

# Options Assessment Report Findings Summary



# Document guide

## Document guide

This document has been produced as a helpful high-level overview, guide and summary of the findings of the route Option Assessment Report (OAR) to assist and inform responses to the route consultation exercise in Jan - March 2021. It should be viewed alongside the information provided on the Future Chippenham consultation webpage, including the consultation map plans and overview video. For further, more detailed analysis and information regarding the relative differences of each option and against each assessment criteria please refer to the OAR.

## Assessment scoring

A representation of how each option performs in each zone against the assessment criteria is scored using a 5-point scale.

	Strategic case	Deliver case	Environmental case	Financial case
5	<i>Fully address objective with no consequences</i>	<i>High level of feasibility and acceptability</i>	<i>Reasonable Beneficial Impacts</i>	<i>Small portion of budget</i>
4	<i>Significant benefit to objectives</i>	<i>Good level of feasibility and acceptability</i>	<i>Neutral Impact</i>	<i>Reasonable portion of budget</i>
3	<i>Reasonable benefits to objectives</i>	<i>Neutral or unknown level feasibility and acceptability</i>	<i>Minor Adverse Impact (mitigatable)</i>	<i>Large portion of budget</i>
2	<i>Modest benefit with undesirable consensus</i>	<i>Poor level of feasibility and acceptability</i>	<i>Moderate Adverse Impact</i>	<i>Very large portion of budget</i>
1	<i>No beneficial impact</i>	<i>Low level of feasibility and acceptability</i>	<i>Major Adverse Impacts</i>	<i>Extreme portion of overall budget</i>

## Assessment methodology

Future Chippenham has undertaken an Options Assessment made up of two stages of sifting. Following option generation, a qualitative assessment of the first sift options was undertaken against strategic and delivery objectives. The remaining options were taken forward to a further study and sifted once more to define a best fit option.

OAR findings have been summarised within this document to allow easy comparison of the remaining options based on a defined set of assessment criteria. The criteria assessed includes Strategic, Environmental, Delivery and Financial cases:

**Strategic Case** – Alignment with objectives to delivery housing, improve connectivity and mitigate congestion

**Delivery Case** – Public acceptability, land viability & practical feasibility

**Environmental Case** – Scale of environmental impact

**Financial Case** – Relative cost and risk of each option.

The distributor road route options have been split into five zones to provide appropriate focus and limits for fair option comparison for the assessment. The zones are presented on the next page.

Assessment summaries, by geographical zone, are provided on the following pages. Link roads from the distributor to Pewsham Way are assessed separately to the zones.

The environmental case assessment does not include all mitigation of impact but does include key elements such as reducing floodplain impacts. Mitigation for potential impacts identified, will be developed at the next stage of design. A summary of the Environmental Assessment at this options appraisal stage is provided in the Preliminary Environmental Assessment Options Report Non-Technical summary.

The financial case assessment refers to a proportion of the Housing Infrastructure Funds as discussed in 10.9.4 of the OAR.

# Zones

KEY

 Assessment Zone



Future  
**Chippenham**  
Connecting our communities



# First sift options

## KEY

- Distributor Road Option A
- Distributor Road Option B
- Distributor Road Road Option C
- Distributor Road Option D
- Distributor Road Option E
- Distributor Road Option F
- Link Road 1
- Link Road 2
- Link Road 3
- Link Road 4
- Assessment Zone



# First sift options

## First sift option generation

The approach to option generation considered the scheme objectives and following parameters:

- Completion of a full eastern distributor route for transport congestion mitigation.
- Improvement of multi-modal transport connectivity.
- Options to affect a range of alternative landowners providing alternatives during landowner discussions.
- Applying other developers plans and planning conditions, in part or in full, including the reserved highway corridor for the eastern distributor road at Rowden Park.
- Existing residents of the site.
- Reviewed physical and environmental constraints.

The result of the option generation developed distributor road option A to F, with four Pewsham Link options. Route descriptions are available within the Options Assessment Report.

## First sift summary

An assessment of these options was completed and reduce the number of options taken forward for a more detailed assessment. Reasons for options that did not progress to the detailed assessment are provided below:

Zone 1, Option D – Not taken forward due to a poor deliverability. Direct impact on ancient woodland north of the sewage treatment works and impact on the setting of Rowden Manor

Zone 2, Option F – Not taken forward due to a poor strategic case. This option fails to enable the delivery of housing or enable good multi-modal connectivity.

