to reduce pressure on more strategic highway routes as fewer people will drive to Leeds and York to connect with East Coast Mainline services.
- 5.7. **Leeds Bradford Airport (LBA) Parkway Station:** HBC has supported the development of a new station on the Leeds-Harrogate-York rail line along with other local partners. West Yorkshire Combined Authority (WYCA) has funding to construct the station and is developing designs in order for this to be delivered. In addition to providing vastly improved public transport connectivity to the airport for residents of Harrogate District, visitors and those doing business in the area the station will also provide a Park and Rail facility for both those looking to access Leeds and Harrogate which will contribute towards a reduced number of vehicles from North Leeds accessing Harrogate and Knaresborough by road.
- 5.8. These committed improvements provide a significant level of investment in the Leeds-Harrogate-York rail line and provide a plan, for the relative short term, as to what facilities and improvements will be as standard to the 2035 end of plan period. Given many of these improvements have been secured in recent years outside of developer contributions there will be further opportunities through the plan period to strengthen the rail offer in Harrogate District and beyond. These opportunities include;
- 5.9. **Future Franchise Renewals:** In 2015, as part of the Northern franchise renewal process, HBC produced a paper outlining realistic but achievable asks for the rail line and met with all bidders to lobby for improvements. Most of these ambitions were realised through the successful bid by Arriva and similar lobbying work will be undertaken as part of any further franchise renewals. Other local partners, including NYCC undertook similar exercises. HBC officers also worked with local partners to promote additional direct London to Harrogate services through the East Coast Mainline bidding process. As the proposed local plan growth offers opportunity to increase rail patronage the case for further future improvement is strengthened by the allocations and can aim to build upon the successful lobbying undertaken during 2014-15. Opportunities such as four car trains as standard and earlier/later operation could be achieved through this method.
- 5.10. **Future Infrastructure Upgrades:** Despite the service and rolling stock improvements there are enhancements, particularly to infrastructure, that can still be delivered to make rail travel more attractive. These include;
  - Electrification of the Leeds-Harrogate-York line. This will provide journey time benefits along with reduced running costs as well as greater opportunity for integration with other services at Leeds Station which could result in direct services to Bradford for instance. The

Northern Sparks<sup>5</sup> report, by the Northern England Electrification Task Force ranks the Leeds-Harrogate-York line in the highest priority category for electrification. HBC, NYCC, WYCA and City of York Council (CYC) jointly funded a business case study<sup>6</sup> which concluded that there is a strong case for investment in electrification of the Leeds – Harrogate – York rail line.

- Additional capacity North of York Station. The junction of the Leeds-Harrogate-York line with the ECML provides a constraint as local services have to work around major intercity routes. There are options available to remove this constraint and HBC will continue to promote these to the relevant organisations. This constraint should not affect the ability to run two trains per hour between Harrogate and York.
- Leeds Station Masterplan/ Armley Junction Capacity Upgrade. Work north of Leeds can ensure improved access to Leeds Station and in time, the HS2 hub.
- Double Tracking between Knaresborough and Poppleton. Whilst not required to deliver two trains per hour between Harrogate and York double tracking the single line section of railway would provide journey time reliability benefits and enable improved operation of services.

5.11. From duty to cooperate meetings with rail industry representatives there are no issues with platform capacity and length currently. There will be need for upgrades to selected rail stations as a result of local plan proposals. The facilities at Cattal and Hammerton are commensurate with the passenger levels and whilst improvements have been (and are) forthcoming there will need to be investment in access and passenger amenities to bring these stations up to a desirable standard. The exact requirements will be dependent upon the final boundary chosen for the new settlement. Improved walking and cycling routes to Pannal Rail Station will also be required in order to enable good quality sustainable transport links to the sites to the north of the village. Harrogate Station has an allocation effectively attached to it and work is progressing on developing a masterplan for the area which will include improved rail station facilities and better access opportunities.

5.12. The sites to the north of Starbeck will be expected to provide good active travel access to Starbeck Rail Station and there are opportunities to improve the station entrance and car parking within HBC land at Hornbeam Park. Knaresborough Rail Station is well located for visitors to Knaresborough Town Centre which is important for tourism but perhaps less optimally positioned for the majority of local residents wishing to commute. Improvements could be made to access and options for cycling infrastructure connecting into Knaresborough Rail Station will be further examined. Weeton Station is located in the green belt and is envisaged to remain a relatively small rural station. It is not expected that there will be significant impact on demand at Weeton as a result of the local plan allocations. The sites in West Harrogate will be able to connect into rail services at Harrogate, Hornbeam Park or Pannal rather than travel further to Weeton.

### **Bus provision**

5.13. There are a number of development focussed opportunities to improve bus services to 2035, including;

5.14. HBC and Harrogate Bus Company are actively looking for opportunities to fund a Park and Ride site to maximise the opportunities offered by the existing high frequency provision of

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<sup>5</sup> Northern Sparks: [https://transportforthenorth.com/wp-content/uploads/EFT\\_Report\\_FINAL\\_web.pdf](https://transportforthenorth.com/wp-content/uploads/EFT_Report_FINAL_web.pdf)

<sup>6</sup> Harrogate Line Electrification Business Case: [https://www.wymetro.com/media/1634/harrogate\\_business\\_case\\_final.pdf](https://www.wymetro.com/media/1634/harrogate_business_case_final.pdf)

the 36 on the A61 between Harrogate and Leeds. Such an initiative will strongly help to reduce vehicle trips to and from the employment allocation north of Pannal as well as offering an interchange to Leeds Bradford Airport bus services and a potential base for shuttle services to Cardale Park, thereby helping to minimise existing traffic accessing existing employment in West Harrogate as well as reducing vehicle demand on the A61 into Harrogate Town Centre.

