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AXMINSTER NEIGHBOURHOOD PLAN

AXMINSTER TRANSPORT ISSUES

August 2016

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Client:

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List of Acronyms

ANPR	Automatic Number Plate Recognition
ATC	Axminster Town Council
ANP	Axminster Neighbourhood Plan
CIL	Community Infrastructure Levy
CPO	Compulsory Purchase Order
DCC	Devon County Council
EDDC	East Devon District Council
ADDP	East Devon District Plan
ERR	Eastern Relief Road
HCA	Homes & Communities Agency
HGVs	Heavy Goods Vehicles
HTP	Hudson Transport Planning, Transport Planning Consultancy
HE	Highways England
NP	Neighbourhood Plan
LEP	Local Enterprise Partnership
LTP	Local Transport Plan (DCC transport plan)
Pcus	Passenger car units (measured equivalent of cars)
RSIs	Roadside Interviews (type of traffic survey)
SATURN	Simulation and Assignment Model for the Evaluation of Traffic
TRO	Traffic Regulation Order
Vpd	Vehicles per day
Vph	Vehicles per hour

1. Introduction

1.1 Transport is an important consideration for the Axminster Neighbourhood Plan (ANP) because the reduction of through traffic in the town centre is the top priority. Clarity is required about the available options, what choices are available and what can be delivered. Discussions took place with the Neighbourhood Plan Steering Group and it was agreed that the following matters would be examined and form the content of this report:

- The Eastern Relief Road;
- The Western Bypass;
- The A35 Junctions with Lyme Road & Musbury Road;
- Weycroft Bridge;
- Town Centre Traffic Conditions;
- The Neighbourhood Plan transport objectives and policies.

1.2 There has already been a considerable amount of transport related work in and around Axminster. In particular, the Devon County Council (DCC) Transport Planning Reports for the East Devon Local Plan from 2013 which includes a report of traffic surveys (Refs 1 & 2). There is the Vision of Axminster 2030 Community Plan (Ref 3) and more recently the Axminster Neighbourhood Plan research which includes a Traffic Management position statement from 2015 (Ref 4).

2. Transport Context

2.1 The Vision of Axminster 2030 Community Plan (Ref 3) places much emphasis on reducing the impact of traffic in the town centre with the top three aims stated as:

- *a welcoming, vibrant, safe, and people-friendly town centre;*
- *fine historic buildings protected and enhanced – and no eyesores;*
- *a strong local economy with thriving businesses & a good variety of jobs.*

2.2 The Neighbourhood Plan objectives, which are still emerging, are dominated by the impacts of traffic.

2.3 The East Devon District Plan (EDDP) 2013-2031 (Ref 5) also has some significant and specific policies relating to transport in Axminster and the potential relief road. On page 21 it states under key plan objectives for Transport item 'h' it states: '*Bottlenecks and vital roads such as Dinan Way, A327, A35 and North-South bypass for Axminster are some of the road issues…'* More specifically under Strategy 20, which applies to Development at Axminster under transport (item 4) it states *'Transport - support the provision of better sustainable (non-car) transportation, including footpaths, cycle routes and bus services both within the town and to link with the countryside and other settlements. Introduce through-route large vehicle traffic management measures and promote a North-South relief road.'*

2.4 The EDDP says in Strategy 20 (a) that developments north and East of the town (E105) will be a mixed development that incorporates:

> *i) Around 650 new homes;*
> *ii) 8 Hectares of land for mixed job generating commercial and employment uses;*
> *iii) a range of social, community and open space facilities to support development;*
> *iv) a 210 pupil primary school (1.5ha site – which forms part of the overall 8 hectare employment allocation), including a nursery and accommodation to support children's centre services; and*
> *v) a North South relief road for the town will be delivered as part of this development linking Chard Road (A358) to Lyme Road (B261).*

2.5 The Plan also notably identifies *that 'A Masterplan will be required for this site.'*

2.6 Devon County Council are the highway authority for the local highways also identify a number of transport policies for the area. These are largely summarised in the Local Transport Plan (LTP) for 2011-2016 (Ref 6). Axminster is identified as one of 28 Market and Coastal Towns and page 96 of the LTP states the key elements of the strategy. Due to the extensive area covered it has not much specific detail which it leaves to the Local Development Plans for each District, although, it is perhaps disappointing that the Targeted Capital Interventions on page 97 exclude a specific reference to an A358 relief road for Axminster.

2.7 In summary, there is consistency across the County, District and Parish that a relief road is necessary as the only way of reducing the problems in the town centre. In terms of the Parish it is 8 years since the Vision 2030 was produced and now that the Neighbourhood Plan is emerging it is felt that something needs to be done urgently and it is the top priority for the Plan. How exactly the A358 through traffic is removed is complex with various options available. A firm direction is required in terms of what should be the preferred way forward, that also brings together consensus between the authorities and interests involved.

3. Traffic Flow Analysis

3.1 Prior to considering highway options for the town it is useful to quantify traffic flows and to identify the potential effects with different options. The Devon CC Axminster Report of Surveys (Ref 1) from 2013 is very helpful in this regard and most of the flows referred to are from this work.

3.2 The key traffic flow volumes are summarised on Table 1 below which shows where traffic is travelling to and from the A358 north of the town at Chard Road Weycroft Bridge. Figure 1 indicates the location of these roads around Axminster. The percentage relating to each origin and destination is taken from the roadside interviews (RSIs) and the daily trip totals from the Automatic Number Plate Recognition surveys (ANPR) carried out. This is because RSI distributions are normally more reliable than those from APNRs whereas camera ANPRs tend to be more reliable for traffic volumes.

Origin & Destination	**All Vehicles**		**HGVs**	
	Flow	**%**	**Flow**	**%**
North to and from West	**894**	**11**	**62**	**19**
North to and from South	**1098**	**14**	**25**	**8**
North to and from East	**2036**	**25**	**192**	**58**
North to and from Axmin.	**4095**	**50**	**55**	**16**
Total	**8123**	**100**	**334**	**100**

Note: Flows are 12 hour (07.00-19.00) weekday in 2013

Table 1: Summary of Trip Origins and Destinations at the A358 North of Axminster

3.3 This shows that total daily flows are about 8,000 vehicles per day with 330 HGVs, some 4.1%. Note that these are heavy goods vehicles and exclude light goods vehicles, which would normally be more than double this number.

3.4 Half of all traffic has a destination to Axminster centre, but only 16% of HGVs travel to the town. Or to put it another way through traffic is 50% of all vehicles, but for HGVs its 84%. It is this through traffic that is causing the main difficulties due to the HGV content and traffic with a through destination will focus on minimising time and can tend to exceed the speed limits in the centre, when not in a queue.

3.5 Other key findings include:

- the dominant external destination is eastwards, with 25% of all vehicles (2000 vpd) and 58% of HGVs (192 vpd);
- trips to the south are 14% all vehicles (1098 vpd) and 8% HGVs (25 vpd);
- the trips to west are 11% all vehicles (894 vpd) and 19% HGVs (62 vpd).

Plate 1: Traffic congestion through the narrow streets

Plate 2: Delivery vehicle causing extensive delays and a hazardous delivery manoeuvre

3.6 The external traffic is the maximum likely to use a north-south relief road that currently travels through the town. So a north eastern relief road could be expected to attract all traffic that has an easterly destination, which is half of the through traffic. Analysis by DCC has compared journey times for the southerly and westerly destinations and it will be less easy to attract those trips, depending on the layout of the relief road, signage and the A35 junctions. These are discussed further below in terms of scheme options.

