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# Cambridge South East Transport
# Local Liaison Forum meeting
# 1 June 2020

# Agenda

1. Introductions
2. Phase 1 Progress Report & Recommendations
3. Cambridgeshire Autonomous Metro Update
4. Phase 2 Options Assessment
5. Phase 2 Public Consultation
6. Phase 2 Preferred Option Recommendations
7. Phase 2 Next Steps
8. AOB

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# Objectives

- *Support the continued growth of Cambridge and south Cambridge's economy.*
- *Relieve congestion and improve air quality in South East Cambridge.*
- *Improve active travel infrastructure and public transport provision for South East Cambridge.*
- *Improve Road Safety for all users of the A1307 Corridor*
- *Improve connectivity to employment sites in South East Cambridge and Central Cambridge*

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# 2. Phase 1 Progress Report & Recommendations


Paul Hinsley (GCP)

Oliver Daffarn (Mott MacDonald)


# Scheme Progress Summary

Tranche

**1**

- **Scheme 2:** Extra cycle storage and Babraham Road P&R - **COMPLETE**
- **Scheme 10: (Advanced works)** – Safety improvements to Dalehead Foods junction - **COMPLETE**
- **Scheme 11:** Linton Village College signal upgrade - **COMPLETE**

**2**

- **Scheme 1:** Granham's Road Junction, Right turn lane – site clearance completed, Main works scheduled May 2021
- **Scheme 3:** (Section 1) – Linton Greenway – works due to commence May 2021
- **Scheme 6:** Signalised crossing at roundabout – Contractor Mobilising, Works to begin Mid June 2020
- **Scheme 7:** Eastbound bus lane at A11 – Contractor Mobilising, Works to begin Mid June 2020
- **Scheme 9:** Signalised Hildersham crossroads with Toucan/Pegasus crossing – Undertaking design for crossing
- **Scheme 10: (Full works)** – Peak-hour eastbound bus lanes on approach to Linton Village College - **COMPLETE**
- **Scheme 12:** Signalisation and right turn ban (except buses) from Linton High Street – **COMPLETE**
- **Scheme 17:** Road Safety improvements between Linton and Havernhill – Average speed camera installation Sept 2020
- **Scheme 18:** Babraham Park & Ride – Extension to existing creating 160 additional spaces – 2021

**3**

- **Scheme 3:** **(Sections 2-5)** - Linton Greenway – **DESIGN STAGE**
- **Scheme 4** Haverhill Road/the Gog Farm Shop junction – Planning application has been submitted May 2020
- **Scheme 5:** Multi-user underpass at Wandlebury – Cancelled
- **Scheme 8:** Multi-user crossing of A11 via improved footbridge & underpass – **TRANSFERRED TO PHASE 2**
- **Scheme 14:** Westbound bus lanes on approach to B1052 junction – **DESIGN STAGE**
- **Scheme 15:** Bartlow Road roundabout and rural hub – **DESIGN STAGE**
- **Scheme 16:** Dean road crossroads, closure of central reserve – **DESIGN COMPLETE**

# Recently completed schemes

## Scheme 10

- 1300mtrs of new footpath / cycleway
- New landscaping to verges
- New yellow & white lining to carriageway
- New bus stop
- Re-worked the junction outside of Dale End Foods
- New kerb line to junction & landscaping

## Scheme 12

- New yellow& white lining
- New signalised junction
- Resurfacing to junction and main carriageway

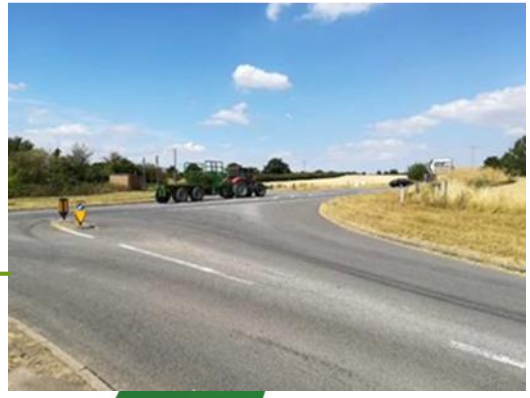

# Scheme Design Update

## Scheme 3 Linton Greenway

- Scheme split into 5 separate sections to allow for delivery of sections where route of path is confirmed and no land ownership issues.
- Section 1 & 2 (Addenbrooke's to A11) – Design complete - reviewing RSA2 audit response
- Section 3 (A11 Crossing)– Transferred to Phase 2
- Section 4 & 5 (South of A11 to Linton) – Detailed Design underway

## Scheme 9 Hildersham Crossroads

- Continuation of Linton Greenway at Hildersham Crossroads location.
- Identified significant delays along A1307 due to introduction of signals, design being reviewed and developed.
- Upgrading of existing crossings across A1307
- Discussions on-going with landowner for the route through Pampisford Estate.



## Scheme 14 Westbound Bus Lane

- Implementation of a new westbound bus lane approaching B1052
- Scheme currently in design stage
- Stakeholder discussions on-going

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# Scheme Design Update

## Scheme 15 Bartlow Road roundabout/Rural Hub

- Design on-going for the scheme
- Creation of a new offline roundabout at Bartlow Road/A1307
- Rural Hub design is under review

## Scheme 4 Haverhill Road

- Safety improvements at Haverhill Road/Gog Farm Shop.
- Scheme submitted to Local Planning Authority for Planning Permission.


# TRO Objections

## Scheme 12 Linton High Street Signals

- Design Proposals
  - 18m extension to existing double yellow lines in the High Street to provide additional space for traffic turning in
  - Double yellow lines mitigated risk of traffic queuing back to the A1307, increasing the risk of collision and therefore addresses a safety concern at the junction

- Objection
  - “Objections from 3 local residents. The main point is that parking is already at a premium and the proposal will remove several valuable spaces for residents and businesses.”

- Work done to validate design proposals
  - Surveys carried out after completion of the signals (pre-COVID lockdown) validated risk that an increase in traffic could result in traffic queuing back onto the A1307, increasing risk of collision.
  - Since opening, the area to be lengthened has had traffic management in place that has limited parking in that area with no reported issues.
  - Recommendation remains to install the increased length of double yellows

# TRO Objections

## Scheme 14 Westbound Bus lane


- Design Proposals
  - To include a new bus lane in westbound direction on A1307 for which Stagecoach are supportive.
  - The X13 Bus service operates 4No services through morning peak, Then Stagecoach operates a normal service there after, through Linton Village.
  - The new bus lane also benefits from a 1.68 Benefit cost ratio and is medium value for money as per DfT scoring, enhancing the commute into Cambridge.