Zone 3, Option F - Not taken forward due to a poor strategic case. This option fails to enable the delivery of housing or enable good multi-modal connectivity.

Zone 5 Option E – Not taken forward as this option conflicts with the planning application and desires of the landowner. This option would also require removal of a heavily vegetated habitat.














Pewsham Link Option 2 – Option suitable based on strategic and delivery case but is very similar is design to Option 3 which has a lesser impact on existing habitat.

Pewsham Link, Option 4 – Not taken forward, although deliverable, due to strategic case. This option restricts the masterplanning of the development if used as a distributor road. More direct Pewsham link options are available.

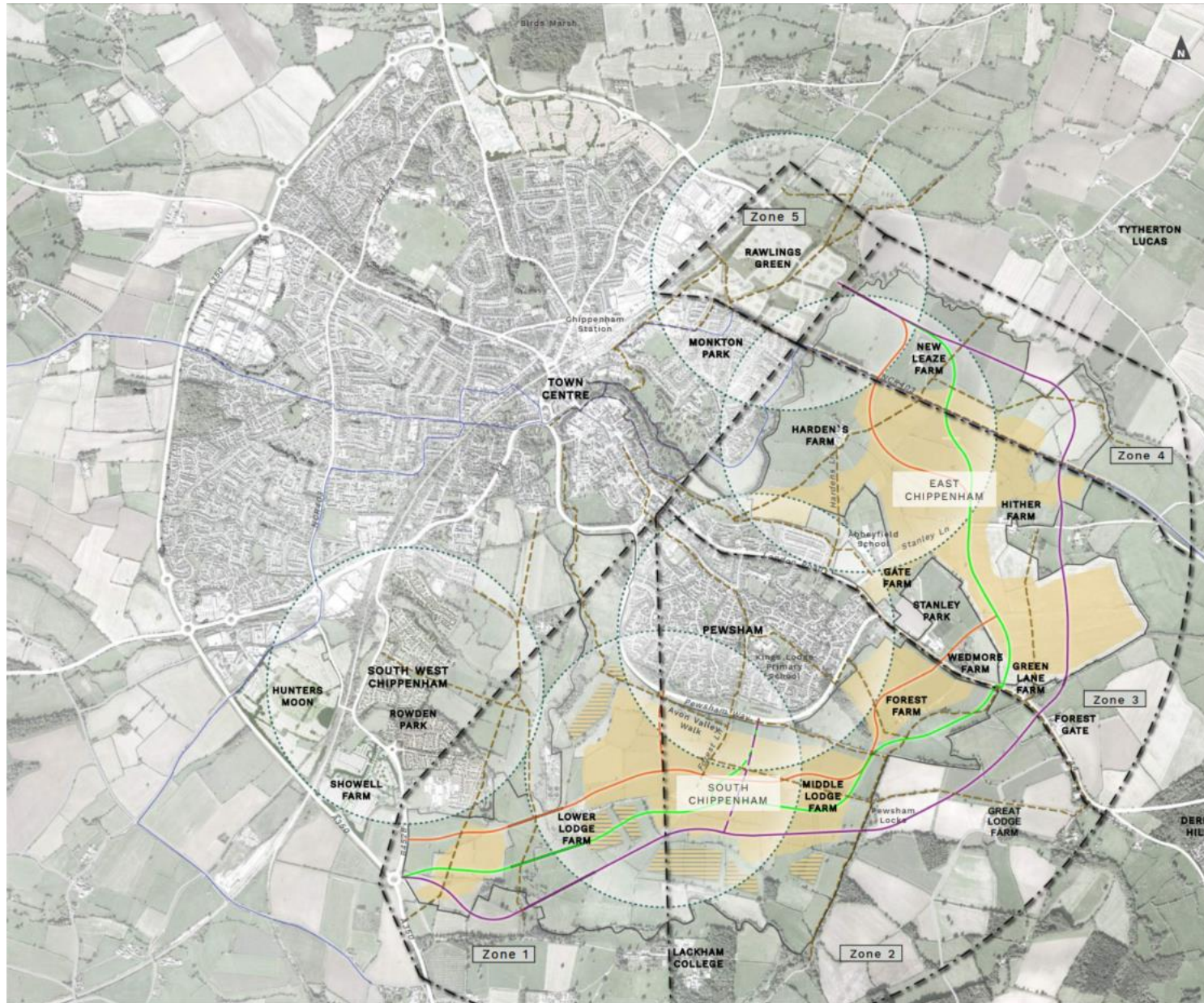


# Second sift options

## KEY

-  Preferred Development Sites Boundary Identified in Local Plan Review (Regulation 18)
-  Residential Area Identified in Local Plan Review (Regulation 18)
-  Possible Future Development Area Identified in Local Plan Review (Regulation 18)
-  Distributor Road Option A
-  Distributor Road Option B
-  Distributor Road Option C
-  Link Road Option 1
-  Link Road Option 3
-  Public Footpath/Rights of Way
-  Bridge/Viaduct
-  National Cycle Route
-  800m/10mins Walking Radius
-  Assessment Zone

The distributor road route through Zone 5 follows the alignment of Rawlings Green development.



# Zone 1

**Zone 1 Extents:**  
Distributor road route from Lackham Roundabout/B4528 south of the scheme to Forest Lane

Key quantities:	Route length (km)	Bridge length (m)
Option A	1.75	(1 no.) 468.0
Option B	1.65	(1 no.) 444.0
Option C	1.60	(1 no.) 336.0

**Option assessment findings:**

Strategic case  
Option C provides the best connectivity for all types of transport network. It is located within a 10 minute walking distance of proposed developments at Southwest Chippenham and a direct route through Rowden Park to the town centre.  
Option C provides the greatest potential for direct cycle routes to surrounding urban areas using existing Public Rights of Way.  
Option A and B also provide opportunities for cycle and pedestrian routes to Southwest Chippenham but are located further away.  
Option A is likely to operate like a traditional ring road around the edge of the Future Chippenham development, without a further road corridor running through the development this option is a low / poor fit for connectivity.

Delivery case  
All options have a similar level of practical feasibility. Land viability and public acceptability will be reviewed as part of public and stakeholder consultation.