- 5.15. As well as the core growth areas of West Harrogate, Ripon, and the A59 corridor between Knaresborough and Kirk Hammerton there are other opportunities to sustain existing services. The villages between Harrogate and Pateley Bridge lie on the 24 route and the allocations in these areas will allow for a greater potential bus passenger market. The 24 route has been subject to reductions in services at the latter end of the day and a level of further development along the route can only help to substantiate the case to improve the service.
- 5.16. Boroughbridge is served by a number of routes and whilst these tend to be subsidised there have been efforts to generate a commercial service recently. Further growth towards the south side of the town combined with a new settlement in the Hammerton area provides a significant opportunity to sustain and strengthen the little explorers 22 service which serves York – Green Hammerton – Boroughbridge and Ripon and local villages in between.
- 5.17. Ripon currently has a high quality bus service linking the city to Harrogate and then on, directly, to Leeds in the form of the northern section of the 36. This route is extremely well established. Ripon also has a number of less frequent connecting bus services linking the city with other towns such as Thirsk, Boroughbridge and Masham. In addition to these routes there is also a Ripon City Service (with three various loops) currently operated by Connexions. The Ripon Barracks development to the West of the City will need to connect into Ripon Bus Station in an expedient and frequent manner to enable residents to conveniently access the 36 service to then travel on to Harrogate or Leeds. The volume of housing associated with the Ripon Barracks site can be anticipated to provide sufficient commercial security to the city bus services in order to enable good connections into Ripon City Centre and also to sustain the route for existing residential areas.
- 5.18. In addition to the above there may be potential to create a 'long-link' Park and Ride facility within the new settlement to ensure a direct bus connection with York as well as supporting the Little Explorers service. The aspiration for the new settlement is to have a strong element of bus/rail interchange to further boost options for integrated public transport travel both within the settlement and to key locations outside of it.
- 5.19. Developers of all major sites will be required to take into account bus service provision and allocations will need to be appropriately masterplanned to ensure quality, prioritised bus access within and into/out of sites. High quality waiting facilities are also important and well-designed shelters, complete with real time bus information provision will be expected in all developments where buses will pass through.

### **Highway projects**

- 5.20. There are a number of committed highway improvement projects across the district that will provide improvement to the current situation and contribute towards enabling future growth. There are four main pieces of work underway, these being;



## **A1(M) Junction 47 Upgrade**

- 5.21. A scheme has been designed to remove the current issue of vehicles queuing down the slip roads onto the main carriageway of the A1(M). This scheme involves signalisation of all junction arms and some slip road widening. The scheme, jointly funded by the York, North Yorkshire and East Riding Local Enterprise Partnership (YNYER LEP) and NYCC through a National Productivity Investment Fund (NPIF) allocation is to begin implementation during 2018/19. This scheme also has an enhanced design associated with the successful planning application by Forward Investments LLP to create a major business park (site allocation FX4). This enhanced design will provide sufficient capacity to allow development of the largest employment allocation in the district.
- 5.22. Further works will be required in addition to the two schemes outlined above in order to ensure suitable delivery of local plan allocations. This work has been undertaken in partnership with Highways England, NYCC and the York, North Yorkshire and East Riding Local Enterprise Partnership and has been separately reported. The local plan mitigated solution for Junction 47 uses the Forward Investments enhanced scheme as a base and includes further components to mitigate the cumulative impact of local plan allocations.

## **National Productivity Investment Fund 2 (NPIF2)**

- 5.23. HBC proposed a series of transport improvements in West Harrogate to NYCC as part of the NPIF2 call for projects. This funding stream could only be accessed by Local Transport Authorities and after further developing the proposed project NYCC secured £3.2m of government funding to implement a package of improvements relating to growth and sustainable travel in the West Harrogate area. This project is discussed in greater detail in the West Harrogate section. The success of the project in achieving funding demonstrates that highway conditions and growth potential in Harrogate District mean that government funding can be accessed independently and above what can be generated from developer contributions.

## **Bond End, Knaresborough**

- 5.24. As discussed in the air quality section this junction has not been considered in detail through the highway modelling work that has been reported as the final alignment was unknown through the process. Traffic assessments for sites having an impact on Bond End will need to ensure that their impact on the new junction layout is fully considered.

## **Improvements from Existing Planning Commitments**

- 5.25. A number of successful planning applications have accompanying highways mitigation requirements. Where these fall within one of the core growth areas they are highlighted in the growth areas section below. The majority of highway amendments associated with committed developments relate to access provision and footways and are relatively minor.

## **Harrogate/Knaresborough Northern Bypass**

- 5.26. A protected route was in place for a northern bypass of Harrogate and Knaresborough. This was however revoked by NYCC during 2018 and as such, is not considered further through the local plan process.