- Objection
  - Linton Parish Council reiterate its previous concerns and opposition to the provision of bus lanes for the benefit of four X13 buses, to the detriment of all other road users and the environment.


- Work done to mitigate design proposals
  - A new, species rich, hedgerow 2m wide is proposed along the new highway boundary, this will provide over 700m of new and replacement hedgerow.
  - 50 new trees will be planted at intervals along the hedge, to replace the trees that need to be removed.
  - Where possible, new hedgerow is to be planted prior to the removal of the existing hedgerows and using mature specimens in order to minimise the loss of bat habitat

# Questions

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# 3. Cambridgeshire Autonomous Metro update

## Andrew Munro (GCP)

# Concept


Initial operation until City Tunnels by Electric or Ultra Low Emission High Quality Bus Type Vehicle

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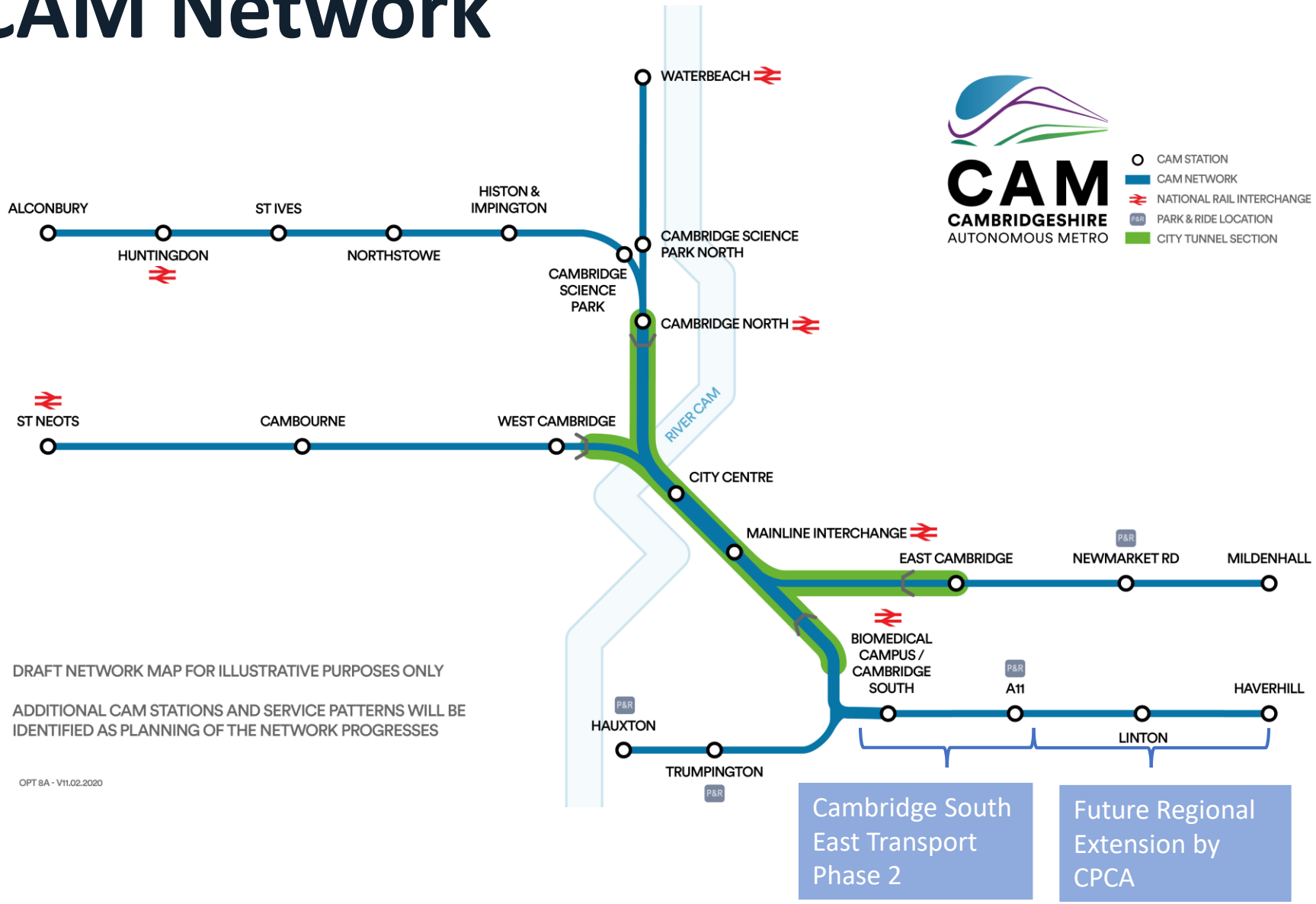
# CAM Network


WATERBEACH
ALCONBURY
ST IVES
HISTON & IMPINGTON
HUNTINGDON
NORTHSTOWE
CAMBRIDGE SCIENCE PARK NORTH
CAMBRIDGE SCIENCE PARK
CAMBRIDGE NORTH
ST NEOTS
CAMBOURNE
WEST CAMBRIDGE
RIVER CAM
CITY CENTRE
MAINLINE INTERCHANGE
EAST CAMBRIDGE
NEWMARKET RD
MILDENHALL
BIOMEDICAL CAMPUS / CAMBRIDGE SOUTH
A11
HAVERHILL
HAUXTON
LINTON
TRUMPINGTON
P&R
CAM
CAMBRIDGESHIRE
AUTONOMOUS METRO
CAM STATION
CAM NETWORK
NATIONAL RAIL INTERCHANGE
PARK & RIDE LOCATION
CITY TUNNEL SECTION
DRAFT NETWORK MAP FOR ILLUSTRATIVE PURPOSES ONLY
ADDITIONAL CAM STATIONS AND SERVICE PATTERNS WILL BE IDENTIFIED AS PLANNING OF THE NETWORK PROGRESSES
OPT 8A - V11.02.2020
Cambridge South East Transport Phase 2
Future Regional Extension by CPCA

# Questions

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# 4. Phase 2 Options Assessment