3.7 While a relief road has the potential to remove all through traffic, some 50% of traffic and 16% of HGVs are anticipated to remain within the centre of the town. A key benefit is that the vast majority of HGVs have the potential to be removed. However, the town will not be without traffic

and taking the 4000vpd out of the town will not solve all problems, but it provides the opportunity for environmental and economic enhancements to the centre.

Plate 3: Chard Road southbound on approach to the Stoney Lane junction. Long delays and gridlock during the July 2016.

Plate 4: Chard Road southbound on approach to the Stoney Lane junction, 50m nearer, after a lengthy delay.

3.8 Seasonal traffic effects require consideration as traffic conditions during the summer are significantly worsened due to an increase in traffic flows and a higher content of trailers and caravans. The photos 3 and 4 help to demonstrate this on the approach to the town from Chard Road. In the town centre caravans have difficulties in negotiating the narrow town centre streets. This is also the very time when there is most tourism potential for the town with visitors at present experiencing the effects of congestion, noise, road safety difficulties and air pollution.

3.9 Traffic flows during August are typically 15-20% higher than a neutral month weekday which at Weycroft are currently 10-12,000 per day. And during the peak six summer Saturdays (mid July to end of August) flows can be substantially higher. Long delays are common through the town and at the Weycroft Bridge shuttle traffic signals. Long delays and tailbacks occur on the B3165 from Lyme Regis because vehicles waiting to turn east from Hunters Lodge block the exit for vehicles wanting to

turn west onto the A35 and then turn right onto the B3261 in order to access the A358 to Chard and beyond.

3.10 A traffic model [1] for the town has been built for the AM and PM peaks by consultants Hadrock (Ref 7 & Ref 8). This provides the most reliable way to forecast traffic flows with different highway layouts. It is understood that this tests four main scenarios and these include future years with the ERR and the development. Apparently, the forecasts suggest that the ERR will attract most of the through traffic, but this would need to be examined. Unfortunately, the SATURN model results would not be released on instruction from Persimmon, which is disappointing.

3.11 The SATURN model, will show how existing flows, additional development traffic and traffic growth to future years would reassign with an ERR. However, it does not take account of strategic transfers of traffic that could take place, such as between the A35 and A303. Related to this is the Weycroft bridge constraint that if improved combined with the ERR, then there is greater potential for strategic transfer of traffic.

[1] The model simulates on computer existing and future traffic flows for the peak hours. The model type is called SATURN which stands for Simulation and Assignment Model for the Evaluation of Traffic. It is an industry standard and often used to simulate traffic flows in town centres and bypass options.

4. The Eastern Relief Road (ERR)

4.1 Highway Route Options

4.1.1 The main design specification of the relief road between Chard Road (A358) and Lyme Road (B3261) are identified below. All options assume:

- a lorry ban through the town centre and;
- an improvement at the A35 / Lyme Road and A35/A358 Musbury road junctions.

Both these are excluded from the ERR proposals, but in the future these will be added and the ERR is best viewed as a first and very significant step towards a comprehensive relief road for the town.

4.1.2 Three principle ERR options have been identified. The approximate alignments are shown on Figure 3 and are as follows:

- Option A: a segregated route on the eastern edge of the development route as indicated in the EDDC District Plan;
- Option B: spine road through the development with development and direct accesses;
- Option C: a spine that follows the eastern edge in parts, but also routes through some of the development in a direct and segregated manner.

4.1.3 In recent years there have been advocates for placing busy roads through developments to create 'life and bustle'. However, that is what is desired to have removed from the town centre and there is a strong case to suggest that the lorries and caravans are better away from residential streets. It is also important to create an attractive route that minimises time along the route for different destinations along the A35. On this basis there are advantages to progress with Option A, with an alignment along the eastern boundary of the development and town. However, there are technical considerations such as gradients and the bridge over the brook to consider as well as environmental factors.

4.1.4 An evaluation has been carried out for each option against six key objectives:

- Objective 1: Reducing goods vehicle traffic through the town centre;
- Objective 2: Reducing light traffic through the town centre;
- Objective 3: Creating a safe road;
- Objective 4: Impacts on the development, i.e. a road through the middle with goods vehicles and traffic flows near to the new development;
- Objective 5: Impacts, mainly environmental on the eastern rural edge where there is a SSI and protected landscape;
- Objective 6: Delivery, the ease of implementation, including costs.

4.1.5 Table 2 summarises the evaluation in a matrix. Each option is scored from 1 which is low to 5 as the highest score. It is a subjective assessment and the process itself is as important as the results as it is useful to consider these broader objectives. Some may consider that the removal of traffic from the town centre is by far the most important objective and not assess beyond this, but there are

other considerations and in effect there is a double weighting to this objective as it has been split between goods vehicles and light traffic.

			Objectives Scored 1-5 (5 in high 1 is low)				
Scheme Option	1	2	3	4	5	6	
	Reduce HGV Traffic in TC	Reduce Car Traffic in TC	Road Safety	Impact on dev't	Impact on rural east	Delivery	Total
Option A: Eastern Edge 40mph	5	4	4	4	2	2	**21**
Option B: Spine Rd 30mph	3	2	3	2	5	5	**20**
Option C: Edge & Spine 30mph	5	3	4	3	3	4	**22**

Table 2: Evaluation Matrix of Eastern Relief Road Options

4.1.6 What the matrix suggests is that there appears to be little to choose between the options, with a preference for a compromise option, as this can still be effective at removing traffic from the town centre, especially HGVs with a lorry ban Traffic Regulation Order, has less impact on the rural edge and should also be deliverable. In practice, it will be down to the more detailed engineering, but it does seem likely that an option that in part follows the rural edge where it is practical to do so, has a fairly straight alignment, which does not deviate along the Mill Brook valley and runs through some of the new development will maximise the objectives set out.

4.2 Highway design specification

4.2.1 Road width and cross section: Highway 6.1m and wider in places to accommodate the tracking of goods vehicles, 2m grass verges either side of the highway, a footway 2.0m on one side a 3.0m shared pedestrian and cycle link on the other and 1m verge beyond the footways / cycleways. Figure 2 shows the recommended cross section of the highway corridor which will take up 17.1m, but would be 3.0m wider where there is a right turn lane, therefore overall the corridor will be 17.1-20.1m. Discussions with Devon CC and the developer highway consultants suggest that this would be consistent with their proposals (Refs 8 & 9).

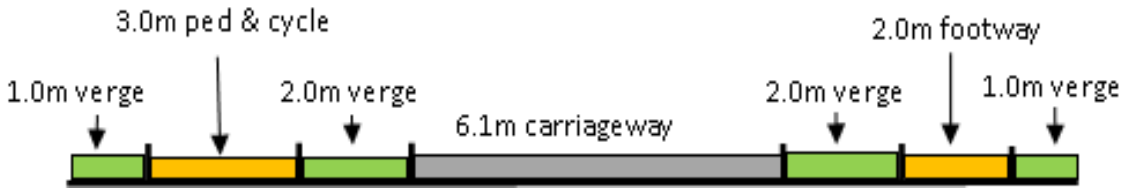

Figure 2: Cross Section of the Eastern Relief Road

4.2.2 Highway speed limit: 30mph so it is faster than routes through the town centre. If traffic destinations to the A358 south and especially the A35 west are to be encouraged to use the route, then an unimpeded 30mph is necessary. 40mph would be preferable for encouraging bypass traffic, but would not be appropriate through the built up area.

