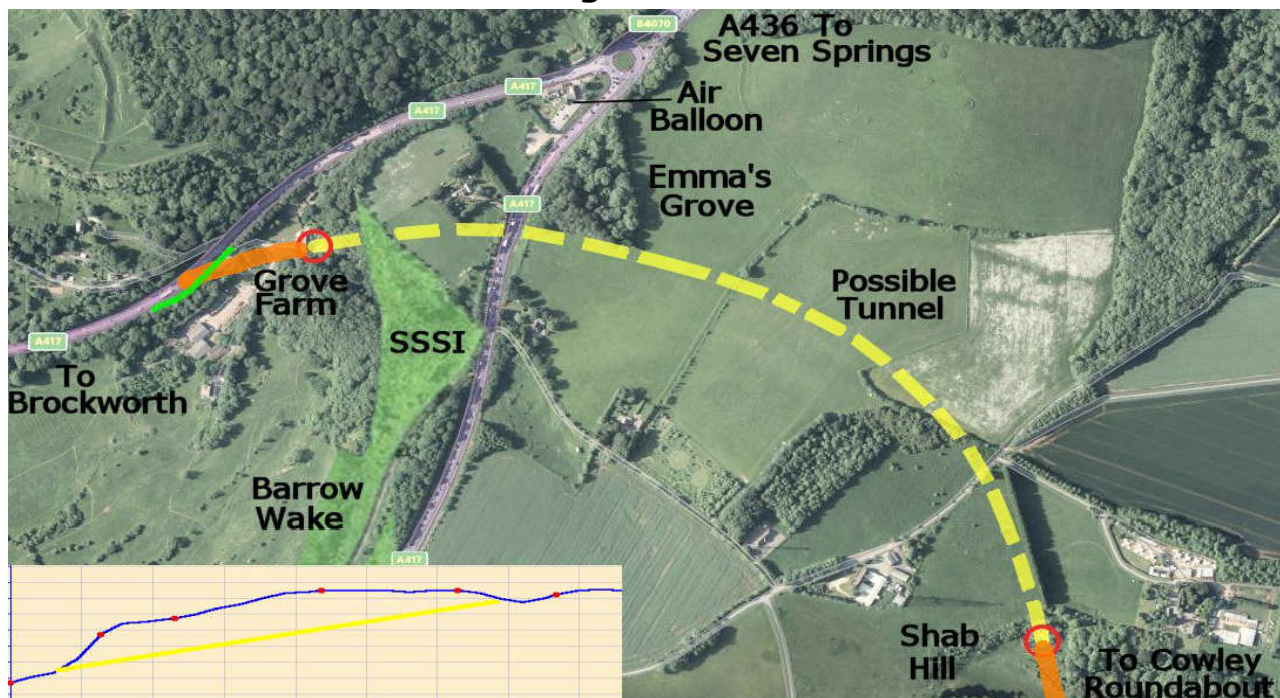


Adapting Option 30 to fit the Cotswolds National Landscape

The A417 Missing Link at the Air Balloon



Example: 1.2km Tunnel using New Austrian Method (Maps: Bing, Magic)

5% Gradient, under Barrow Wake SSSI, avoids Emma's Grove and the Air Balloon

After long and careful consideration of the scheme proposals, it appears that the very special environment of the Cotswolds AONB between Barrow Wake and the Air Balloon can only be properly retained if the new A417 is put into a tunnel.

28 of the 30 Options initially proposed for the scheme, involved tunnels and highlighted their suitability for crossing the steep edge of the escarpment. Appropriate costings should be used.

It was anticipated that Option 3 would be offered for the 2019 Public Consultation alongside Options 12 and 30. However it was deemed too expensive due to use of twin tunnel boring machines. Low cost tunnelling (the New Austrian method) uses standard digging machines with spray concrete lining and gave good effect in the North Downs and South Downs AONB. See page 3 of the 2019 GR-Review of HE Options, tunnels and green bridges and A27 tunnel.

Ramblers have put forward various tunnel options during the consultations. A 1.2km tunnel, in yellow above, from the scarp edge at Grove Farm to a valley face at Shab Hill, has a height gain of 60 metres i.e. a gradient of 5% - within the DMRB rules of maximum 6% for a tunnel. (Connecting roads shown orange, down slip green as per Option 3 and simplified Option 30.) The A417 gradient from Brockworth to Grove Farm is retained at 7%, less than the currently planned 8%. Option 3 proposed a 1km tunnel slightly south of the line. Option 30, to the north, could be tunnelled between Emma's Grove and the Air Balloon.