## 6. Impact of the Local Plan

- 6.1. HBC has commissioned highway modelling work using the Harrogate District Transport Model. Development of the model was undertaken through a joint commission with NYCC using Jacobs. The Local Model Validation Report<sup>7</sup> describes the detail behind the model build and the technicalities with the system. There are two further reports; the first of these details the original growth proposals and the second updates the modelling with the revised site allocations that were identified to meet increased housing and employment requirements. Whilst these documents cover the findings of the highway modelling work in detail, a brief summary is provided here in order to ensure the full context of the infrastructure requirements outlined below is understood.
- 6.2. The highway modelling is strategic in nature and will need to be supported by transport assessments specific to planning applications in due course. The intention of the work is to establish any key capacity constraints on the highway network cumulatively as a result of development, evidence the extent of the problems and enable solutions to be found to those issues. The assessment work has identified the junctions in the table below as being impacted by traffic from developments proposed within the local plan. These junctions have been subsequently examined in greater detail through specific junction modelling software packages. This second stage of analysis is undertaken to a greater degree of accuracy in terms of junction dimensions and can therefore result in the outputs showing that there is no impact. It has been agreed with NYCC that the requirement for the local plan is that a junction solution needs only to mitigate the impact of the cumulative site allocations rather than it being necessary to bring junctions to a state where they will no longer suffer from congestion. This does not preclude a junction from requiring mitigation in future should a traffic assessment identify a requirement for intervention.

Junction	Status
Clocktower, Ripon	Principle of junction mitigation agreed with NYCC, further opportunities identified to create an improved solution.
High/Low/Water Skellgate / Somerset Row, Ripon	Principle of junction mitigation agreed with NYCC subject to further understanding of traffic flows displaced by prohibited right turn.
A59/A658, Knaresborough	Detailed modelling showed junction performance to be under the threshold for mitigation.
Woodlands junction, Harrogate	This is a complex junction on the busiest approach road to central Harrogate. There are two potential solutions to this junction. One involves the purchase of third party land. The other solution seeks to maximise junction capacity through amendments to the existing layout. Further work is to be undertaken with NYCC to establish which solution is required to deliver the local plan.
Leeds Road Marks and Spencer, Harrogate	Improvements have been identified to increase the capacity of this junction including a banned right turn into Leadhall Lane.
Otley Road/Crag Lane/Beckwith Head Road, Harrogate	Mitigation agreed in principle with NYCC.

<sup>7</sup> Available online: [Harrogate District Transport Model; Local Model Validation Report](#)

A658/B6164, Knaresborough	Mitigation agreed in principle with NYCC.
A59/B6164/Chain Lane, Knaresborough	Mitigation agreed in principle with NYCC. The solution to this junction builds on a proposed design associated with the Manse Farm development to the East of Knaresborough.
A61/Pannal Bank/Follifoot Road, Harrogate	The mitigation solution to this junction requires the purchase of third party land and involves changing the alignment of the junction to remove the current staggered design which is not efficient.
Hookstone Road / Oatlands Drive, Harrogate	Detailed modelling showed junction performance to be under the threshold for mitigation.
Leeds Road/West Park/Otley Road/York Place, Harrogate	Detailed modelling showed junction performance to be under the threshold for mitigation.
Kestrel Roundabout (A658/A661), Harrogate	Principal of junction mitigation agreed with NYCC. Third lane to be added to A661 approach to Harrogate
Hookstone Road/Hornbeam Park Avenue, Harrogate	Detailed modelling showed junction performance to be under the threshold for mitigation.
Leeds Road/Vernon Road, Harrogate	Detailed modelling showed junction performance to be under the threshold for mitigation.
Cold Bath Road/West Cliffe Grove, Harrogate	Detailed modelling showed junction performance to be under the threshold for mitigation.

- 6.3. In addition to the above, further work has identified the likelihood for a roundabout upgrade at Pot Bank roundabout north of Beckwithshaw. There may also be requirements in the Ripon area for signalisation of the Blossomgate/Westgate junction. The A61/Melmerby Green Lane may require a roundabout should traffic assessments identify issues with HGV access. Junction 47 of the A1(M) has been assessed in a further study and is reported separately.
- 6.4. Work is underway to apportion the impact of each development on junctions requiring mitigation and therefore allocate contributions in a fair and equitable manner. This work will be available for the plan examination.
- 6.5. Separate meetings were held with both Harrogate Bus Company and Connexions as the major bus operators in the district to understand the potential for serving new developments with bus based public transport. These discussions were informal and commercially confidential however they have informed the broad proposals within the growth areas to ensure that major developments are well served by buses. It is likely that there will be a requirement on developers to support services prior to the full build out of sites in order to ensure that newly arrived residents have the option of bus travel from their move in date.
- 6.6. Cycle routes have been identified through understanding the key destinations for specific housing developments and applying broad routes at this stage to be delivered. These routes will be required to be delivered to ensure that sites can meet a realistic mode split target in line with that in the highway modelling. Whilst they are broad in nature at this stage further work will be undertaken to integrate feasible, specific alignments into the plan process.