4.2.3 Junctions and accesses: Three arm roundabout to the north (A358) Chard Road. Similarly, at the Lyme Road (B3261), although it is understood that due to gradients and land take a priority junction with changed priorities could be preferred, subject to its design. The junction treatments for existing highway connections to Sector Lane and Beavor Lane will depend on detailed design, but priority junctions are recommended and probably with right turn lanes. Access to the new development should be indirect with no direct accesses or on street parking from the new development. There should be several side roads for access to the development and these are expected to be priority junctions and for the busier add a right turn lane. If there are right turn lanes then pedestrian refuges should to be provided on each right turn lane to provide crossing facilities for pedestrians and to discourage overtaking at the junctions.

4.2.4 Route signage: Route all A358 traffic via the ERR and Lyme Road to the A35, but only when the improvements at the A35/ Lyme Road and A35/ Musbury Road junctions have been implemented. These are discussed in more detail below. If the A35 junctions are not improved, then traffic should not be encouraged to route via these hazardous A35 junctions due to significant increases in traffic making right turns across main road flows. If the A35 junction improvements are carried out, then a 7.5t lorry ban through the town is recommended. Should the A35 junction improvements be introduced after the ERR, then there will need to be a phased signage strategy.

4.2.5 Capital Cost of ERR: DCC have estimated the cost of the road to be £15.5m in 2013. It will depend on the details of the scheme, but is likely to be of this order. For the design recommended for Option C a broad cost estimate of £15m has been identified.

4.2.6 Longer Term Southern Extension. In the longer term the eastern relief road could be extended to the A35 at Musbury Road. This would make the Relief Road more attractive for A358 south and A35 west traffic. The Lyme Road junction with the ERR should be located and designed flexibly so the road can extend southwards at some future date, with for example an additional arm to a roundabout.

Eastern Relief Road Summary

4.2.7 An ERR between Chard Road (A358) and Lyme Road (B3261) can follow a number of alignments and can be designed in different ways. Three main designs have been compared:

- Option A: a segregated 40mph route on the eastern edge of the development route as indicated in the EDDC District Plan;
- Option B: spine road, 30mph bendy route through the development with many direct accesses;
- Option C: a spine road through some of the development in a segregated manner at 30mph and also follows the eastern edge in parts.

4.2.8 The preferred scheme is Option C, which allows traffic to route at 30mph relatively unimpeded, that can be effective at removing traffic from the town centre, but also have less impact on the rural edge and housing and should also be deliverable.

4.2.9 Note that all options assume there will be a lorry ban through the town centre and improvements at both the A35 / Lyme Road and A35/A358 Musbury road junctions.

4.2.10 The design of the ERR should be a fairly direct alignment, 30mph, with few access junctions and no direct development access. Gradients are a significant technical issue and to achieve a fairly direct route across the brook, some earthworks and bridging will be necessary. The cross section of the road is recommended to be 6.1m wide carriageway, 2m grass verges, a 2m footway on one side and a 3m shared footway and cycleway on the other.

4.3 The A35 junctions

4.3.1 As currently set out, the A35 junctions with Lyme Road (B3261) and Musbury Road (A358) are major constraints to traffic using the eastern relief road with a destination along the A358 south, Musbury Road and the A35 west. As referred above, signage from the north cannot direct through traffic via Lyme Rd/ A35 nor the Musbury Rd / A35 junctions as they require negotiating right turn manoeuvres which are considered to be hazardous.

4.3.2 Discussions have taken place with Highways England (HE) who, as Highway Authority need to be involved in any proposals (Ref 10).

The A35 / B3261 Lyme Road East

4.3.3 The traffic flows at the junction indicate that 96% joining the A35 turn left (2200 vpd) and 95 turning into Lyme Road turn right (2250 vpd), so a small proportion of traffic travels west as would be expected, about 100 vpd. Currently the main hazard risk concerns the 2250 vpd turning right across two lanes of A35 eastbound traffic as shown on the photos below. The outside overtaking lane allows some traffic to travel at considerable speed.

4.3.4 Site visit observations suggested significant road safety concerns at the operation of the existing junction. While the accident data has not been examined as yet, it would be surprising if there was not already a difficult situation.

4.3.5 With the ERR traffic with destinations to the West and South would turn right out of this junction, which on current flows (ref Table 1) are about 2000vpd. Added to this would be the new development traffic and traffic growth. Right turning traffic flows of 2000-3000vpd is a very different level of demand to the existing 100vpd and an improvement is necessary to accommodate these volumes.

Plate 5: Right turning low loader into Lyme Road

Plate 6: Right turning traffic amidst the fast A35 traffic

4.3.6 There are two main highway options available:

- Option A: A roundabout, which could include a bypass westbound lane for the A35 traffic. This would only slow the eastbound traffic. Costs for this are likely to be in the order of £1m;
- Option B: Bridge with the Lyme Road below the A35 and connecting to the south with left on and left off turns. DCC had suggested a cost estimate for this at £10-£15m. These values seem high, and a value of £7-10m seems more likely, however this could be investigated.

4.3.7 The cost of Option B, grade separation is likely to be prohibitively high, therefore Option A is identified as the preferred option and should be pursued with the HE. From discussions with Hydrock (Persimmon highways Consultant, Ref 8) it is understood that the HE have agreed with Persimmon Homes that they do not need to carry out an improvement at the junction. This means that some other funding source other than from the developments will be required.

4.3.8 Care will need to be taken to minimise any delays to mainline A35 traffic and as referred to above, a westbound roundabout 'bypass lane' would assist in achieving this, with delays only to eastbound traffic giving way to those right turning into the B3261. Slowing eastbound traffic may have broader road safety benefits as it is likely to be the high approach speeds at the A35/B3165 Hunters Lodge junction that contribute to its accident record. The A35 eastbound traffic would only

give way to the 2250vpd currently right turning into Lyme Road and the 2000-3000 vpd right turning traffic would give way to this eastbound A35 traffic. Due to the road safety concerns at the junction the HE can be expected to be receptive to improvements.

The A35 / A358 Musbury Road Junction

4.3.9 Grade separation already exists, but there is only a connection to the north, so traffic turning out westbound and in from the east have to cross the A35 main flows. These daily flows are 900 vpd turning right into the side road and 410vpd right turning out. With the ERR this is expected to more than double with an increase of 1100vpd (Ref Table 1) with the A358 southbound traffic adding to this movement. There will also be additional development traffic and traffic growth, potentially adding another 300-400vpd, so a total right turning flow can expect to increase from about 900vpd to over 2000vpd.

4.3.10 Road safety at the junction is a concern and a site visit identified significant issues with right turning traffic in and out of the junction conflicting with A35 traffic travelling at high speed as indicated on the photos below.

Plate 7: Right turning traffic from Musbury Road

Plate 8: Right turning from A35 into Musbury Road

4.3.11 Without the removal of the hazardous right turn manoeuvre at the A35/Musbury Road junction, the eastern relief road cannot be recommended as a route to the A358 southwards (even after an improvement at the Lyme Rd/A35 junction).