If local roads are kept in place for local traffic, there would be no need for a Shab Hill junction and flyover, or to divert the A436 with its 2 mile extended journey distances. The PRoW network and unclassified roads can also be retained. The current A417 Birdlip Bypass could be carefully repurposed as a B or C road to minimise late night concerns of use as a race track.

For many people the Air Balloon still standing, alongside the Cotswold and Gloucestershire Way long distance walking trails, with through-traffic gone, will be a sign that the Applicant has made good on the scheme aims of 'Landscape-Led' and 'Recreational Enhancement'.

Tunnelling Options should be properly considered.

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Outline Representation Sept 2021

This scheme for a new dual carriageway within an Area of Outstanding Natural Beauty is fundamentally flawed, in its claims of 'landscape-led' and 'recreational enhancement', without proper consideration of tunnelling.

'Landscape led': The current road from Brockworth to Cold Slad turn has a noticeable 7% gradient and is low in the landscape to minimise visual and noise intrusion. The plans increase the gradient to 8%, to cover a step change in height of terrain, and include a flyover at the highest point, Shab Hill. Part of a SSSI is removed and the landmark Air Balloon demolished.

'Recreational enhancement': Paths and tracks are severed or diverted, facilities and heritage are lost at the Air Balloon, local connection between villages is removed and popular parking at Barrow Wake reduced. Where footpaths are changed to include broader use, this would not be generally considered beneficial by walkers.

'Government National Planning Policy Framework' says

Para 174 – decisions should contribute to and enhance the natural and local environment

Para 176 – Great weight should be given to conserving and enhancing landscape and scenic beauty in..... Areas of Outstanding Natural Beauty.

The proposals sever the historic landscape and natural connectivity.

Instead the road could be kept low in the landscape. Short tunnels or vegetation covered bridges would increase connectivity, including between Barrow Wake and Crickley Hill SSSIs, enhance the environment for both walkers and wildlife and retain the Inn.

'The Design Manual for Roads and Bridges LA 112 Population and Human Health'

Table 3.11 has a 'very high' sensitivity for National Trails, promoted routes and existing employment sites.

Table 3.12 lists WCH diversions greater than 500 metres (0.3 mile) as a 'major adverse impact'.

Section 3.15 says:

- a) identify alternative design/route options that avoid the requirement to compulsory purchase property, land and assets; and
- b) identify alternative design/route options that avoid introducing or worsening severance and avoid reducing WCH provision/increasing journey times.

The proposal extinguishes or diverts existing footpaths, worsens severance and increases journey times.

An alternative design could retain connectivity and avoid compulsory purchase of the Air Balloon (an employment site) where the Cotswold Way National Trail meets the Gloucestershire Way.

'Tunnelling ' should be properly considered.

The North and South Downs AONB use a low-cost reinforced sprayed concrete method to maintain footpaths and the landscape above new roads. The HS2 and Network Rail infrastructure upgrade also use various types.

For this project, tunnels were discounted largely on grounds of cost, with the use of expensive twin tunnel boring machines.

However by going underground, surface features can be maintained and gradients reduced. A step change in height of terrain could contain a tunnel entrance.

Ramblers have campaigned here for over 20 years for through traffic to be removed from local roads so that roads become crossable and walkable again, preferably with a tunnel so the landscape remains much the same.

If proposals were reconsidered, footpaths and the countryside could be retained within the scheme for enjoyment by future generations.

(493 words)

Background - the road network

The A417 has been gradually dualled from Cirencester to Cowley Roundabout (and the connecting A419 dualled from Swindon M4 junction 15 to Cirencester).

The single carriageway A417 Birdlip Bypass was completed in the mid 1990s and also bypasses Barrow Wake viewpoint on its way to the Air Balloon roundabout (named after the nearby Inn, which in turn was renamed in the late 1800s to recognise activity at Crickley Hill).