## 7. Growth Areas

### West Harrogate & Pannal

7.1. The proposed allocations in West Harrogate and Pannal are critical to delivering early plan period growth. As indicated in figure one Otley Road, the main radial route to the west of Harrogate is by far the lowest trafficked main arterial in Harrogate. Notwithstanding this, the level of growth proposed is not insignificant and has required some additional assessment to take place over and above the outputs of the strategic highway modelling. This has arisen as a result of a number of planning applications assessed in the Otley Road corridor presenting data which required further examination. This further examination and discussions with developers of allocation sites has identified a number of interventions that are likely to be required as a result of the transport assessment process;

- **Pot Bank roundabout upgrade and widening.** North of Beckwithshaw at the junction of the B6161 (Pot Bank) and the B6162 (Otley Road). The developer of the allocation to the north of Otley Road has an option on the land to the north east of the junction. The proposed mitigation is to utilise the option on this land in order to realign the roundabout and widen it sufficiently to ensure that development traffic can be accommodated. There is also likely to be an element of improvement associated with this mitigation for existing users of the mini roundabout.
- **Access points for the site north of Otley Road.** These access points will need to be relatively substantial junctions given the size of allocation and the connection with Otley Road. Some preliminary work has been undertaken to identify a likely arrangement in order to appropriately integrate with existing site accesses on that stretch of highway. The likely junction access points are shown on the plan below though the final detail of these will need to be established through the traffic assessment process and coordinated with the committed sites opposite.
- **Beckwith Head Road/Crag Lane/Otley Road junction enhancement.** There are improvements to be undertaken to this junction as part of committed development. In addition to these improvements there is a further requirement to extend the footprint of the westbound junction approach to accommodate increased vehicle flows on Otley Road as detailed in the local plan highway mitigation reports.
- **Widening of Whinney Lane.** This road is relatively narrow in parts. Development provides the opportunity for widening and the site frontage could accommodate footways and cycleways.

7.2. In addition the NPIF2 scheme outlined in section 5.3.2 will provide a number of further enhancements to the existing network which will help to alleviate key pinch points. The improvements as part of this package are highlighted on the map and comprise;

- **Harlow Moor Road / Otley Road Junction:** Widening of the junction to ensure that vehicles heading eastbound on Otley Road can pass right turning traffic without delay. This is a key constraint on movement across the corridor and contributes towards saturation at the Harlow Moor Road / Otley Road junction and at other junctions on Otley Road as a result of a more concentrated vehicle flow departing this area.
- **Burn Bridge Lane / A61 Roundabout:** A safety scheme exists and has funding to provide an improved approach. As part of the NPIF scheme this will be developed further to provide a roundabout access point and ensure that vehicles turning out onto the A61 can do this safely.

- **Improvements to routes between A61 and West Harrogate;** funding has been allocated within the NPIF bid to improve relevant sections of highway connecting the A61 and sites around Otley Road. These improvements may require further investment from developers depending on the outcome of detailed transport assessment work.
- **Signal Improvements on Otley Road:** Further technological upgrades have been incorporated into the NPIF bid to ensure that signals are as coordinated as possible to improve traffic flows.
- **Cardale Park Sustainable Transport Provision:** This is a flexible financial allocation that could fund cycle parking, electric vehicle charging points or other sustainable transport infrastructure as appropriate.
- **Otley Road Cycle Route:** A significant piece of cycling infrastructure, building on a committed route with developer funding this work will ensure a coherent, segregated cycle route adjacent to Otley Road that site allocations will be able to connect into, ensuring that cycling is as attractive as possible to future residents and that short vehicle trips can be minimised from these locations.

### **Bus Provision**

- 7.3. Both Connexions and Harrogate Bus Company provide bus services linking West Harrogate with Harrogate Town Centre. The level of development can be considered to provide a commercial case for extending a route of either, or both, operator to serve the new developments. Committed sites H45 and H46 have no through access so the HBC preferred route at this stage is to achieve high levels of bus accessibility through sites H49 and H51 before the route can re-join the existing West Harrogate loop. Sites PN18 and PN19 both lie adjacent to the A61 and as such, service 36 to Leeds and Ripon, the service to Leeds-Bradford Airport and Bradford and services to Ilkley, provide excellent direct bus connectivity.