Environment case  
Option B has the lowest overall impact on the environment, aligned lower in the landscape than option C which means it has a greater potential to be screened from existing views of the area. It is also located further from heritage assets at Rowden park than option C and further from heritage assets at Lackham College than option A  
Option C has the second largest impact on the environment due to it's proximity to Rowden Park conservation area and greater visual impact than option B due to its connection to the high ridge line at Lower Lodge Farm.  
Option A is the least preferred environmental option, although it has a lesser impact on noise & vibration and air quality due to being located further from existing residential areas. Option A impacts the landscape setting of Lackham College and due to the long length of structure has a greater visual impact. The largest impermeable area has the greatest potential to pollute the existing watercourse, having onward effects on flooding and aquatic life in the River Avon. Option A, the longer route compared to option B and C will require additional construction materials and waste.

Financial case  
Option C has the shortest road and bridge and lowest delivery cost estimate.

Option Assessment Scoring		Option A	Option B	Option C
Strategic	Delivery of Housing	4	4	4
	Connectivity	2	3	4
	Traffic Congestion Mitigation	4	4	4
Delivery	Acceptability	3	3	3
	Land Viability	3	3	3
	Practical Feasibility	3	3	3
Environmental	Soils & Geology	3	3	3
	Population & Health	3	3	3
	Noise & Vibration	4	3	3
	Air Quality	4	3	3
	Climate Change Effects	3	3	3
	Landscape Visual	2	3	3
	Cultural Heritage	2	3	2
	Biodiversity	2	2	2
	Water Environment	2	3	3
	Materials & Waste	3	3	3
Financial	Capital Cost	1	1	2
	Affordability & Overall Risk Cost	1	1	2

# Zone 2

**Zone 2 Extents :**  
Distributor road route from Forest Lane to the A4 London Road.

Key quantities:	Route length (km)	Bridge length (m)
Option A	2.40	(1 no.) 23.5
Option B	2.20	(1 no.) 23.5
Option C	2.00	(1 no.) 25.0

**Option assessment findings:**

Strategic case

Option C provides the best connectivity for all types of transport network. The centre of Pewsham is located at a 10 minute walking distance from the distributor road.

The centre of Pewsham is just outside the 10 minute walking distance of option B.

Option C provides the greatest potential for direct cycle routes to surrounding urban areas using existing Public Rights of Way. These routes include Forest Lane to access Pewsham and the town centre.