4.3.12 Adding an access from the south and connecting to the A358 has been identified as a scheme and has been priced at £1.5m by DCC (Ref 2).

A35 Junctions Summary

4.3.13 The ERR will add an estimated 2000-3000vpd right turning vehicles onto the A35/Lyme Road junctions and 1300vpd onto the A35/Musbury Road junction. Junction safety improvements are required at both the A35/Lyme Road and A35/Musbury Road junctions due to these additional flows. Discussions will be necessary with Highways England (HE) and DCC about how best to proceed with

these. Total costs for both are likely to total about £2.5m to what is essentially part of delivering an effective ERR. Significant through traffic can be expected to remain in the town centre without these highway improvements.

4.4 Delivery of the Eastern Relief Road (ERR)

4.4.1 There has been much discussion and debate in recent years over the ERR and there are several organisations involved. The key players are:

- Persimmon Homes, a developer which has options on land to the north and south of the eastern area where the ERR would be located. These areas are shown on Figure 3;
- Crown Estates, a land owner / developer owning land between the Persimmon sites, as shown on Figure 3;
- Highways England (HE) who are responsible for the A35 trunk road and their agreement is required for any changes to the A35 junctions;
- Devon County Council (DCC), the Highways Authority who are responsible for all other parts of the highway and who would eventually adopt the road as public highway. Their support and agreement is required for all other highway proposals;
- East Devon District Council (EDDC), the Local Planning Authority, who determine any planning applications for the area;
- Axminster Town Council (ATC), the local council, which is responsible for producing the Neighbourhood Plan.

4.4.2 The aim is to have the ERR constructed by the developers and this should be completed prior to construction to avoid construction traffic routed through the town.

4.4.3 Persimmon Homes are the main developer with the largest land holding with land to both the north and south of the ERR alignment. They are also potentially the developers who are most likely to deliver the scheme. They have recently carried out a public consultation (May 2016) in the town explaining their planning application to date and are understood to be keen to move forward with a joint masterplan for the entire eastern area (Ref 11), which includes both Persimmon & Crown Estates.

4.4.4 Crown Estates own the freehold of the land in middle area across Mill Brook between the Persimmon Homes sites. So while they depend on Persimmon for access to their site, Persimmon also depend on Crown Estates because the ERR will have to be constructed through the Crown Estates land. Crown Estates are also understood to be keen to engage in the master planning process (Ref 12).

4.4.5 There has been a lack of agreement in the past between the developers and this needs to be resolved, or it is difficult to see how the ERR can proceed. The amount and type of development, and proportions of developable land are understood to be the key items that require agreement. So, for example the site with the school will tend to have less area for housing.

4.4.6 Discussions with East Devon District Council suggest that they are keen to facilitate a single masterplan (Ref 13) and as stated in their Local Plan Strategy 20.

4.4.7 In this context then, the master planning should be able to proceed. This will determine the following:

- The alignment, cross section and characters of the ERR;
- The access junction locations off the ERR;
- The main parcels of development;
- The phasing of the parcels of development;
- The phasing of the construction of the ERR.

4.4.8 If additional funding to deliver the ERR is required then sources to be investigate will be:

1) the Community Infrastructure Levy (CIL) which EDDC will be implementing in the Autumn of 2016;
2) Loans from the EDDC or DCC;
3) The Homes and Communities Agency (HCA). The HCA have a process to loan funds for infrastructure that facilities development. In this instance the applicant would be the developer borrowing the funds to deliver the ERR and the loan is paid back over a period of years at an agreed rate of house building. The key objective for the HCA is to see housing delivery and the ERR does seem to be delaying this delivery. The HCA South West have been contacted and have suggested that they would be willing to assist (Ref 14);
4) The Local Enterprise Partnership (LEP), who can be a source of funding for infrastructure mainly relating to the economy and employment. The ERR also helps the economy with new jobs accessed from the employment area, the reduction in delays for businesses and the potential tourism benefits from removing traffic from the town centre.

4.4.9 It is likely that the ERR between Chard Road and Lyme Road will be delivered by the developers as it is required to access their developments. However, the A35/Lyme Road, A35/Musbury Road junction improvements, and town centre lorry ban are likely to require funding from other sources.

4.4.10 To help progress the ERR, it is recommended that the Neighbourhood Plan continues in parallel alongside the master planning of the eastern area.

4.5 Timescales to Delivery

4.5.1 The timescales for delivery of the ERR will essentially follow the process for delivery of the new dwellings. If the Master Plan can be worked up and agreed by all the key players over the next six months, then a planning application can be submitted in the winter of 2016/17. If approved, the highway can start to be designed in detail and then progress to construction. Table 3 below suggests some of the key stages with the road potentially completed by February 2019.

4.5.2 There are several risks to this delivery programme with for example the different timescales of the two developers with Crown Estates perhaps submitting a planning application at a later date. The recent financial and economic uncertainties caused by the referendum may also delay housing

construction. Subject to these risks, an ERR open to traffic sometime in 2019 would be a realistic target.

Ref	**Activity**	**Period of time (months)**	Start Date	End Date
1	Develop a Masterplan for Eastern Axminster	6	Jul-16	Dec-16
2	ERR Design and DCC approve preferred route	4	Aug-16	Dec-16
3	Environmental Assessment, Transport Assessment & other supporting documents for planning	4	Aug-16	Dec-16
4	Apply for Outline Planning Permissions (Persimmon & Crown Estates), with Highways as Reserved Matter & permission granted	6	Jan-17	Jun-17
5	Progress detailed highway design	6	Mar-17	Aug-17
6	Tender for construction, decide on bidder & start	6	Aug-17	Feb-18
7	Construct Relief Road	12	Feb-18	**Feb-19**
	total months:	43		
	total years:	3-4		

Notes: 1) Reserved matters planning applications for residential to progress in 2017 & 2018

Table 3: Possible Programme for ERR Delivery

4.5.3 There will also need to be agreements on the alignments and connections between the different ownerships. It is recommended that Devon CC enter into Section 106 Agreements with the developers to ensure:

- that the scheme is delivered on agreed alignments with a continuous and consistent highway between the sites;
- that there are triggers to ensure delivery is early in the development and this will depend on the traffic impact assessments for the phases. Development could presumably proceed from the south as the ERR progresses northwards.

Summary of ERR Delivery

4.5.4 There are six main stakeholders involved in the delivery of the ERR and these include the developers, highway authority, planning authority and Town Council. Probably the most important are Persimmon and Crown Estates, as it is they who are likely to be constructing the road with a dual function of development access and a relief road to the town.

4.5.5 The first step in delivery is to complete a masterplan for the area which requires agreement between all the main parties. The estimated cost of the ERR is £15m and a delivery programme suggests that it could be open to traffic in 2019.

4.6 A35 Junction Improvements Delivery

4.6.1 It seems that developers will not be required to fund these improvements, estimated at £2.5m. Therefore, alternative funding will need to be investigated. The sources of funding are listed in paragraph 4.4.8 and the following are likely to have most potential:

1) Highways England, the Highway Authority for the A35;
2) Devon CC as Highway Authority for the connecting roads;
3) East Devon District Council and the Community Infrastructure Levy (CIL);
4) Local Enterprise Partnership. Significant potential partial funding as the economic and environmental improvements to the centre of Axminster will not be effective without these improvements.