### **Rail**

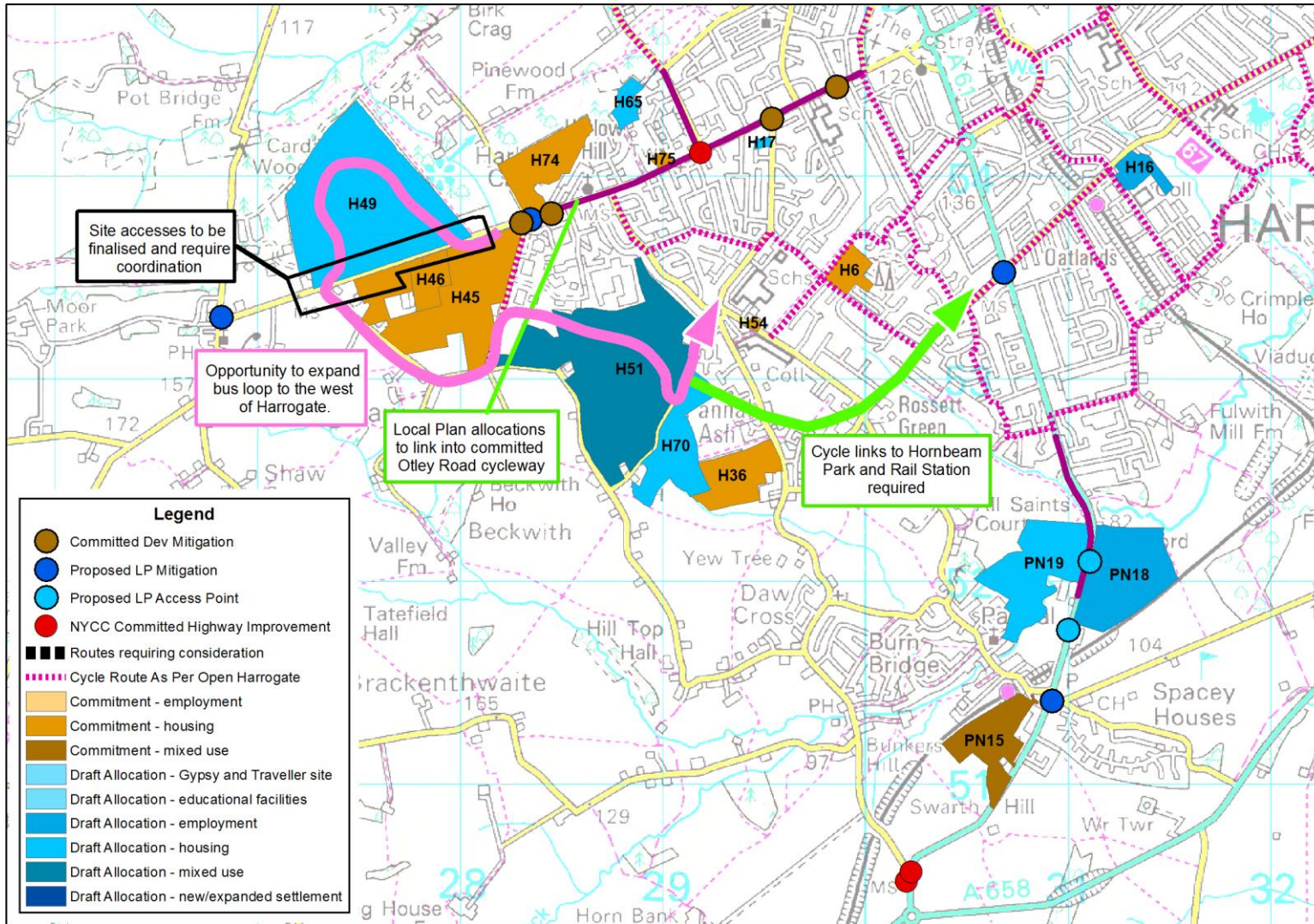
- 7.4. For the sites in West Harrogate links to rail will be provided through linking to the Otley Road cycleway allowing access to Harrogate Rail Station by bicycle, a proposed new route linking across to Hornbeam Park Rail Station and the improved bus frequency which connects to rail via the adjacent bus station. Sites PN18 and PN19 will require some improvement to connections to Pannal Rail Station but their close proximity to this station offers significant opportunity for high rail mode share in trips to and from the sites.

### **Walking and Cycling**

- 7.5. As outlined previously much of the walking infrastructure to be implemented by plan allocations will be through within site networks and connecting to key destinations. In West Harrogate and north of Pannal, this largely consists of access to schools and employment. Discussions are ongoing in relation to school requirements in West Harrogate and walking routes will need to develop in line with any new school location. Cardale Park is a large employment centre and is located sufficiently close to the proposed housing allocations to be walkable. This offers the opportunity for those working at the site and living further afield to locate closer to work and potentially reduce vehicle trips on the network.
- 7.6. North of Pannal, walking connections will need to be provided to Pannal Village and particularly from the employment site to Pannal Rail Station. Provision will also need to be made in some form to cross the A61.



Figure Eight: 2035 Transport Infrastructure Plan: West Harrogate



## Harrogate to A1(M)

- 7.7. The A59, A658 and A661 corridor between Harrogate and the A1(M) comprises the key arterial highway network in the south of Harrogate District. Allocations on this corridor include employment land adjacent to Wetherby Road (A661) in Harrogate, housing to the East of Knaresborough and the committed major employment allocation at Flaxby, just south of the A59. This highway corridor comes under greater pressure as a result of the allocations due to traffic travelling from the new settlement and the Flaxby employment site to Harrogate and Knaresborough. A number of junctions on this corridor have been identified for mitigation in order to accommodate the east - west flow on the arterial roads. Improving east – west connections (encompassing these roads) is identified as a key priority by the York, North Yorkshire and East Riding Local Enterprise Partnership (YNYERLEP) and NYCC.
- 7.8. The local plan mitigation measure identified in this corridor can act as a catalyst for a wider improvement scheme to fulfil partner ambitions for improved east west connections. For instance, where there are mitigation measures to roundabouts these can be developed to increase capacity further. The mitigation options for the junctions highlighted with a dark blue circle in the plan overleaf are detailed in the highway mitigation report, however a summary of the issues and solutions is outlined below;

## Wetherby Road

- 7.9. Wetherby Road in Harrogate is the main approach road to the town from York, the A1(M) and Wetherby. It is also the signed route for those wishing to cross The Pennines using the A59. As a result traffic flows are high and whilst there is a half hourly, recently upgraded, bus service on the road there is no cycle route infrastructure and congestion occurs. In light of this few allocations have been recommended in close proximity to Wetherby Road however there is impact from trips to the employment site adjacent to the A1(M) and A59 and the proposed new settlement accessing and egressing Harrogate. The key pinch points and issues are;
- 7.10. **Empress Roundabout:** A major roundabout in Harrogate joining Wetherby Road, Knaresborough Road and Skipton Road. Whilst a busy location it has not been highlighted within the highway modelling as a problem junction. This is likely to be due to the fact that the junction itself has vehicles moving across it and junctions or crossings to either side of the roundabout can cause the roundabout itself to become congested.
- 7.11. **Woodlands Junction:** A Local Sustainable Transport Fund project implemented changes to the layout of the junction in 2014. Even so, this location as a major crossroads is a pinch point on the Harrogate highway network. It has been identified for local plan mitigation and analysis has shown that there are still measures that can be implemented in the existing highway footprint. The approach taken, given this is strategic modelling has been to develop two solutions that can be implemented should vehicle flows reach a certain level. The agreed distribution of traffic flows for the permission granted to the major employment site adjacent to the A1(M) and A59 has a lower level of traffic travelling west towards Harrogate and Knaresborough than in the HBC local plan model runs. The traffic to/from this site and Harrogate forms a key part of the flow on Wetherby Road and therefore through Woodlands junction. The lower level solution includes restriction of certain lightly trafficked movements and improvements within the footprint of the junction. The major intervention involves the purchase of third party land to create additional space at the junction and also to provide new Stray land. Further work will be undertaken with NYCC to confirm which solution is required.