## Mike Payne (Mott MacDonald)

# Process

Re-appraise Strategies

Consider 11 possible P&R locations

141 combinations rejected

Remaining 90 combinations further assessed to produce

3 shortlisted P&R sites

5 possible route variations

Further assessment of shortlisted options

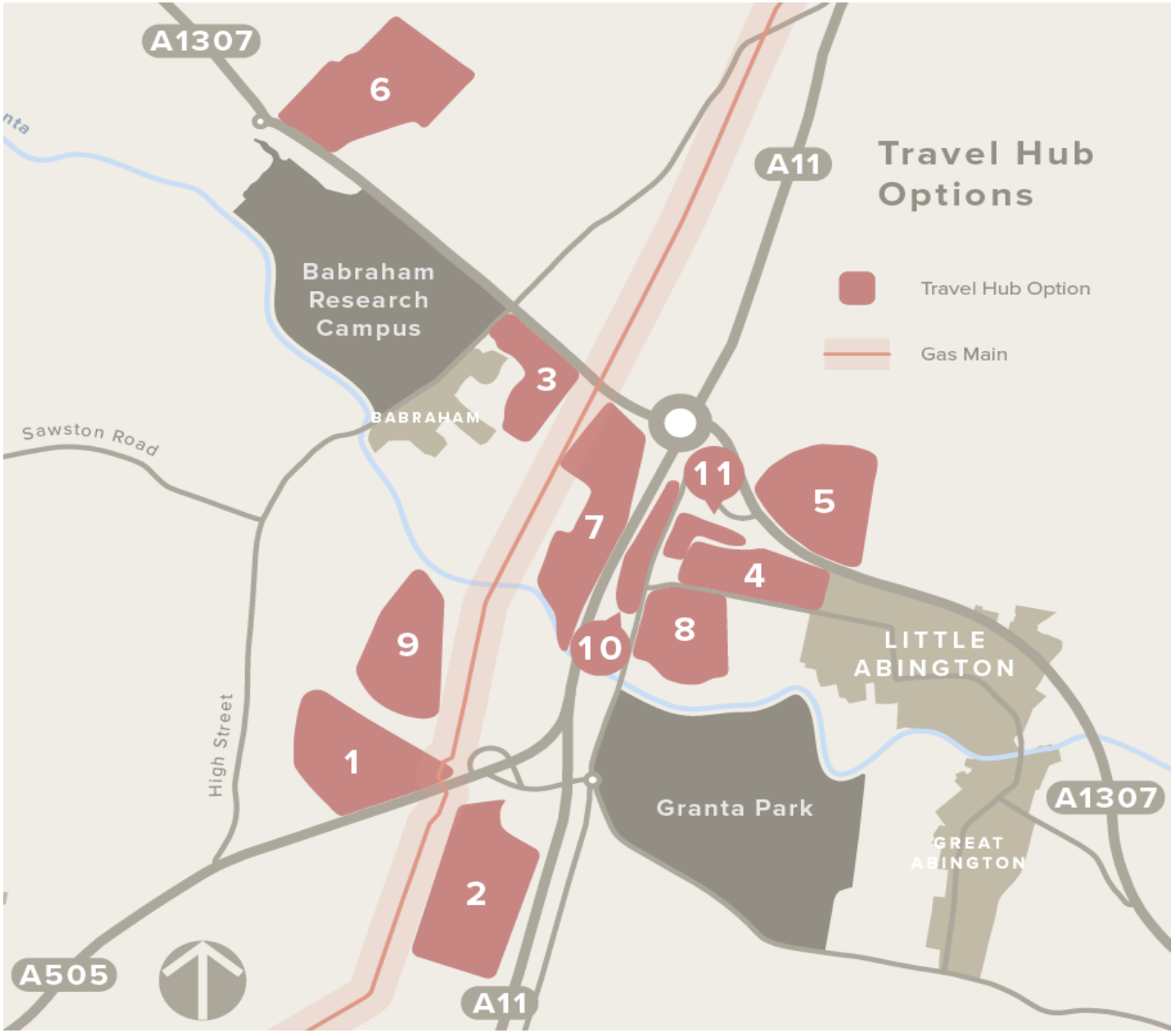
# Travel Hubs (P+R)

Highest usage with site close to A11/A1307/A505

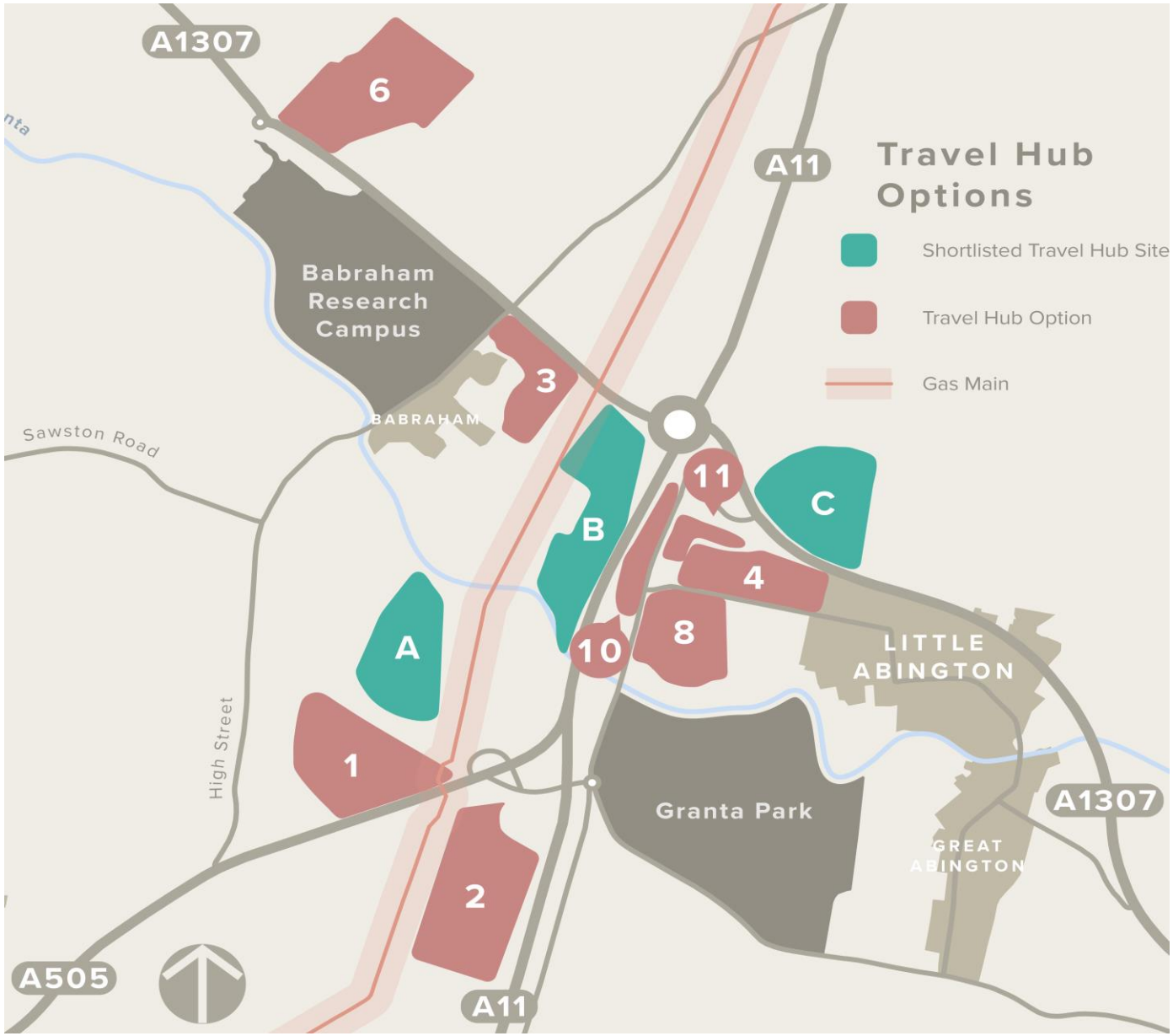
50% of traffic on A1307 at Babraham has come from A11.  50% of traffic at Abingtons turns onto A11.