4.6.2 It is recommended that these are actively investigated as part of the Neighbourhood Plan.

5 The Western Bypass

5.1 The alignment of a Western Bypass could follow a number of routes. Figure 4 shows two alternatives identified as follows:

- Option A: Railway alignment following the west railway the entire route except at the south where it links south easterly to the A358 at the A35 / Musbury Road junction;
- Option B: Western alignment, which follows the railway for a short distance before leaving the flood plain to the west. Where it connects with the B3261 south west of the town there would be a roundabout and the route would then continue southwards to the Musbury Road / A35 junction.

5.2 The better alignment is probably along the side of the railway line, but on some sections this would be close to the Axe which may require diverting. This route is estimated to be approximately 4.0kms for Option A, the railway alignment and 4.2kms for Option B, the more westerly alignment.

5.3 The cost estimates for the route would be substantial due to the number of bridges, environmental mitigation and some of it being constructed on flood plain. Depending on the alignment and details it is estimated to cost in a range of £37-42m.

5.4 For a comparison of a westerly route compared to an eastern route an evaluation matrix against four key objectives is shown on Table 4 below. Objectives for evaluation identified were:

- Objective 1: Reducing goods vehicle traffic through the town centre;
- Objective 2: Reducing light traffic through the town centre;
- Objective 3: Impacts, mainly environmental on adjacent rural areas;
- Objective 4: Delivery, how easy to deliver in terms of cost, time and process.

5.5 Table 4 summarises the evaluation in a matrix. As with the earlier evaluation table each option is scored from 1 which is low to 5 as the highest score. It is subjective assessment and the process itself is helpful to consider these broader objectives. This suggests that the Eastern Relief Road scores higher at 16 and would be preferable compared to the Western Bypass with 11.

5.6 There are a number of benefits in constructing a western bypass when compared to the ERR and these include:

1) The Weycroft bridge constraint is also addressed, although not the most cost effective way of doing so;
2) It can be constructed without dependence and the uncertainty of developers. While this can be a disadvantage, developers can also help deliver the scheme in terms of timing and funds;
3) It includes the entire length from the A358 at Weycroft bridge to the A35 south of the town;
4) There would be little disruption during construction.

Scheme Option	1	2	3	4	
	Reduce HGV Traffic in TC	Reduce Car Traffic in TC	Impact on rural area	Delivery	Total
Western Bypass	5	4	1	1	**11**
Eastern Relief Rd	5	3	4	4	**16**

Table 4: Evaluation Comparing the Western Bypass with the Eastern Relief Road

5.7 However, a western bypass has significant deliverability and environmental difficulties. There are a number of major problems which can be summarised as:

1) Environmental impact on the Area of Outstanding Natural Beauty. It would pass through part of the AONB at the northern end and the AONB has the highest status of protection. If damage can be avoided by alternative routes then these should be pursued, or very good reasons given to impact on the AONB;
2) The environmental impact on the river Axe and its flood plain and a likely objection from the Environment Agency;
3) High cost of construction due to flood plain, bridges and the difficulties associated in finding funds of £37-42m;
4) It would be essential to gain the support from the Highway Authority, Devon CC and this is not expected. Devon have been contacted on the matter and said that due to the extent of flood plain around the highway they had chosen not to pursue the scheme further (Ref 7);
5) The timescales involved with delivery suggest some 9 years as summarised in Table 5 below. This is significantly longer than the ERR (3-4 years) which could be introduced prior to or at the same time as development;
6) That the main destination of through traffic is eastwards and this traffic is being diverted to the west of the town.

5.8 This analysis suggests that the Western Bypass has some merit, but its construction costs are relatively high, it will have major environmental impacts, and is not expected to be supported by the Highway Authority. There is little choice, but to recommend that it is not pursued further.

<u>Western Bypass Summary</u>

5.9 Western bypass options between the A358 Chard Road and the A35 have been investigated on a preliminary basis with one alignment following the railway and the other a more westerly route. Both offer some benefits such as resolving the Weycroft Bridge constraint at the same time and a comprehensive bypass solution. However, when compared to the ERR there are significant environmental impacts and delivery problems due to costs at £37-43m and length of time to complete. The Highway Authority do not support its construction, it has major impacts on the Axe Valley and

AONB. In summary it is not feasible nor practical in economic or environmental terms and it cannot be recommended to be pursued further.

Ref:	**Activity**	**Period of time (months)**
1	Traffic study to assess route options	6
2	Economic evaluation and identify referred route	6
3	DCC approve preferred route	6
4	Preliminary highway design	6
5	Environmental Assessment & other supporting documents for planning	6
6	Apply for Planning permission	3
7	Planning appeal, public inquiry & inspector decision	12
8	Progress detailed highway design	12
9	If Publish Compulsory Purchase Orders for land	6
10	If CPO inquiry and inspector decision	12
11	Adjust detail design for any refinements to design	3
12	Tender for construction, decide on bidder & start	6
13	Construct Bypass	24
	total months:	108
	total years:	9

Table 5: Possible Programme to Deliver a Western Bypass

5 Weycroft Bridge

6.1 The Weycroft Bridge is located about 400m from the northern boundary of Axminster on the A358. Traffic travelling between Chard and Axminster have to use the bridge which is a single lane width with traffic signal control shuttle working. This causes delays to all traffic and during the summer months there can be significant queues and delay. There is a need to quantify the delays per annum to drivers to assess more accurately the impacts on the economy.

Plate 9: Weycroft Bridge northbound traffic by mill

Plate 10: Bridge over the Axe looking southbound

6.2 The traffic signals are set with variable timings depending on the volume of traffic in each direction with vehicle actuating loops in the road. Under vehicle actuation the green time is about 50%, with a capacity of about 1000pcus (passenger car units[2]). With extended traffic signal cycle times the highway capacity could be improved to 1200-1400pcus, depending on the traffic signal settings.

6.3 Three preliminary options have been identified:

- Option A: Revert the bridge two way working, add a 3m pedestrian & cycle bridge, remove the existing footway and traffic manage the existing structure. The width between the existing bridge parapets and/ or buildings is between 5.5m and 6.5m so traffic could proceed slowly in two directions. Meanwhile, a 3m pedestrian and cycle structure would run parallel with the bridge in 2 sections, on the west side past the mill and on the east side at the river crossing. The cost for this is estimate at about £1m;
- Option B: Realign the A358 west of the existing bridge. Construct a new road approximately 250m in length with a bridge 20-50m west of the existing structure. Approaching from the south the road would start about 50m prior to the Mill, then veer left and across the mill stream and river, and run behind the cottage and re-join north of the traffic signals. This is costed at £3-4m and the approximate alignment is shown on Figure 5;
- Option C: Realign the A358 from the edge of Axminster where the proposed ERR roundabout is proposed and route westwards to near the railway, cross the river and connect north of the existing traffic signals. The approximate alignment is shown on Figure 5, with the length of road is about 800m. This would have significant impacts on the AONB, the river and cost in the region of £5 to £8m.

[2] Units of traffic flow used in traffic signal capacity calculations with one pcu equivalent to 1 car and goods vehicles range from a value of between 2 to 3 pcus. So for example a large articulated lorry is equivalent to about 3 cars travelling through traffic signals.