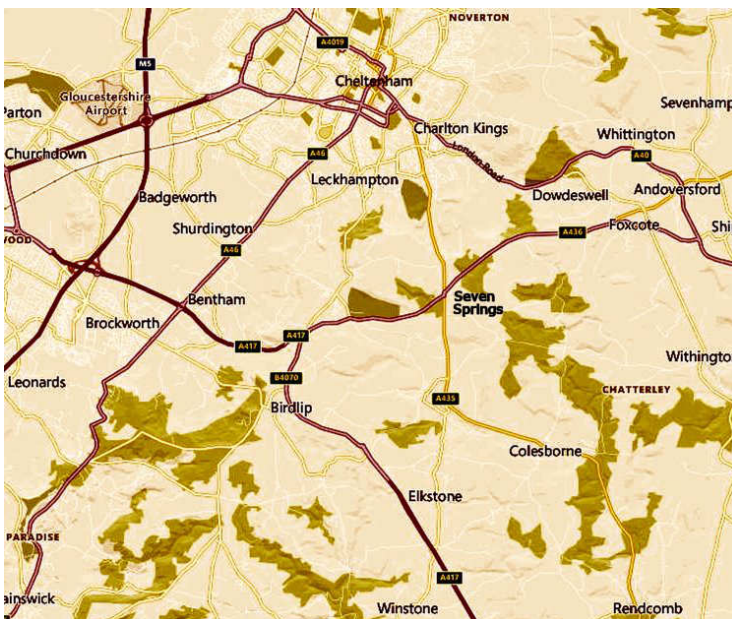
A new A417 dual carriageway from the M5 junction 11A bypassing Brockworth was also completed around 1990. It is a 3 lane single carriageway to climb Crickley Hill to the Air Balloon. Together with the A436 from there to Seven Springs and Andoversford this section effectively forms a bypass for the A40 through Cheltenham.

The missing dual carriageway from Brockworth to Cowley Roundabout has been referred to as the A417 Missing Link at the Air Balloon for a number of years.

The A417 dual carriageway has not connected every major road. The A435 Cheltenham to Cirencester road through Seven Springs was not linked and has led to traffic finding a rat-run through Elkstone village where the A417 and A435 are close.

The B4070, Birdlip to Leckhampton, is another road to Cheltenham that seems to have taken A435 traffic.

The countryside relies on connections between one place and other. A new road scheme can influence the traffic loads on those routes.



Footpath Crossings become Unusable

Crossing the A417 trunk road has become increasingly difficult, with increased traffic volumes, as the road is gradually upgraded from single to dual carriageway. For some crossings the traffic has effectively created an obstruction for much of the day. Removing this traffic to a new road or providing suitable bridges or underpasses could bring those footpaths back into use. The Option 30 plans instead choose to close busy crossings. (see representation to ExQ1).

Ramblers response to the 2019 Highways England A417 Missing Link Public Consultation raised the need for an exemplar road scheme within the landscape of the Cotswolds.

Currently the applicant's proposals for Option 30 as a way of resolving the issue of the 'Missing Link at the Air Balloon' seem unlikely to meet the various requirements for a road scheme within an AONB. The new road itself should be greened up to minimise demolition, disconnect and severance before trying to compensate by introducing more disconnect and severance.

Returning the gradient of the new road from the currently proposed 8% to the previous 7% would allow a 150 metre green bridge under the Air Balloon site (minimising intrusion on Emma's Grove) and keep the road low in the landscape. The use of a 1.2km tunnel from Grove Farm to Shab Hill would give a reduced gradient of 5% and further enhance connectivity in the landscape for people and wildlife

If plans retain an A436 junction at Shab Hill, a full flow junction may be considered to reduce roundabouts. However journey distances would still increase by 2 miles over current and fuel consumed for travelling the 40 metres to the top of Shab Hill and down again. The Birdlip link road could connect through a standard junction here or at the Air Balloon or Cowley.



A417 Scheme vs Road Schemes within other AONBs

Notable comparable schemes may be in the North and South Downs.

The South Downs A27 Shoreham Bypass (shown right) could have used a cutting to pass through nearby Southwick Hill. Instead the New Austrian tunnelling method was used, retaining the landscape and 4 footpaths.

At Hindhead in the North Downs the A3 was taken underneath the Devil's Punchbowl, a National Trust site. Again a low cost sprayed concrete method was chosen. One end of the route involved tunnelling through sand but the engineers were up to the challenge.



Would a tunnel be cost effective here?

Hindhead was completed within budget at £371m including a significant sum for landscaping. Allowing for 25% inflation gives a figure of £465m to 2021. The scheme was longer at 6.5km vs. 5.2km for Brockworth to Cowley and included dual 1.8km tunnels.

It was hoped that for the 2019 consultation that Option 3 with its 1km tunnel was going to be put forward alongside Options 12 and 30. However it was discounted due to applying costing for an expensive twin tunnel boring method at £875m. Budget for the scheme had been set to £500m.

An early scheme, Option 3, was designed to only take the A417 traffic through a tunnel, leaving local traffic to use the local road network and retaining much of the landscape.