P&R further east on A1307 unviable (lower demand and higher service cost)

Sustainable solutions, flexible with low impact – 2000 to 2500 spaces


A1307
6
A11
Travel Hub Options
Travel Hub Option
Gas Main
Babraham Research Campus
3
BABRAHAM
Sawston Road
11
5
7
4
9
10
8
LITTLE ABINGTON
High Street
1
Granta Park
A1307
GREAT ABINGTON
2
A505
A11

# Travel Hub Shortlist



# Campus Access

Contains OS data © Copyright and database rights 2018 OS 100023205

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Supplementary stop for Site C at Babraham increases accessibility

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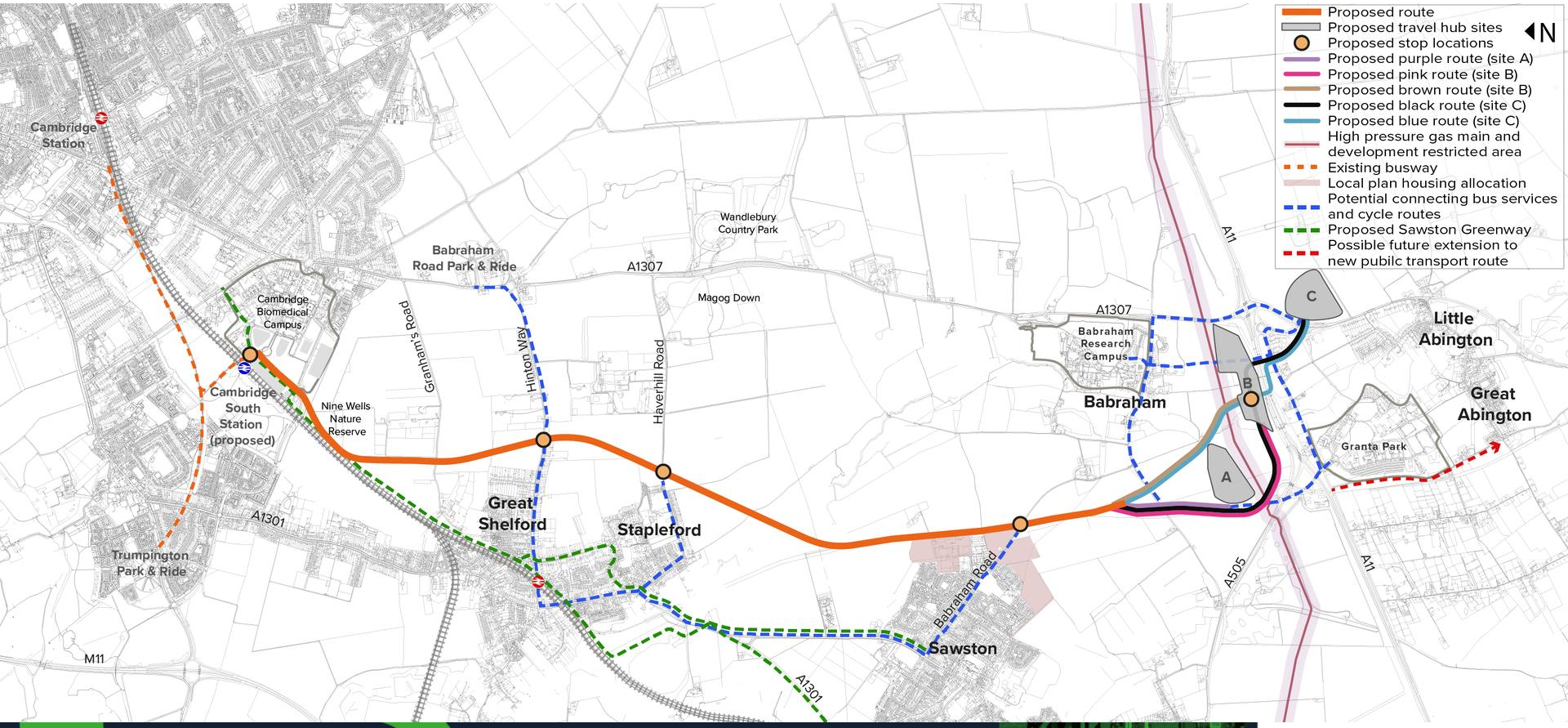
# Route Shortlist