6.4 Option A could have potential, but is not expected to pass a Road Safety Audit due to the risks associated with the narrow section of highway. Other issues include:

1) the impacts of traffic on the mill and bridge;
2) whether the structure of the bridge is adequate to withstand two way working and weights nearer to the parapets;
3) access into the mill courtyard on the east with the visibility 'x' distance reduced to almost zero;
4) Still susceptible to flooding;
5) the acceptability of a pedestrian and cycle bridge adjacent to the existing structure.

6.5 Option A is considerably lower cost than other options and would have less impact on the AONB so should not be entirely dismissed and would be worth investigation.

6.6 Option C is high cost in terms of funds and the environment with a major impact on the AONB. For these reasons this option is not recommended to pursue further.

6.7 Option B is a modest realigned A358 routing to the west. It has the most potential in terms of limiting environmental impact and provides the highway capacity at a more reasonable cost. There will still be environmental challenges, notably with crossing the river and the effects on the cottage by the traffic signal junction. But there will also be environmental benefits with the existing bridge being potentially closed to access only.

6.8 It is recommended that Option B is examined in more detail and some preliminary work carried out on Option A.

<u>Weycroft Bridge Summary</u>

6.9 The traffic signals cause delays to all traffic routing between Chard and Axminster. Three preliminary options to improve the situation have been identified:

- Option A: Revert the bridge two way working, add a 3m pedestrian & cycle bridge and remove the existing footway. Cost about £1m;
- Option B: Realign the A358 west of the existing bridge. Construct a new road approximately 250m in length with a bridge 20-50m west of the existing structure. Cost about £5m;
- Option C: Realign the A358 from the edge of Axminster where the proposed ERR roundabout is proposed and route westwards close to the railway, cross the river and connect north of the existing traffic signals. Cost of £5 to £8m.

6.10 Option B is likely to offer the most potential in terms of limiting environmental impact and provides the highway capacity at a more reasonable cost.

7. Town Centre

7.1 Car parking, traffic management, environmental enhancements and detailed transport proposals for the Town Centre are important transport considerations. To address these, additional work would be required. Therefore, this report provides some guidance where the strategic issues have some effect on the Town Centre.

7.2 There has already been some useful analysis carried out which is set out in in the Traffic Management Plan (Ref 4).

7.3 The proposals for the Town Centre should fall into three phases which corresponds to through traffic transferring from the Town:

- Phase 1: Proposals prior to the ERR;
- Phase 2: Proposals when ERR is open to traffic (approx. 50% through traffic transferred);
- Phase 3: Proposals when the ERR & A35 junction improvements are completed (all through traffic transferred).

8. Other Transport Issues

8.1 Stoney Lane Improvement

8.1.1 Stoney Lane provides a connection between Chard Road and Lyme Road, so currently traffic from the A358 north to the A35 east can take this route and avoid the town centre. However, along Stoney Lane there are two schools, the Axe Valley Community College and the Axminster Community Primary School and near to it on Lyme Road is St Mary's Catholic Primary School. There is a narrow section where it is only one lane wide and without footways over a section of about 150m between the Lyme Road junction and the primary school. The photo below shows a common event with a lorry waiting to enter the narrow section which may require the car on the other approach to reverse. The existing road layout makes the highway unsuitable for anything other than local traffic, which also finds the route a significant constraint.

Plate 11: Stoney Lane northbound on approach to narrow section with lorry and car meeting

8.1.2 To enable a highway widening of the narrow section buildings will need to be purchased and demolished. There buildings will add significantly to scheme costs and there are impacts on the character of the area.

8.1.3 The construction of the ERR as identified in this report would mean that through traffic and development traffic would avoid Stoney Lane.

8.1.4 It is still recommended that improvements to Stoney Lane are supported, even if the ERR is constructed in order to make access to the local schools safer. Funding for this is likely to be sourced from DCC or EDDC via CIL.

8.2 A35 / B3165 Hunters Lodge

8.2.1 Highways England (HE) road safety scheme is progressing and due for implementation in Autumn of 2016. The proposed scheme is supported. Accidents at the junction are in part caused by the high approach speed from the west. This report is section 4.3 recommends that a roundabout is

introduced at the A35/ Lyme Road junction, which would have the effect of slowing the approaching traffic from the west and improving highway safety at the Hunters Lodge junction.

9. Neighbourhood Transport Objectives and Proposals

9.1 Objectives

The following transport related objectives are recommended

1. Transfer all A358 Through Traffic Out of the Town Centre
2. Make the Town Centre a more pleasant place for both residents and visitors
3. Support the economy by reducing delays to traffic
4. Ensure there is adequate parking available in the town
5. Encourage the use of public transport by improving facilities and services
6. Encourage the use of walking and cycling in and around the town

9.2 Proposals

9.2.1 The following transport proposals and actions are recommended. They have been split into strategic, town centre and others. There may be a need for some more details for the town centre proposals in the town centre.

Strategic Proposals

1. Promote the construction of an Eastern Relief Road between Chard Road and Lyme Road
2. Promote the improvement of the A35/Lyme Road as a roundabout
3. Promote the improvement A35/Musbury Road with a southern slip road
4. Investigate a realignment of the A358 west of the existing Weycroft bridge

Town Centre Proposals

5. Introduce an HGV ban for traffic routing through the town after the ERR and A35 junction improvements are completed;
6. Review car parking supply and demand in the town centre and identify parking proposals
7. Environmentally improve Trinity Square
8. Conduct a survey of town centre footways and carry out improvements
9. Conduct an audit of streets in the town centre and implement the recommendations

Other Proposals

10. Support the improvement of the A35 / B3165 Hunter Lodge junction
11. Support the Stoney Lane highway improvement
12. Support the introduction of half hourly train services to and from Exeter
13. Support the introduction of an intra town bus service
14. Support cycle network improvements in the following locations: (To be specified by Neighbourhood Transport Group)
15. Support pedestrian and footpath improvements in the following locations (To be specified by Neighbourhood Transport Group)

