

2.5 Identification of the Preferred Solution

The Options Appraisal Report (OAR) presented alongside this OBC (Appendix S) provides a detailed explanation of the option refinement and selection process. Option identification is summarised here for the purposes of the Strategic Case.

The following options in Table 2-6 were considered to address the East Mayne exceedances. Of these only Engineering Option 3 achieves and overall 'pass' against the primary Critical Success Factor.

Table 2-6: Full list of non-CAZ options considered in OAR

No.	Route Option Description	Primary CSF
1	Engineering Option 1 – A new staggered crossing route in the vicinity of Sainsbury's to link with the existing crossing on the southbound carriageway.	No
2	Engineering Option 2 – A new staggered crossing route to the south of Christopher Martin Road to link with the existing crossing on the southbound carriageway.	No
3	Engineering Option 3 – A new crossing from the beginning of the central reservation route over to the west of East Mayne, continues the route south to a point opposite the existing crossing in the vicinity of Sainsbury's. Option provides partial compliance with LTN 1/20.	Yes
4	Engineering Option 4 – A new crossing from the beginning of the central reservation route over to the west of East Mayne then crosses back over to the east of East Mayne via the existing crossing on the northbound carriageway and then onto a new crossing point on the southbound carriageway.	No
5	Engineering Option 5 - Upgrade A127 eastbound on slip & westbound off slip signals to Toucan crossings and widen shared route eastern side of roundabout.	No
6	Engineering Option 6 - East Mayne Crossing location south bound closer to roundabout.	No

7	Engineering Option 7 - Route to western side of roundabout. Using the existing signals on the A127 westbound off slip and the existing signals to the centre of Nevendon roundabout.	No
8	Engineering Option 8 - Provide a route to the existing cycleway on the western side of roundabout. New Toucan across A127 w/bound onslip.	No
9	Structure Option - Cycle Footway across East Mayne.	No
10	Structure Option - Covered Walkway along Central Reserve.	No
11	Structure Option - Barrier either side of Central Reserve.	No
12	Road Realignment of Southbound Carriageway.	No

Shortlisted Option Selection

In line with JAQU guidance Critical Success Factors (CSF), detailed in Section 2.4, were used to conduct a high-level comparative assessment of the options. The primary and secondary CSF were used with primary CSF requiring to be passed for an option to be considered further. This produced the shortlisted options below however the CAZ C was only progressed as a benchmark:

1. CAZ C (benchmark) - Around the Basildon Enterprise Corridor
2. Engineering Option 3 - Replace existing crossing layout with staggered crossing
Remove existing crossing location and remove access to area of exceedance along East Mayne Central reservation. Includes signal timing changes to ensure East Mayne queues are minimised. In addition, active air quality monitoring is included with this option. Option provides partial compliance with LTN 1/20.

Monitoring and evaluation plan is included for both options (Appendix F). The detailed appraisal of the shortlisted option is also in the OAR (Appendix S) and is summarised here for convenience.