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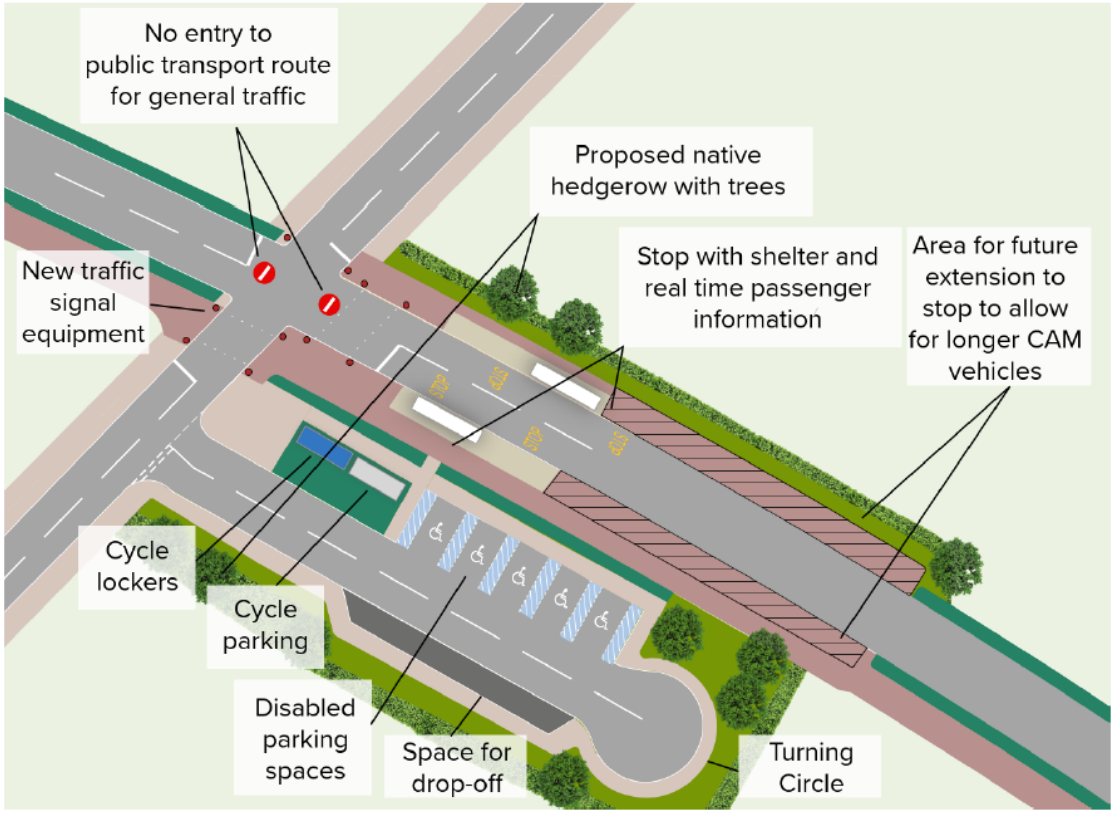
# Stops

- Three stops are proposed at Great Shelford, Stapleford and Sawston.
- It is proposed that each stop will have high quality waiting facilities including shelters and real time passenger information. All will provide level access to public transport vehicles.
- Cycle parking is proposed at each stop.
- Disabled car parking is proposed at each stop alongside a pick-up and drop-off bay.
- Opportunities for improving walking and cycling connections to these stops are being considered in order to maximise accessibility.

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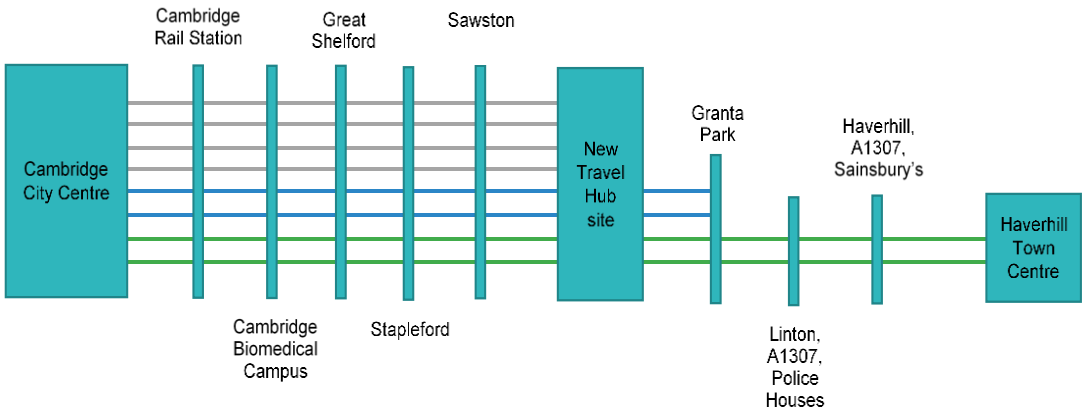
# Proposed High Quality Public Transport Network




- 8 peak services per hour between Travel Hub and Cambridge City Centre
- 4 peak services per hour between Granta Park and Cambridge
- 2 additional peak services per hour between Haverhill and Cambridge

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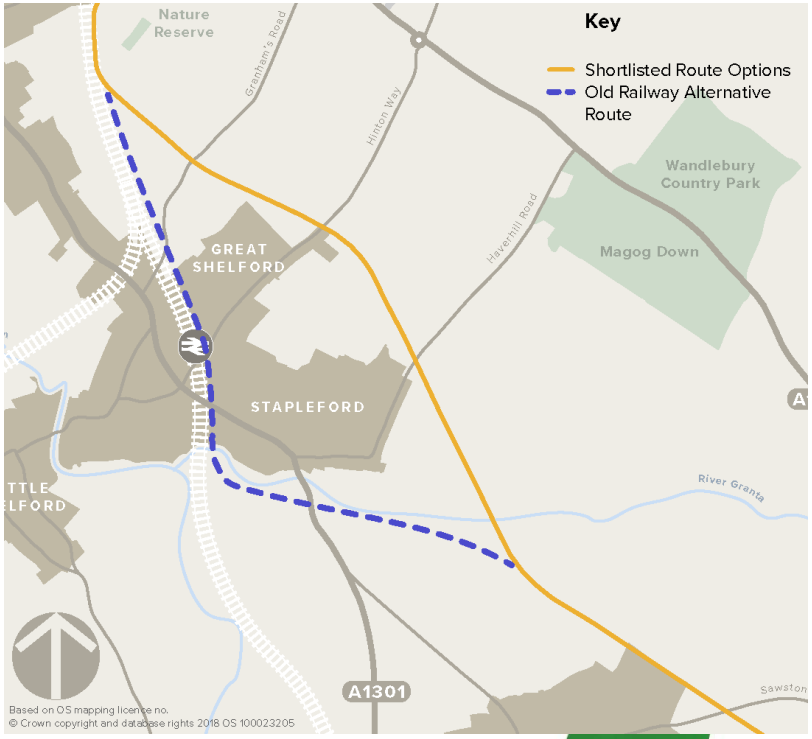
# Alternative Options

An alternative route was suggested following the disused Haverhill Branch Line to Great Shelford. This route had been examined before, but was subject to further and more detailed assessment.