However the limited junction arrangements could be applied to a much shorter scheme such as the 2014 GCC instigated A417 loop consultation arriving at a 150metre green bridge with the Air Balloon on the top, together with a migration route for wildlife and retaining the line of the Cotswold and Gloucestershire Ways.

An intermediate Option could follow the alignment of Option 30 but use the step change in height of the landscape near Grove Farm as one end of a 1km tunnel to the back of Shab Hill.

Mitigation

In all of the above schemes elsewhere, mitigation has been provided by taking the new road underneath a key part of the landscape. Reduced traffic on local roads provides further mitigation.

The Applicant's approach here with the A417 scheme seems to be to take the road through the landscape severing paths and tracks and demolishing almost anything along the route. Subsequent proposals for mitigation result in closure of local roads to local people and loss of parking to increase green space.

Barrow Wake View Point and Parking

Barrow Wake view point is unique along the edge of the escarpment. It allows people to park up and enjoy the views across Gloucester, the Severn Vale and beyond, no matter the weather perhaps enjoying a cup of tea, sandwiches or fish and chips.

Currently there are 70 spaces (with 2 disabled) at the View Point. The access road from Birdlip is also used for parking to avoid cluttering the view point and has about 80 spaces, some with views. The Air Balloon has approx 30 spaces plus another 30 overflow used by walkers.

The current proposals use the access road as the main link to Birdlip so lose the 80 spaces. If the Air Balloon is demolished, those 60 spaces are lost too. If the viewpoint parking is removed to try to compensate for loss of SSSI, that's 210 spaces in total. The concern is that people may begin to park on verges, on the grassland of the SSSI or within Birdlip village.

The Barrow Wake SSSI Anomaly

The Natural England/Defra magic map of the SSSI shows the old A417 as a space used for the viewpoint parking. It therefore seems odd that the current A417 is indicated as being part of the SSSI.

The reason is that plans for the then new A417 were approved at about the same time that the SSSI was recognised.

If the A417 road was there when the SSSI was created there would likely have been a gap for the road.

Similarly if the SSSI was in place before the road, it's likely the road would have bent around the edge of the SSSI.

As both occurred at the same time without either seemingly knowing of the other, the anomaly came into being that a busy road is part of an SSSI.

Should an SSSI preserve the state of the land within it?



Ramblers Aims

Ramblers have campaigned here for over 20 years, to remove through-traffic from local roads (preferably with a tunnel) to make them crossable and walkable again, the landscape remaining much the same.

Although the crossing of the A417 at the Air Balloon roundabout can be said to be difficult, it is believed that some 80,000 people walk the Cotswold Way each year. The Gloucestershire Way also crosses here and many walkers use the landmark and historic Inn as a base.

Ramblers aims for this scheme can be summarised as

- Keep the Cotswold Way and Gloucestershire Way on their Authors' line
- Ensure safe footpath crossings
- Retain the landmark Air Balloon Inn – a meeting place for walkers
- 'Green-up' proposals for the new road in preference to the current road .

What is an Improvement?

An improvement to one person or organisation may not be seen as an improvement to another. Retain, maintain or keep the same may be better for both.

The 2019 and 2020 Consultation Responses.

Ramblers consultation responses are attached. They include commentary on the Applicants Fly-through videos and discuss options for retaining the landscape while the new road passes through. It wasn't anticipated that the proposals for a new road could lead to demolition of the very place, outside which ramblers had campaigned, on the Cotswold and Gloucestershire Ways. Ramblers had not campaigned for closure of local roads, for example the closure of the Birdlip bypass, rather than retaining a hierarchy of roads with a low traffic route for local people, farmers, business and the bus.

The proposal to rename the bypass was met with 'If it's to be called the Air Balloon Way surely it should at least go to the Air Balloon?' Taking the Birdlip link road through a roundabout next to view point car park, removes useful long term parking and impacts the SSSI.

Maps on the next two pages

Page 7. Current Applicant 2021 Proposal with 8% gradient. Types of PRoW are not distinguished. Possible updates are shown in colour including an alignment of the Birdlip Link road (in blue) that is outside of the SSSI.

Page 8. OS map overlaid with the Applicant's 2019 proposals with 7% gradient. PRoW and UCR numbers added

(Green= Current paths and tracks crossed by the proposed new A417, Yellow= Air Balloon site)

The maps also suggest the Air Balloon Way should remain open to local traffic to reach the Inn. For comparison the tunnel shown on page 1 retains the landscape, without needing the Shab Hill junction or the link road.

Altogether these proposals demonstrate that tunnelling Options should be properly considered.