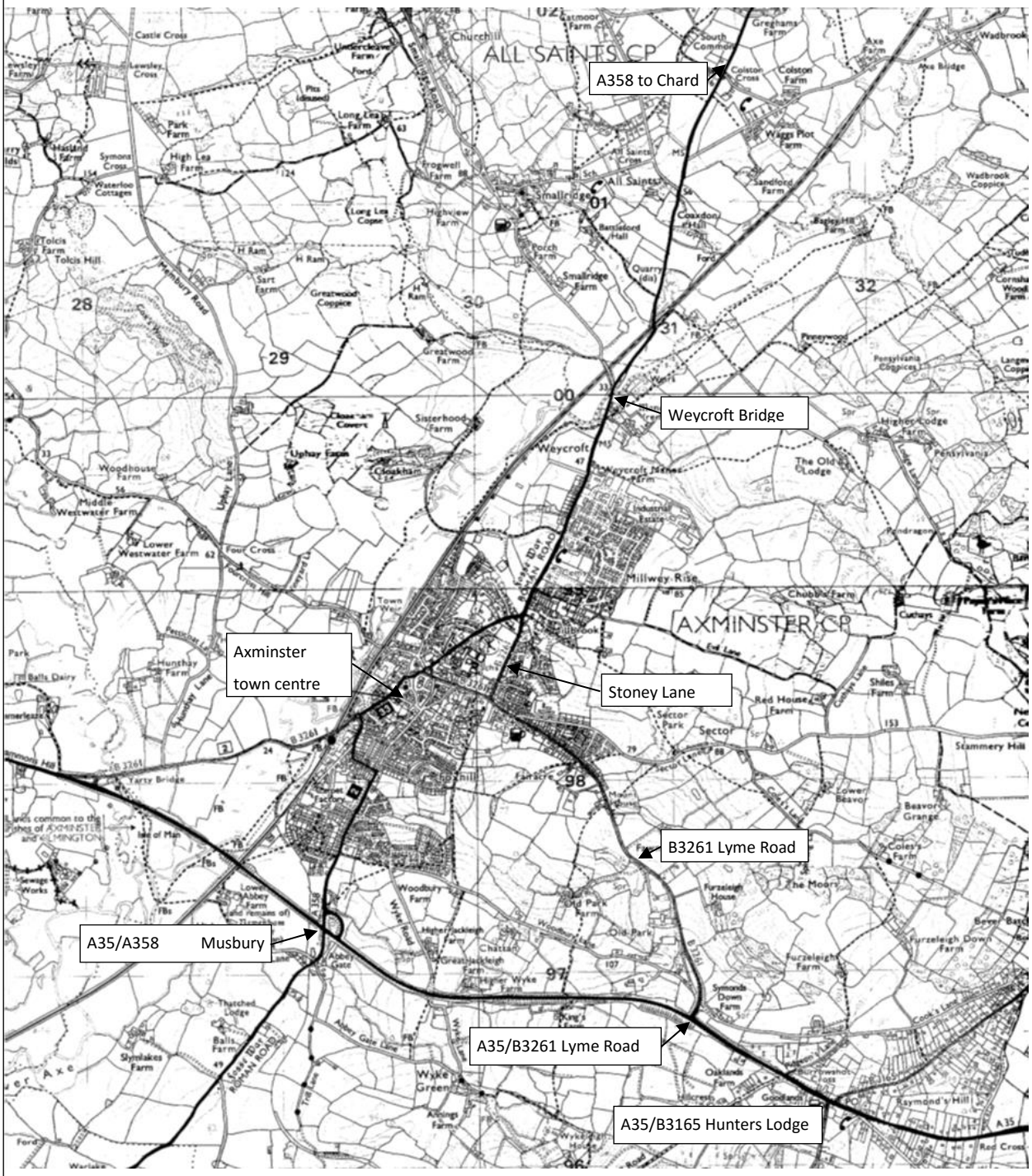

Figure 1: Location Plan

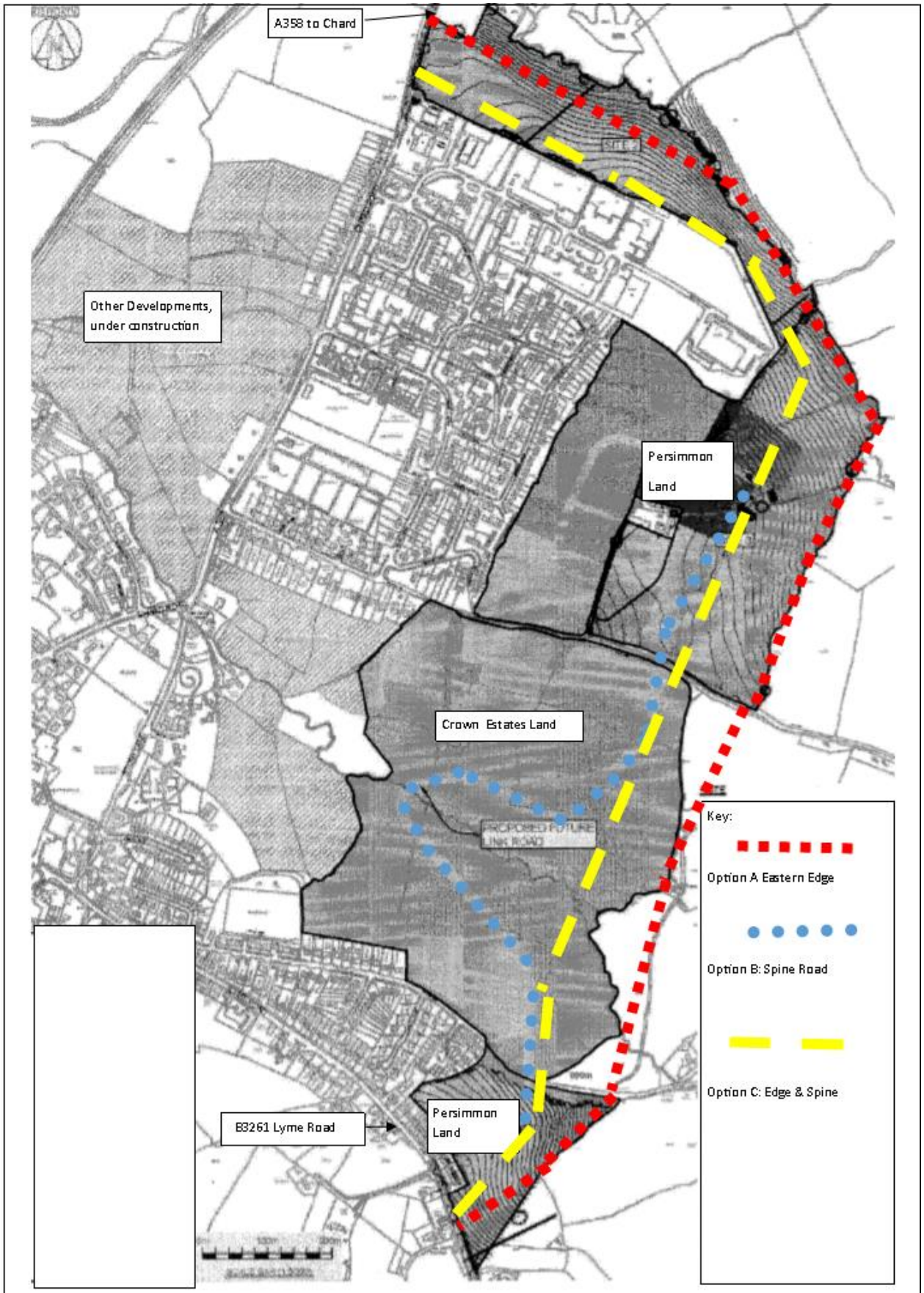

Figure 3: Eastern Relief Road Alignment Options & Development Areas

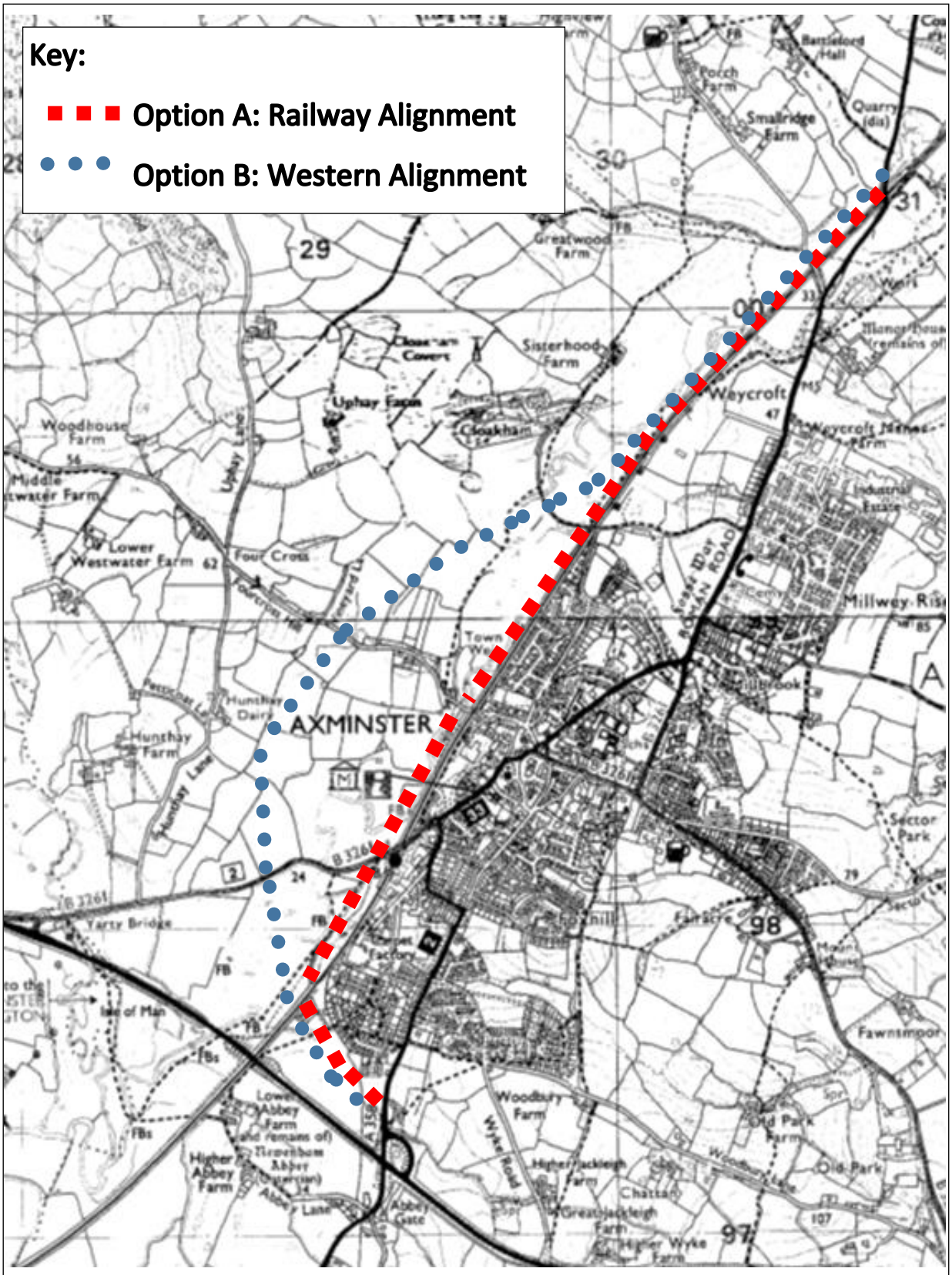

Figure 4: Alternative Alignments for the Western Bypass

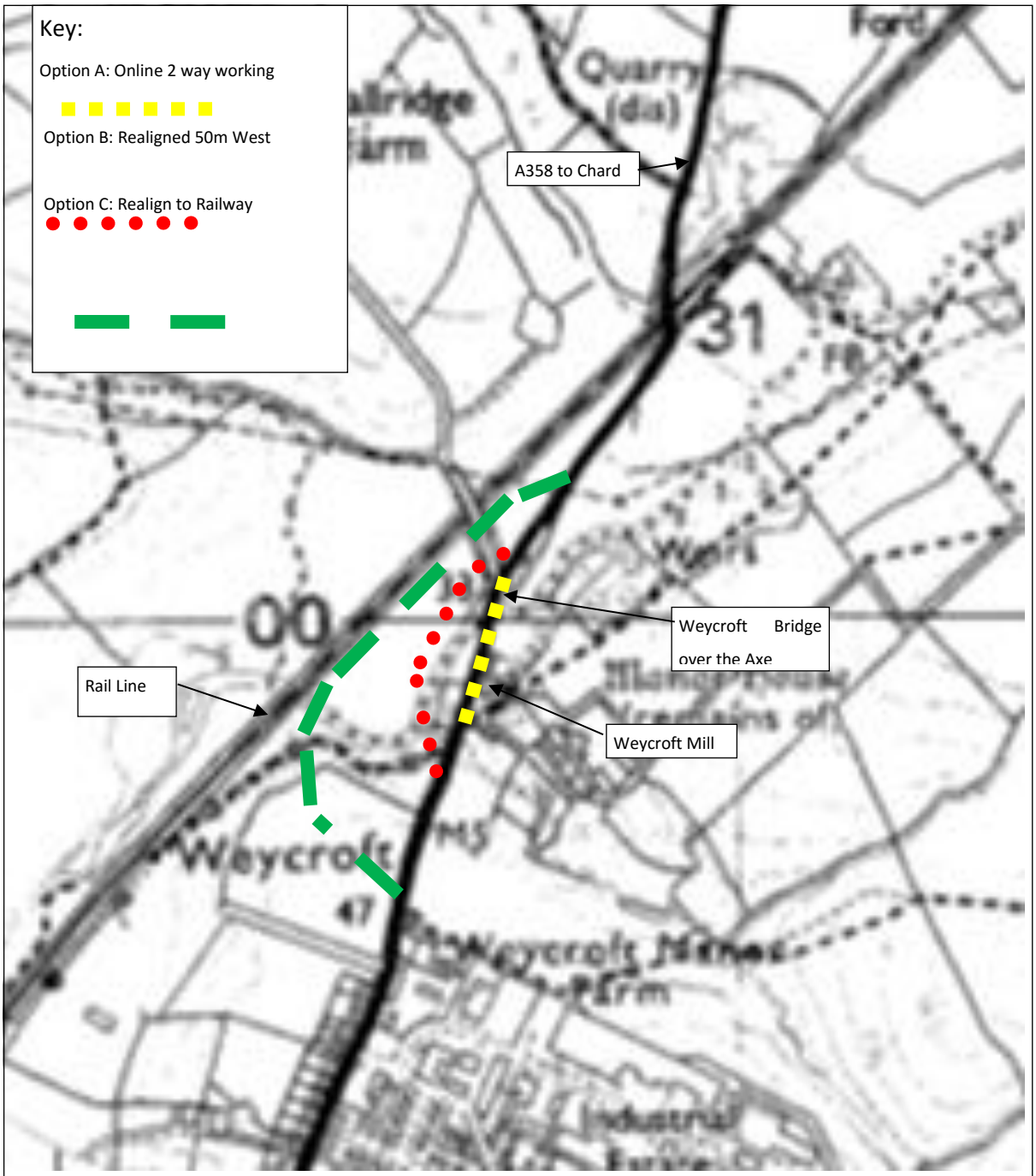

Figure 5: Weycroft Bridge Options

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Ref 2: Axminster Transport Planning Report for East Devon Local Plan. Infrastructure Planning, Devon CC. July 2013

Ref 3: Vision of Axminster 2030 Community Plan. Axminster Community Enterprise. 2008

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