A number of other route changes and refinements were proposed.

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# Railway Route Alternative

Comparative Assessment

| Rank | Scheme | Transport Benefits | Environment | Deliverability | Social Impacts (Quality of Life) | Wider Economic Benefits | Alignment with Objectives | Policy Alignment | Total Score |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Brown route from Travel Hub Site B | 1.52 | -1.25 | -0.57 | 0.88 | 3.00 | 1.75 | 2.20 | 1.08 |
| 3 | Brown route from Travel Hub Site B (Shelford Rail) | 1.05 | -1.38 | -0.93 | 0.76 | 3.00 | 1.70 | 2.20 | 0.92 |
| 2 | Pink route from Travel Hub Site B | 1.50 | -1.25 | -0.64 | 0.88 | 3.00 | 1.75 | 2.20 | 1.06 |
| 5 | Pink route from Travel Hub Site B (Shelford Rail) | 1.02 | -1.38 | -1.00 | 0.76 | 3.00 | 1.70 | 2.20 | 0.90 |
| 4 | Blue route from Travel Hub Site C | 1.33 | -1.25 | -1.10 | 0.58 | 3.00 | 1.65 | 2.20 | 0.92 |
| 8 | Blue route from Travel Hub Site C (Shelford Rail) | 0.90 | -1.38 | -1.26 | 0.56 | 3.00 | 1.60 | 2.20 | 0.80 |
| 6 | Purple route from Travel Hub Site A | 1.31 | -1.25 | -0.29 | 0.71 | 2.00 | 1.68 | 2.20 | 0.91 |
| 10 | Purple route from Travel Hub Site A (Shelford Rail) | 0.83 | -1.38 | -0.79 | 0.60 | 2.00 | 1.60 | 2.20 | 0.72 |
| 7 | Black route from Travel Hub Site C | 1.33 | -1.25 | -1.38 | 0.58 | 3.00 | 1.65 | 2.20 | 0.88 |
| 9 | Black route from Travel Hub Site C (Shelford Rail) | 0.90 | -1.38 | -1.48 | 0.56 | 3.00 | 1.60 | 2.20 | 0.77 |

# Railway Route Alternative

Conclusions

- When assessed against the consultation options the railway route has inferior performance.
- The old branch line track bed terminates at Gt Shelford station.  Routing north from here would require passing through residential and commercial areas and sharing residential roads (Chaston Road).
- Lower operating speed in Gt Shelford of 20 mph.
- Network Rail have stated a potential conflict with safeguarding for both East West Rail and Cambridge South Station.
- Alternative routes following the railway alignment would be expected to cost an additional £29.2 million compared to the shortlisted options due to increased construction cost and increased land cost.
- Does not meet CPCA objectives for dedicated and segregated CAM

# “Railway Route”


Railway infrastructure constraints and need for vehicle containment structure


Space constraints – likely to result in demolition of buildings and relocation of infrastructure


Width constraints at Shelford station and need to purchase commercial property


Mill Court car park would need to be purchased

- Bottleneck at Gt Shelford Station
- Operational issues during construction including likely closure of the railway
- Bridge modification
- Containment structure
- Route through residential area
- Not fully segregated (Chaston Road) hence lower speed

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# Routing Further North of Gt Shelford and Stapleford

The CPCA CAM LTP Sub-Strategy sets out an objective for CAM to be within 10 to 15 minutes walk of key destinations and for it to provide for residents to be within 30 minutes of a good job.

Routes that would take stops further away from Gt Shelford and Stapleford would conflict with core objectives.

# Other Route Alternatives

Suggestions made for route refinements to reduce field severance and local impacts.

These will be considered in developing the proposals further and will fall within the scope of the formal Environmental Impact Assessment

# Questions

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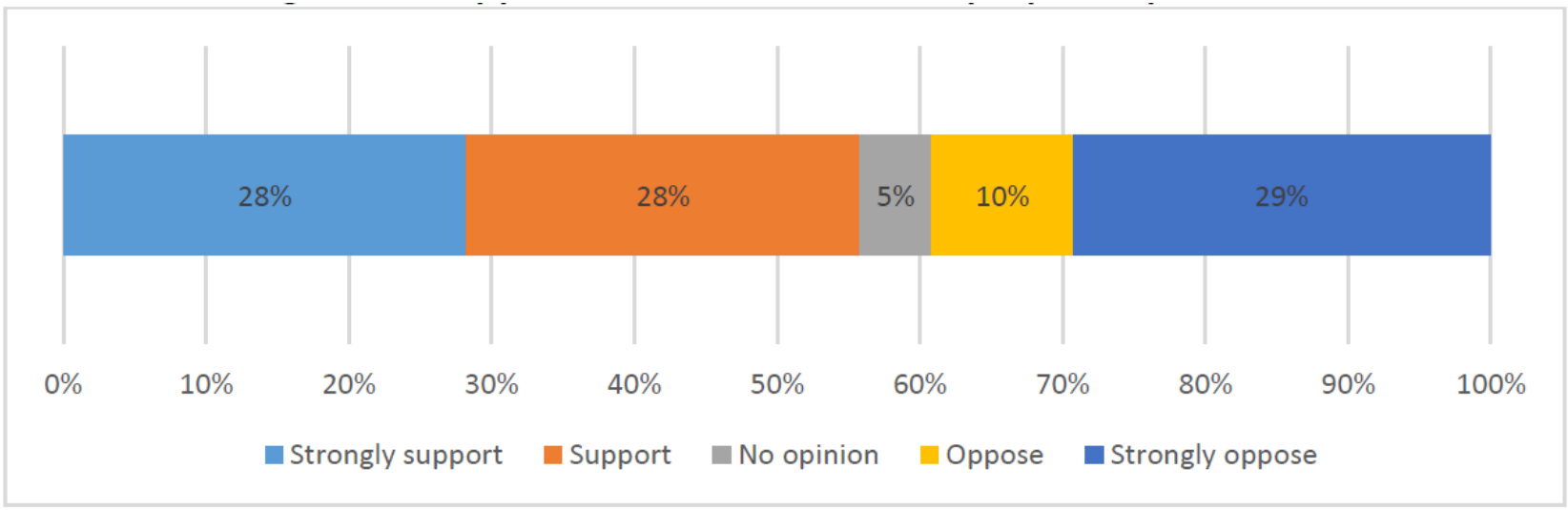
# 5. Phase 2 Public Consultation