Option A and B also provide opportunities for cycle and pedestrian routes to Pewsham but are located further away.

Option A is likely to operate like a traditional ring road around the edge of the Future Chippenham development, without further road corridor running through the development this option is a low / poor fit for connectivity.

Delivery case

All options have a similar level of practical feasibility. Land viability and public acceptability will be reviewed as part of public and stakeholder consultation. Option A has the lowest land viability, no letters of support were received for some of this land during the funding bid stage, this will be reviewed following consultation.

Environment case

All options have broadly similar environmental impacts on the environment in Zone 2. However, the use of option A in zone 2 could have significant visual effects on the setting of Lackham College even with visual screening, so this option is least preferred from an environmental perspective.

Option A has some benefit over options B and C in cultural heritage due to avoidance of an archaeological site of significance at Forest Farm. Archaeology is recorded at Forest Farm following developer surveys; it is possible surveys undertaken for Option A will also discover sites of significance.

Financial case

Option C has the shortest road, a bridge over the canal and lowest delivery cost estimate.

Option B has the second shortest road, a bridge over the canal and second lowest delivery cost estimate.

Option A has the longest road, a bridge over the canal and highest delivery cost estimate.

Option Assessment Scoring	Option A	Option B	Option C	
Strategic	Delivery of Housing	4	4	4
	Connectivity	2	4	4
	Traffic Congestion Mitigation	4	4	4
Delivery	Acceptability	3	3	3
	Land Viability	2	3	3
	Practical Feasibility	3	3	3
Environmental	Soils & Geology	3	3	3
	Population & Health	3	3	3
	Noise & Vibration	3	3	3
	Air Quality	3	3	3
	Climate Change Effects	3	3	3
	Landscape Visual	2	3	3
	Cultural Heritage	3	2	2
	Biodiversity	2	2	2
	Water Environment	3	3	3
	Materials & Waste	3	3	3
Financial	Capital Cost	4	4	4
	Affordability and Overall Risk Cost	4	4	4



# Zone 3

## Zone 3 Extents:

Distributor road route from the A4 London Road north to the National Cycleway 403.

Key quantities:	Route length (km)	Bridge length (m)
Option A	1.55	(1 no.) 31.7
Option B	1.75	0.0
Option C	2.20	0.0

## Option assessment findings:

### Strategic case

Option C provides the best connectivity for all types of transport network. The Monkton Park urban residential area is located within a 10 minute walking distance. Option C provides the greatest potential for direct cycle routes to surrounding urban areas using existing Public Rights of Way. These routes include National Cycle Network (NCN) 403, Hardens Lane and the existing route to Abbeyfield Secondary school and the town centre parallel to London Road. Option A and B also have a direct connection to NCN403 and therefore a link to the town centre and train station but are located further away; Option A is the poorest fit due to greater distance travelled and time taken.

Option A is likely to operate like a traditional ring road around the edge of the Future Chippenham development at East Chippenham, without further road corridor running through the development this option is a low / poor fit for connectivity.

### Delivery case

All options have a similar level of practical feasibility. Land viability and public acceptability will be reviewed as part of public and stakeholder consultation. Options A and B would require an additional eastern link road to connect to the development. Option A has the lowest land viability, no letters of support were received for some of this land during the funding bid stage, this will be reviewed following consultation.

### Environment case

Option B was found to have the lowest overall impact on the environment.

Option C has the second lowest impact but affects social recreation land at Stanley Park sports ground and a pond with records of Great Crested Newts, to the east of Stanley Park.

Option A has the highest impact on the environment as it is likely to be visible from village hamlets to the east and potentially affect the population living close to the A4 at Forest Gate. In addition, the selection of Option A in this zone would require Option A also in Zone 4 which is associated with greater environmental effects.

### Financial case

Options A and B require an additional link road to access the development area at East Chippenham, as shown in the Concept Framework Report. Although this link road is not planned to be delivered as part of the distributor road, it will be required to for the development as hence, has been included within the financial case.

Option C has the shortest road length and lowest delivery cost estimate.