7.12. **Kestrel Roundabout:** The junction of Wetherby Road with the A658 Harrogate Southern Bypass requires a level of improvement to increase capacity. This should be a relatively straightforward scheme, albeit at a busy junction.

#### **A658/A59 Links**

7.13. **B6163/A658 Thistle Hill:** A safety scheme is planned at this location by NYCC. Though the junction has not been identified through the highway modelling as requiring mitigation there may be a need for relevant transport assessments in future to consider the implications of higher vehicle flows on the A658 on vehicles turning right out of the B6163.

7.14. **Roundabouts in the Knaresborough Area:** An identified mitigation scheme has been published for the A658/B6164/Wetherby Road roundabout. The A59/A658 roundabout may be a site access opportunity for K25, if not then there may be requirement to provide a new roundabout on the A59 further east. There are two roundabouts planned to provide access for the Manse Farm development, identified as K31 on the plan below.

7.15. **A59/B6164/Chain Lane:** This junction has been identified for mitigation as part of the local plan cumulative flows. Care needs to be taken on this corridor to ensure that vehicles are not moved too swiftly into central Knaresborough and the York Place air quality management area.

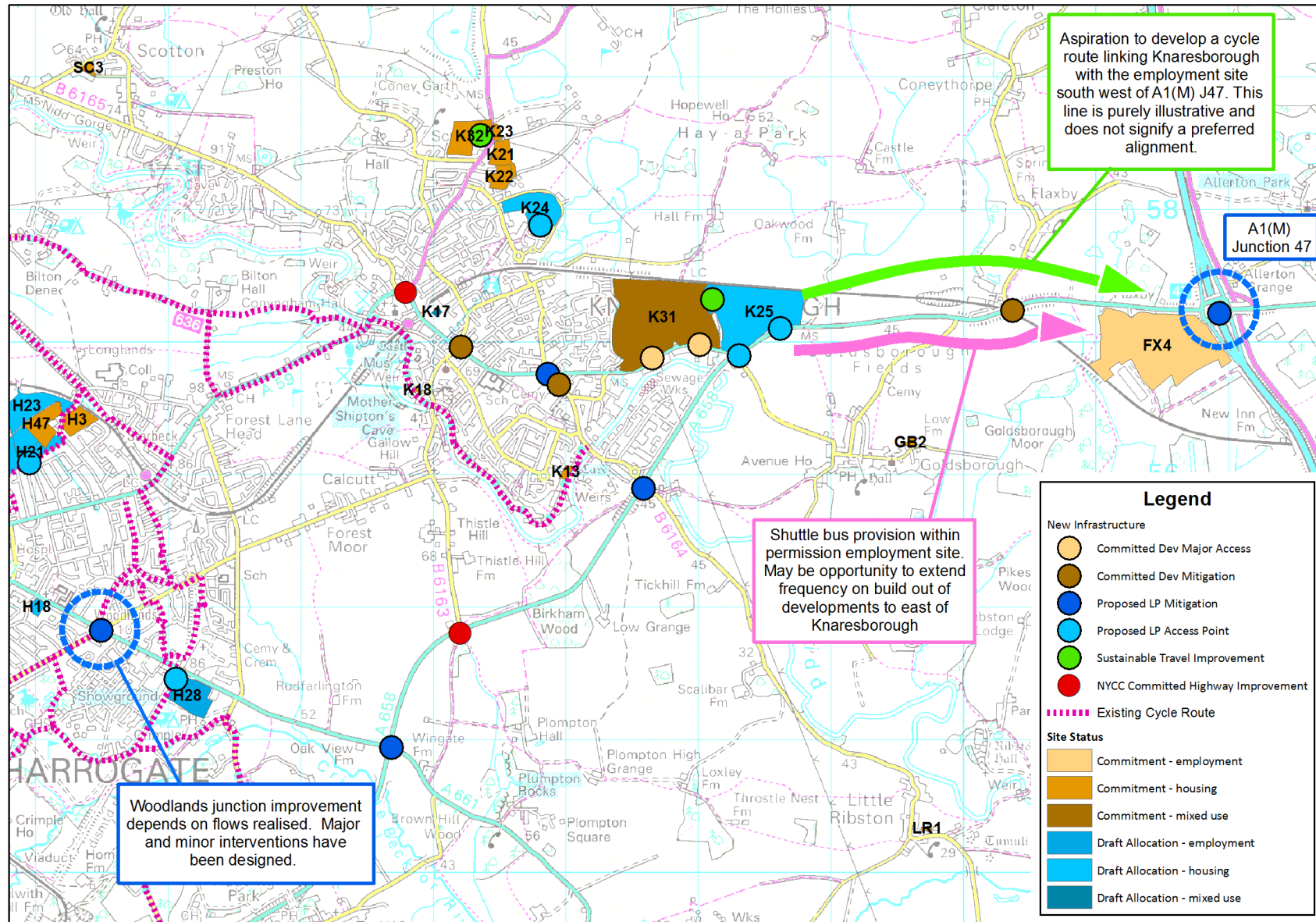
7.16. **A1(M) Junction 47:** This junction is of regional significance and has been examined through a separately published study.