## Andrew Munro (GCP)

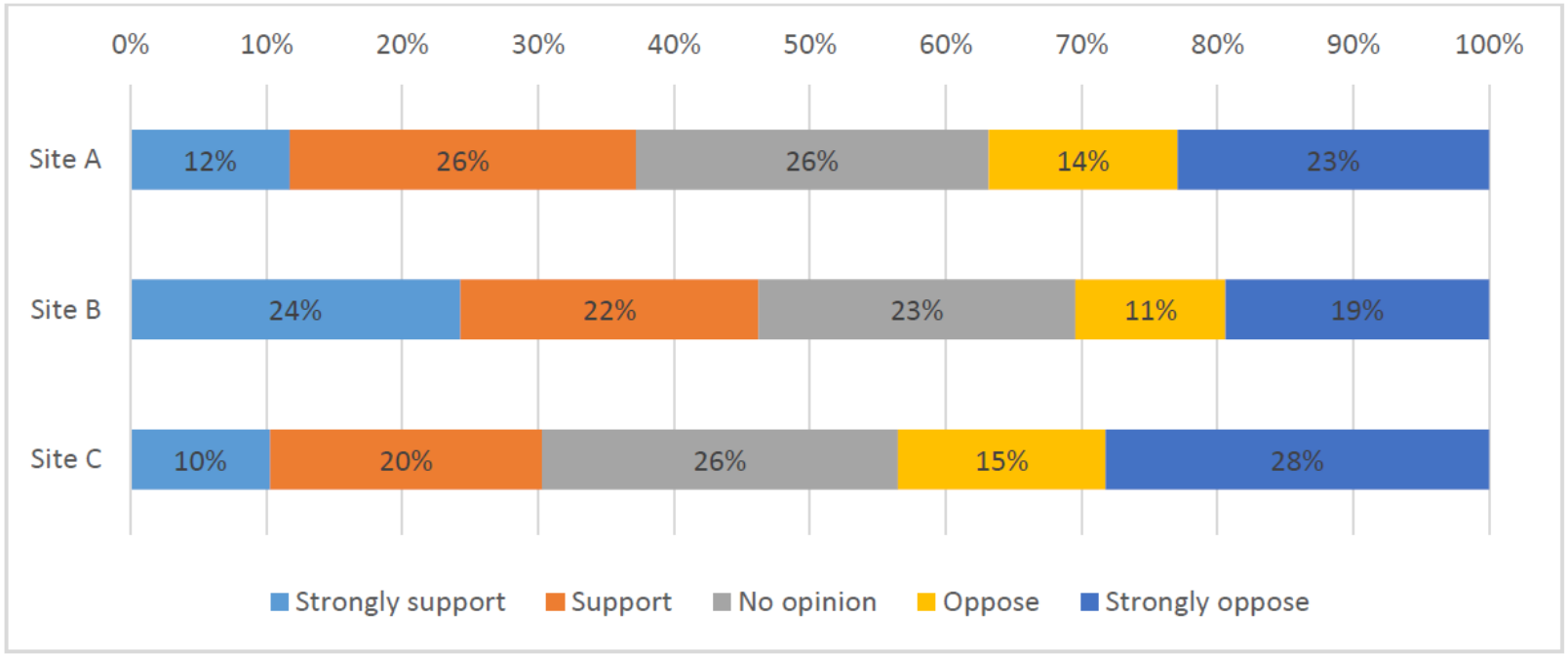
# Public Consultation

## Support for Proposals




# Public Consultation

## Support for Travel Hub Sites

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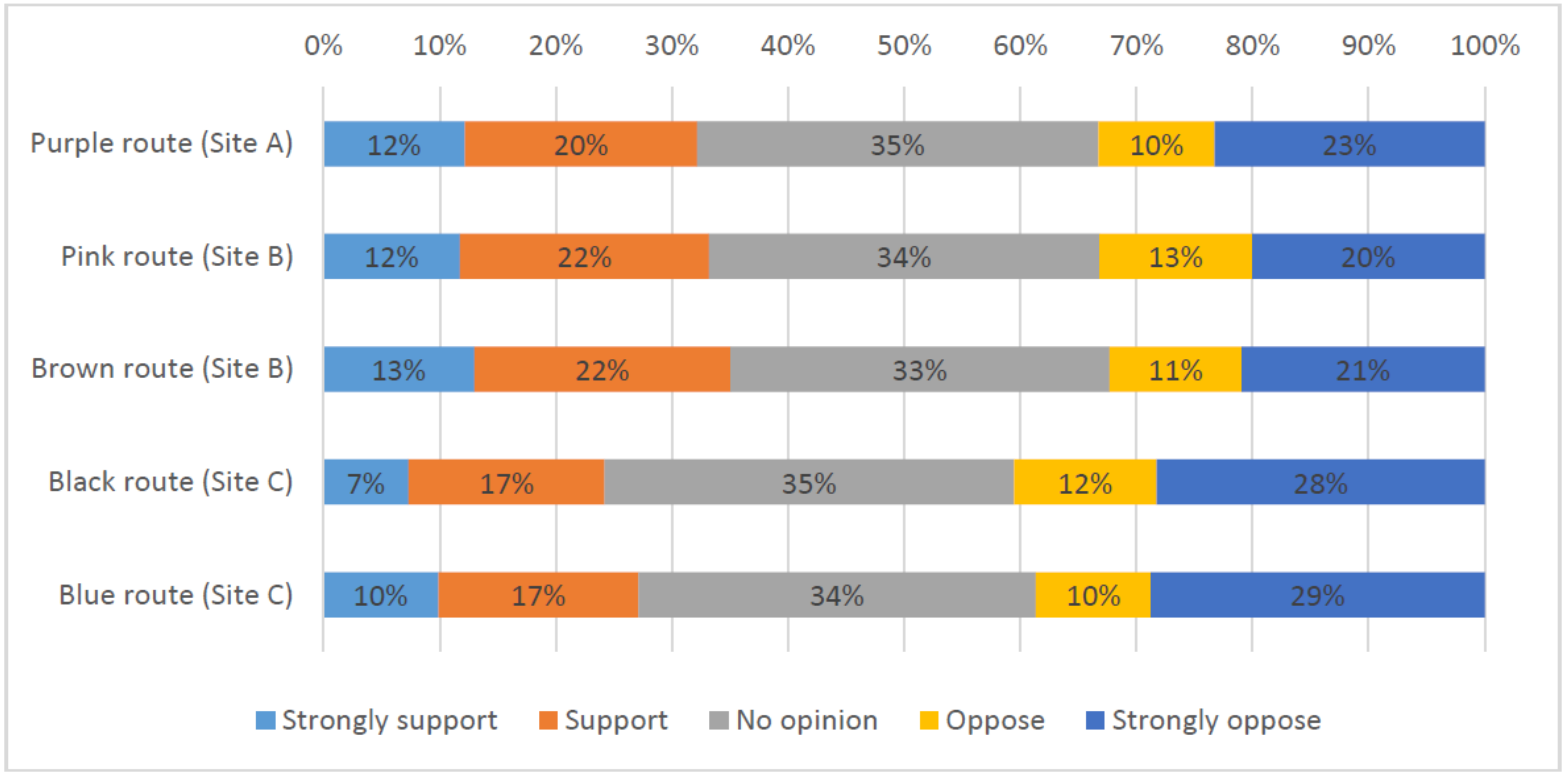
# Public Consultation