Option Assessment Scoring	Option A	Option B	Option C	
Strategic	Delivery of Housing	4	4	4
	Connectivity	2	3	4
	Traffic Congestion Mitigation	4	4	4
Delivery	Acceptability	3	3	3
	Land Viability	2	3	3
	Practical Feasibility	3	3	3
Environmental	Soils & Geology	3	3	3
	Population & Health	2	3	2
	Noise & Vibration	3	3	3
	Air Quality	3	3	3
	Climate Change Effects	3	3	3
	Landscape Visual	2	3	3
	Cultural Heritage	3	3	3
	Biodiversity	2	2	2
Financial	Water Environment	3	3	3
	Materials & Waste	3	3	3
	Capital Cost	4	4	5
Affordability and Overall Risk Cost	4	4	5	

# Zone 4

## Zone 4 Extents :

Distributor road route from the National Cycleway 403 to the River Avon.

Key quantities:	Route length (km)	Bridge length (m)
Option A	1.85	(1 no.) 258.0
Option B	1.00	(1 no.) 258.0
Option C	0.80	(1 no.) 258.0

## Option assessment findings:

### Strategic case

Option C provides the best connectivity for all types of transport network. Monkton Park residential area, Rawlings Green and East Chippenham developments are located within a 10 minute walking distance.

Option C provides the greatest potential for direct cycle routes to surrounding urban areas using existing Public Rights of Way.

Option A and B also have a direct connection to NCN403 and therefore a link to the town centre and train station but are located further away; option A is the poorest fit due to greater distance travelled and time taken.

Option A is likely to operate like a traditional ring road around the edge of the Future Chippenham development at East Chippenham, without further road corridor running through the development this option is a low / poor fit for connectivity.

### Delivery case

All options have a similar level of practical feasibility. Land viability and public acceptability will be reviewed as part of public and stakeholder consultation.

### Environment case

Option C was found to have the overall lowest impact on the environment.

The alignment for option C is the shortest and follows lower slopes of topography to the west of New Leaze Farm, reducing visual impact. The reduced length of this option through zone 4 reduces potential for impact on archaeology records available at New Leaze Farm and reduced impact of farm severance, affected under options A and B, improving population & health.

Option B was preferable to option A as it maintains a lesser visual footprint to receptors to the east.

### Financial case

Option C has the shortest road and lowest delivery cost estimate.

Option B has the second shortest road and second lowest delivery cost estimate.

Option A has the longest road and highest delivery cost estimate.

All route options have the same bridge structure costs.

Option Assessment Scoring	Option A	Option B	Option C	
Strategic	Delivery of Housing	4	4	4
	Connectivity	2	2	4
	Traffic Congestion Mitigation	4	4	4
Delivery	Acceptability	3	3	3
	Land Viability	3	3	3
	Practical Feasibility	3	3	3
Environmental	Soils & Geology	3	3	3
	Population & Health	3	3	4
	Noise & Vibration	3	3	3
	Air Quality	3	3	3
	Climate Change Effects	3	3	3
	Landscape Visual	2	2	3
	Cultural Heritage	2	2	3
	Biodiversity	2	2	2
	Water Environment	3	3	3
Materials & Waste	3	3	3	
Financial	Capital Cost	4	4	4
	Affordability and Overall Risk Cost	4	4	4

# Pewsham link options

## Pewsham Link Extents:

Link road from a given distributor road option to Pewsham Way. Link road option 1; from Option C, south Chippenham to Canal Roundabout and link road option 3 from Option B or A to Pewsham Way, 150m east of Forest Lane.

Pewsham Link option 3 has the same scoring for Option B and A and hence, has only been shown once.

Key quantities:	Route length (km)	Bridge length (m)
Option A / Pewsham Link 2	0.73	None
Option B / Pewsham Link 2	0.64	None
Option C / Pewsham Link 1	0.47	(1 no.) 23.5

## Option assessment findings:

### Strategic case

Pewsham link option 1 provides a good fit with the connectivity objective, providing a closer alignment for connecting all types of transport network to the town centre than option 3. The route is directly linked to the centre of Pewsham via Canal Road;

Pewsham link option 3 provides a reasonable / good fit with the connectivity objective and is directly linked to the centre of Pewsham via Forest Lane. Option 3 has a more direct link to the centre of Pewsham and the town centre than option 1.

Both links connect to Public Rights of Way including Forest Lane and Avon Valley Walk that lead to the town centre.

### Delivery case

All options have a similar level of practical feasibility. Land viability and public acceptability will be reviewed as part of public and stakeholder consultation.

### Environment case

Pewsham link option 3 has the lowest environmental impact, it follows the existing topography minimising visual impact and cultural heritage, does not cross significant surface water features, reducing water environment impact and reducing materials & construction waste. Option 3 scores lower on population & health due to a lower improvement of connectivity.