7.17. Bus provision in this corridor is important and as part of the major employment allocation a shuttle bus is to be introduced between Knaresborough rail station and the site. It is hoped that the committed development and adjacent plan allocation are sufficiently substantial in terms of the number of dwellings to be able to justify a commercially operated service to the business park over time.

7.18. The main cycling implications in this area will be to ensure that site K25 connects into the network and is well planned in terms of cycling provision. There is also an aspiration to provide a cycle connection adjacent to, but segregated from, the A59 in order to remove shorter vehicle trips between Knaresborough to the employment site. This has no funding but HBC will work proactively to achieve this ambition.



Figure Nine: 2035 Transport Infrastructure Plan: Harrogate to A1(M)



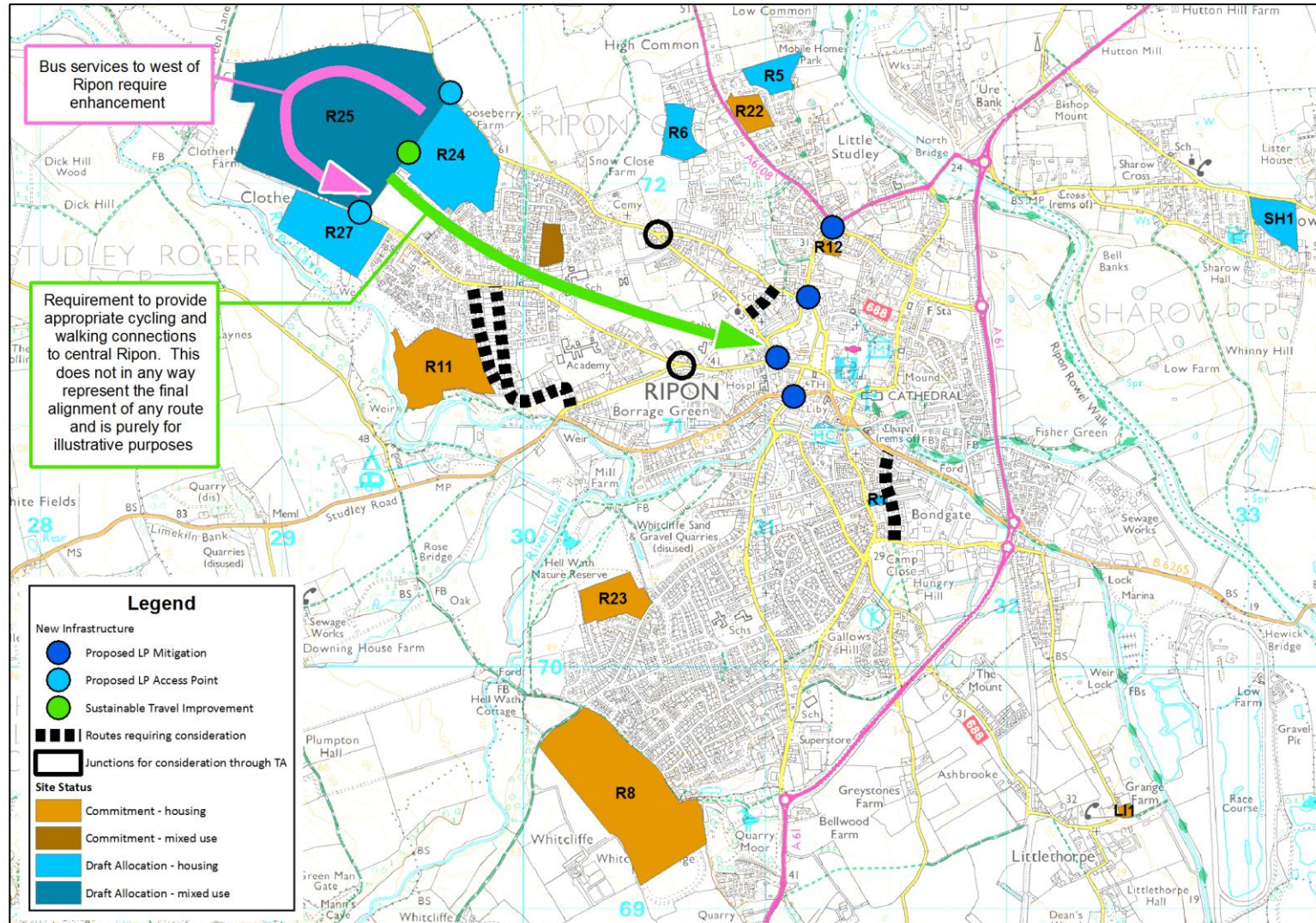
## Ripon

- 7.19. The main allocation in Ripon is the Ministry of Defence land at Claro and Deverell Barracks and Laver Banks. The assumed local plan allocation within the highway modelling work was 800 dwellings alongside a substantial employment allocation. The site promoter has indicated in representations that a revised split between employment and residential is favoured with a greater volume of dwellings and a smaller B1(C) employment plot. This slightly changes the direction and quantum of trips compared to that within the highway modelling work. HBC and NYCC are working with the site promoter to ensure that any changes to the level of traffic from what is detailed within the highway modelling is considered appropriately and that other issues that may not be highlighted through the strategic modelling are embedded within any future transport assessment.
- 7.20. The traffic issues in Ripon predominantly occur as a result of traffic trying to flow through the city centre from the MoD site to the A1(M) and Harrogate. The three key junctions identified within the highway modelling work (Clocktower, High/Low/Water Skellgate/Somerset Row and Coltsgate Hill/North Street) can be mitigated. One other junction was marked as being potentially problematic in the strategic transport modelling, Blossomgate/Westgate. Installing traffic lights at this junction would mitigate the impact and is a scheme to be implemented if transport assessment work suggests it is required.
- 7.21. Whilst the MoD site is the most significant allocation for Ripon site R8 generates an element of traffic accessing the city centre and the employment allocations at Melmerby exhibit a strong commuting connection with Ripon. Promoters of these sites will need to consider the impact on central Ripon.
- 7.22. Sustainable transport is very important in Ripon. Both the size and topography of the city are conducive to cycling. The already committed development at Bellman Walk contains an agreement to fund a £70k cycling study of Ripon. This will be progressed to provide a suitable blueprint for both commuting and recreational routes within Ripon and also connecting the city with key destinations such as Harrogate, Melmerby, Fountains Abbey and surrounding villages where appropriate. As a result the requirements to provide cycling infrastructure, or contributions towards it, are rather more general at this stage. Essentially the MoD site will need to ensure a suitable cycling connection to Ripon City Centre is provided and there also exists the opportunity for the road through the Laver Banks site to be utilised as a walking and cycling connection providing a recreational connection between the site and the Fountains Abbey area. Smaller sites will be required to contribute towards infrastructure identified in the outputs from the aforementioned Ripon cycling study work.
- 7.23. Walking infrastructure is largely good in Ripon though some footpaths, particularly close to the city centre are narrow and constrained by available highway space. As with West Harrogate walking infrastructure provision will be mostly concerned with providing a quality walking environment within sites, ensuring that there are good connections to existing footways and that appropriate crossings are provided on key desire lines, such as near schools or local centres.
