

Cambridgeshire and Peterborough
Combined Authority

CAM Expert Advice

A428 Report

Draft 1 | 17 October 2018

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 263582-00

Ove Arup & Partners Ltd
13 Fitzroy Street
London
W1T 4BQ
United Kingdom
www.arup.com

ARUP

Document Verification

ARUP

Job title		CAM Expert Advice		Job number	
				263582-00	
Document title		A428 Report		File reference	
Document ref					
Revision	Date	Filename	20181017_Arup Public Report.docx		
Draft 1	17 Oct 2018	Description	First draft		
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			
Issue Document Verification with Document <input checked="" type="checkbox"/>					

Contents

	Page
1 Introduction and context	1
2 Approach	1
3 Technical review findings	1

1 Introduction and context

Arup was appointed to provide the role of ‘critical and technical friend’ to Steer in August 2018, to support the development of the CAM project.

An early priority for Arup was to review the A428 project in relation to the delivery of the wider CAM. Arup were directed to provide the Mayor and his team with evidence and confidence in progressing the A428 corridor, including advising on delivering an interface with the CAM network.

This note focusses on the initial findings of that review.

A Metro for Cambridge has the ability to tackle ongoing and increasing congestion issues in the city centre. Additionally, it could also act as a catalyst for accelerating and increasing the delivery of new homes and new jobs across the region.

The A428 corridor was assessed in line with the above benefits from an infrastructure, transport and planning perspectives.

2 Approach

The vision for the CAM network continues to evolve. Arup has undertaken a detailed assessment of the various route options provided by both Steer and Motts for the A428 corridor.

Arup has provided a diverse range of specialists to consider the various aspects of this corridor against the common objectives of the CAM network. The team have attended workshops and meetings, alongside desktop analysis, to understand and challenge the current proposition.

These included:

- an interface meeting with the GCP on the 22nd of August;
- an internal review of options and mitigations measures on the 28th of August;
- several meetings with Mayor James Palmer as well as the CPCA directors;
- further meetings and workshops with the GCP designers at Mott Macdonald; and
- provision of material for Mayor’s James Palmers meeting at Coton Parish Council on the 27th of September.

3 Technical review findings

Arup undertook a strategic review of the case for each of the corridors originally proposed by the GCP. This considered:

- the density of demand on each corridor, and the current level of public transport provision. Current potential demand on each corridor was estimated from 2011 census data (the most recently available);
- future demand in terms of planned future housing development within a reasonable catchment;
- current public transport frequencies and journey times, to establish where the introduction of CAM could be most transformative;
- a structured approach has been taken to identifying and exploring options for the project, and these have been subject to consultation and engagement with relevant parties to secure feedback which has informed options development.

The review found that the Cambourne corridor has a strong case, in light of the current density of population, the level of proposed future development, and the relatively low provision of public transport.

The following areas were identified as requiring further investigation:

- encroachment of the proposals on West Fields;
- impact on Coton; and
- facilitating future growth opportunities.

Three overarching options were considered (A and B as shown in the diagram below and the principle of an additional northern route), in response to these areas. An on-road solution was also examined but was determined to be less than optimal given road capacity, and congestion on the A428 close to the M11, and the need for the network to deliver significantly reduced journey times to make it attractive to existing road users.

It was concluded that the currently proposed corridor (Option A) was the most attractive in terms of programme, planning and environmental constraints, as well as journey time, subject to addressing the areas of concern set out above.



Figure 1 - Options for A428 alignment

West Fields

Two mitigations were considered for the West Fields:

1. to position the portal north of West Fields and avoid the permanent route encroaching onto West Fields.
2. to extend the tunnelled section further west, serving West Cambridge through an underground station, as is the case in the city centre and mainline station locations, further avoiding impact on West Fields.

Given the increase in cost associated with a tunnelled section and an underground station at West Cambridge (which was estimated to be around £350M) it was agreed with Mayor James Palmer that the rerouting around West Fields would be preferable although further detailed work is needed to determine a final decision and an optimal location for the West Cambridge stop.

Coton

Three mitigation options were considered for Coton and are illustrated below. Feedback on these options has not yet been received and will therefore be discussed further in the next period, to determine the correct balance between economic, social and environmental impacts.

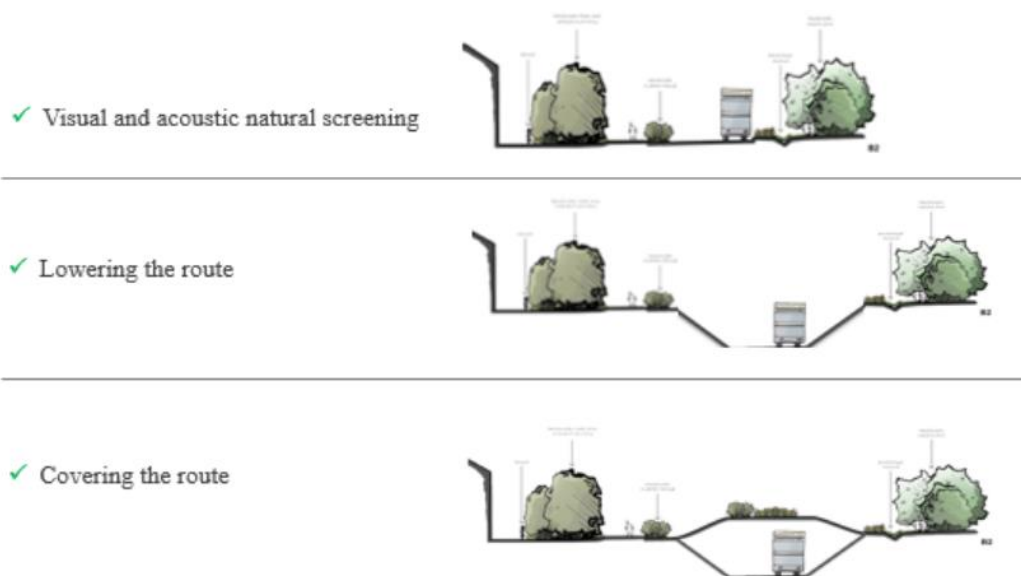


Figure 2 - Mitigation measures around Coton

It was also noted that the mode choice of a new generation of trackless metro mitigates various concerns, particularly around air and noise pollution and ease of access.

Facilitating future growth

Option A is not considered to preclude possible future growth options as these could be facilitated by short non-motorised transport links which would provide access to the CAM.

How growth options are incorporated in the developing SOBC, for publication in January 2019, is an area of ongoing discussion.

4 Conclusion

Through close collaboration with officers of the CA and GCP as well as a review of the work undertaken by Steer, it was determined that:

- The process undertaken to date to determine the route is robust and the optimal solution for the corridor was confirmed;
- The route is reclassified as a CAM route not an independent guided busway corridor;
- The vehicle operating along the A428 corridor will comply with the principles of the CAM being a rubber tyred, electrically powered vehicle;
- The route will continue to be designed to align and integrate with the overarching CAM network, comprising one of the phases of the CAM network; and
- The route will be connected into the tunnelled CAM network through optimal interfaces thereby providing a high frequency, pollution free public transport option into and across Cambridge centre and the entire CAM network