### Financial case

Option 3 does not require a bridge and has the lowest delivery cost estimate.

Option Assessment Scoring		Option 1	Option 3
Strategic	Delivery of Housing	4	4
	Connectivity	4	3
	Traffic Congestion Mitigation	4	4
Delivery	Acceptability	3	3
	Land Viability	3	3
	Practical Feasibility	3	3
Environmental	Soils & Geology	3	3
	Population & Health	3	2
	Noise & Vibration	3	3
	Air Quality	3	3
	Climate Change Effects	3	3
	Landscape Visual	2	3
	Cultural Heritage	2	3
	Biodiversity	2	2
	Water Environment	3	4
Materials & Waste	2	3	
Financial	Capital Cost	5	5
	Affordability and Overall Risk Cost	5	5



# Summary

## Second sift summary

The assessment scoring for each sub-category, within each assessment case, for each route and link option has been averaged to aid comparison. The table informs a best fit option in each zone.

		Strategic Case	Delivery Case	Environmental Case	Financial Case	Best Fit?
Zone 1	Option A	3.3	3.0	2.8	1.0	No
	Option B	3.7	3.0	2.9	1.0	No
	Option C	4.0	3.0	2.8	2.0	Yes
Zone 2	Option A	3.3	2.7	2.8	4.0	No
	Option B	4.0	3.0	2.8	4.0	Yes
	Option C	4.0	3.0	2.8	4.0	Yes
Zone 3	Option A	3.3	2.7	2.7	4.0	No
	Option B	3.7	3.0	2.9	4.0	Yes
	Option C	4.0	3.0	2.8	5.0	Yes
Zone 4	Option A	3.3	3.0	2.7	3.0	No
	Option B	3.3	3.0	2.7	3.0	No
	Option C	4.0	3.0	3.0	3.0	Yes
Zone 5	All Options	-	-	-	-	Yes
Pewsham Links	Option 1	4.0	3.0	2.6	5.0	No
	Option 3	3.7	3.0	2.9	5.0	Yes

## Best fit option:

Following an assessment on each zone, the most suitable route through each zone can be selected to form an option which best fits the objectives. The route predominately follows option C, inner route with the exception of a minor variation in zone 3.

This best fit option avoids conflict with Stanley Park sports ground, the adjacent Great Crested Newt (GCN) habitat, reduces the number of land owners and to impact on residents near the A4. In zone 2 the best fit route follows the alignment of option C as it has better connectivity.

The best fit route includes the alignment of Pewsham link option 3, this option provides greater value for money, lower environmental impact and similar transport benefits when compared to Pewsham link option 1.

This provides a route alignment with the following attributes:

- Good and best fit with the strategic scheme objectives including connectivity and congestion mitigation.
- Coordinates with the Future Chippenham development Concept Framework design principles, including the most suitable location to connect sustainable transport networks with the town.
- Reasonable level of deliverability, subject to land agreements and consultation.
- Lowest overall environmental impact.
- The highest value for money

## Further assessment and next steps:

Final option selection will be further influenced by public consultation and land owner negotiation / acquisition. To have yours say on the options discussed, please see the final page for contact information.