- 7.24. As Ripon does not have a rail connection public transport provision wholly revolves around bus routes. The 36 is the main Ripon bus service, linking the city with Harrogate and Leeds. This service enters and departs Ripon on Harrogate Road at a twenty minute frequency through the day. Given the length of the route it is likely to be difficult to extend route 36 to the MoD site to provide a fully integrated transport service. The most realistic opportunity



will be to ensure that the Ripon City bus services operate to the site at a regular frequency and connect with service 36 without a lengthy interchange time. The expansion of Melmerby Business Park will also require some level of public transport provision from central Ripon to reduce the reliance on private car access to work.

Figure Ten: 2035 Transport Infrastructure Plan: Ripon



## **New Settlement**

- 7.25. The preferred location of the new settlement is being established through master planning work. The area of search around Cattal and Hammerton Rail Stations results in a number of impacts and opportunities from a transport perspective.
- 7.26. Junction 47 of the A1(M) will require improvement beyond the already committed scheme to allow full build out of the new settlement. Moving along the A59 corridor towards Cattal there are a number of junctions that, whilst not providing a capacity constraint may require intervention on safety grounds. A transport assessment as a result of a planning application would be expected to address any identified concerns. The A59 itself will be subject to an increase in traffic as a result of the proposals, regardless of which final site boundary is chosen.
- 7.27. Based on the anticipated housing delivery trajectory single carriageway would provide sufficient capacity until at least the end of the plan period to accommodate the local plan allocations. With the ambitions of local partners in mind the new settlement scheme will need to allow space for any future enhancements of the A59 over and above base mitigation. Some form of major scheme transport funding may be an appropriate way of delivering this infrastructure. HBC officers will work with partners to examine opportunities for external funding on this corridor.
- 7.28. There will be a requirement to address key intersections such as Whixley Crossroads and the B6265/A59 junctions but the level of intervention and the opportunity provided by available land may depend upon the final site boundary. A similar story applies to rail infrastructure, both in terms of station improvement and parking provision and any potential need to bridge over the rail line. Infrastructure in close proximity to, or within, the area of search will be examined through the master planning process.
- 7.29. Planning for bus services, quality cycling and walking corridors and modal interchange with rail will all be integral to the masterplan.
- 7.30. The level of traffic flow towards York is envisaged to be lower than that travelling to/from the A1(M) or Harrogate and there are rail and Park and Ride services, however, further discussions will be held with City of York Council officers to discuss the implications in order to achieve a statement of common ground.

## **Boroughbridge**

- 7.31. The south of Boroughbridge is identified for several allocations. There are no highway capacity issues foreseen in the area, though appropriate walking and cycling connections will need to be implemented to ensure that trips to the Town Centre can be undertaken by sustainable mode. The allocations provide some opportunity for contributions towards improvements to existing bus services in the town.

## **Villages**

- 7.32. Proposed allocations in villages represent more modest localised growth than in the more major areas outlined above. The key issues from a transportation perspective relate to access provision and sustainable travel connections to the settlement from the allocation. These issues have been considered as part of the sustainability appraisal but will need

detailed examination through the planning application process. The cumulative traffic impact from village allocations and potential windfall sites in rural areas is incorporated into the highway modelling report.