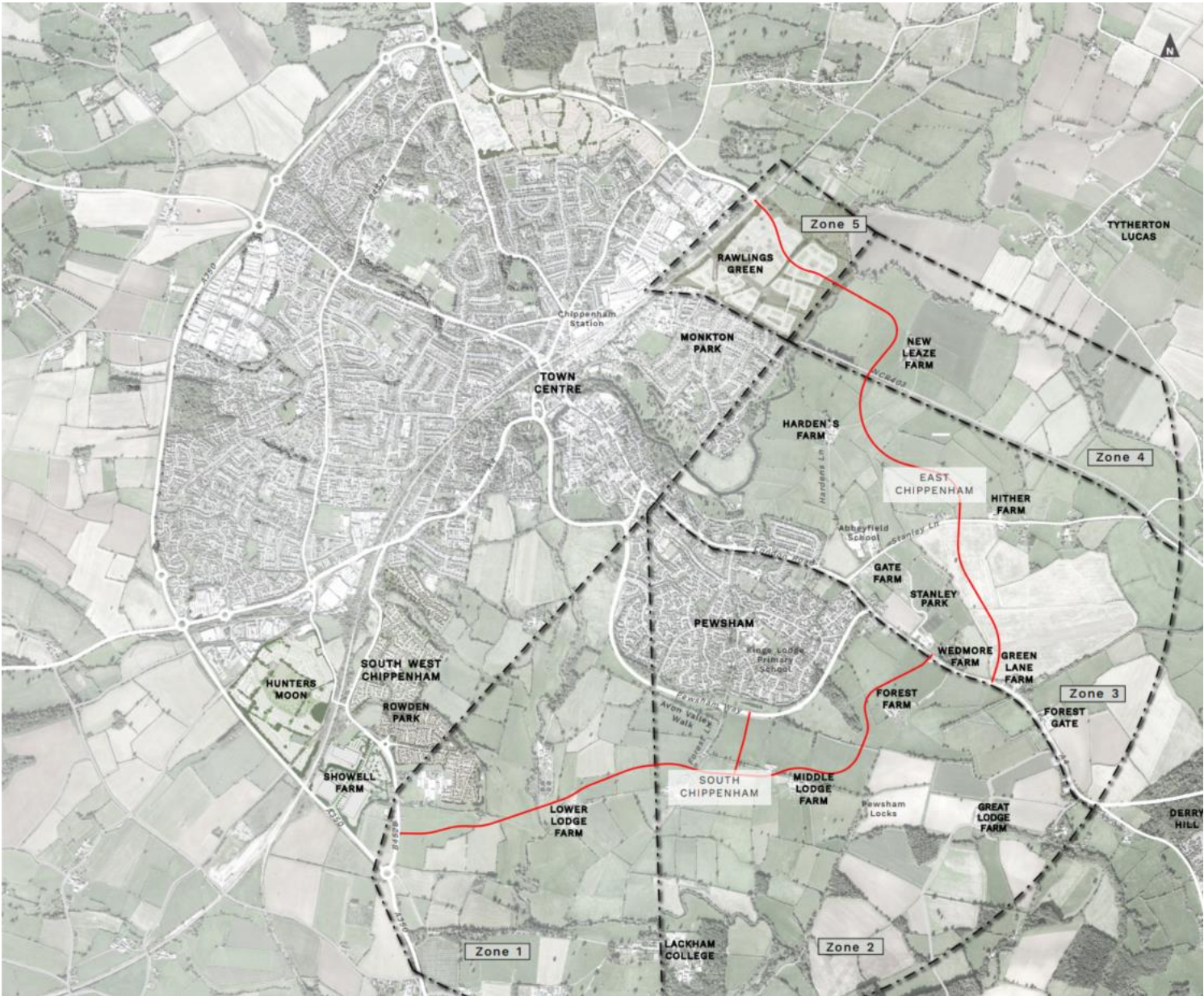
Further refinement of the financial case will be undertaken to better understand the viability of all sections of the scheme. A flood model is being undertaken to understand the suitability of reducing the length of structures and mitigation required for each individual option. This flood modelling is being reviewed with the Environment Agency.


The strategy for securing planning permission for the scheme is still emerging, this is likely to be;

- Full planning permission for the distributor road (including pedestrian and cycle provision) with environmental assessment for the outline masterplan to assess the unlocked land, a Concept Framework for the full study area of 7,500 houses, with up to 3,900 homes being delivered in the Local Plan period to 2036 as illustrative material and;
- An outline application for planning permission for a first phase of homes and selection of employment/community development, plus broader green and blue infrastructure.

# Best fit option

- KEY
- Best Fit Distributor Road Option
  - Assessment Zone





Future Chippenham welcomes comments on these proposals through the online survey form at [www.wiltshire.gov.uk/future-Chippenham](http://www.wiltshire.gov.uk/future-Chippenham), by 5pm Friday 12<sup>th</sup> March

**Email:** [futurechippenham@Wiltshire.gov.uk](mailto:futurechippenham@Wiltshire.gov.uk)

**Post:** Future Chippenham team  
Wiltshire Council,  
County Hall,  
Bythesea Road,  
Trowbridge,  
Wiltshire,  
BA14 8JN

The drawings included in this document are based on Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office. © Crown copyright.  
Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Wiltshire Council 100049050, 2021.  
Contains public sector information licensed under the Open Government Licence v3.0.  
Contains data supplied from Wiltshire Council via their free explorer web maps.