## Support for Routes



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# 6. Phase 2 Preferred Option Recommendations

Mike Payne (Mott MacDonald)

# Preferred Option Selection

## Summary of Appraisal

| Rank | Scheme | Transport Benefits | Environment | Deliverability | Social Impacts (Quality of Life) | Wider Economic Benefits | Alignment with Objectives | Policy Alignment | Total Score |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Brown Route from Travel Hub Site B | 1.52 | -1.25 | -0.57 | 0.88 | 3.00 | 1.75 | 2.20 | 1.08 |
| 2 | Pink Route from Travel Hub Site B | 1.50 | -1.25 | -0.64 | 0.88 | 3.00 | 1.75 | 2.20 | 1.06 |
| 3 | Blue Route from Travel Hub Site C | 1.33 | -1.25 | -1.10 | 0.58 | 3.00 | 1.65 | 2.20 | 0.92 |
| 4 | Purple Route from Travel Hub Site A | 1.31 | -1.38 | -0.29 | 0.71 | 2.00 | 1.68 | 2.20 | 0.89 |
| 5 | Black Route from Travel Hub Site C | 1.33 | -1.25 | -1.38 | 0.58 | 3.00 | 1.65 | 2.20 | 0.88 |

Source: Mott MacDonald

# Preferred Option Selection

## Benefit Cost Ratio Comparison

| Economic Summary | Site A | Site B | Site B | Site C | Site C |
|---|---|---|---|---|---|
| Appraisal Period 60 Years | Purple | Brown | Pink | Blue | Black |
| Present Value Benefits (PVB) £m | £57.1 | £57.2 | £51.1 | £58.8 | £52.6 |
| Present Value Costs (PVC) £m | £70.2 | £80.9 | £79.9 | £101.7 | £96.8 |
| Benefit Cost Ratio (BCR) | **0.81** | **0.71** | **0.64** | **0.58** | **0.54** |
| BCR Rank | 1 | 2 | 3 | 4 | 5 |
| Difference PVB-PVC £m | (£13.17) | (£23.73) | (£28.84) | (£42.90) | (£44.25) |

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# Preferred Option Selection

## Green Belt Assessment

- The scheme falls within the list of permitted developments in the National Planning Policy Framework, provided that it can be considered to demonstrate a requirement for a Green Belt location.

- As Cambridge is surrounded by Green Belt, it would not be possible for a new off-road public transport route to be provided without requiring a Green Belt location.

- The independent assessment by LDA concludes that the degree of harm to the Green Belt from the proposals would be between Moderate, Moderate-Minor and Minor with appropriate planting, assessed in the context of the surrounding environment. With careful and robust landscaping and retention of as much of the existing vegetation as possible, harm to the Green Belt would be minimised.

# Preferred Option Selection

## Planning Appraisal

- The proposed Cambridge to Haverhill transport project is contained in the Cambridgeshire Transport Delivery Plan 2019/20 to 2021/22 which forms part of the Adopted Local Transport Plan.

- The proposals are consistent with the National Planning Policy Framework, South Cambridgeshire District Council and Cambridge City Council Adopted Local Plans (2018).

# Adjusted Benefit Cost Ratio for Preferred Option

| £ million at 2010 prices discounted to 2010, over a 60-year appraisal period | |
|---|---|
| **Present Value of Benefits (PVB)** | |
| Level 1 – Conventional transport benefits | 60.6 |
| Level 2 – Wider economic impacts related to transport scheme | 9.2 |
| **Total PVB** | 69.8 |
| **Present Value of Costs (PVC)** | 85.7 |
| **Benefit Cost Ratio (BCR)*** | 0.81 |

*Adjusted BCR takes into account reliability, Level 2 benefits and updated cost estimate for Preferred option

# Conclusions

- Travel Hub Site C was rejected on the basis of being the most costly option, the least supported option in consultation and having the lowest Benefit Cost Ratio (BCR).
- The Brown option (Travel Hub Site B), was identified as the preferred option from both the multi-criteria assessment and consultation feedback.
- The Purple option (Travel Hub Site A), was identified as the best performing option in terms of Value for Money due to lowest cost.
- The Purple option is the poorest located for the A1307 and A11, and is poorly located for Babraham Research.
- The Brown option, although having a lower BCR than the Purple is the most strongly supported option and is the best located option for A11, A1307, Babraham Research and Granta Park.  It is also best located for potential future route extensions to Haverhill.

# Recommendation

- The recommended preferred option is the Brown route with Travel Hub Site B

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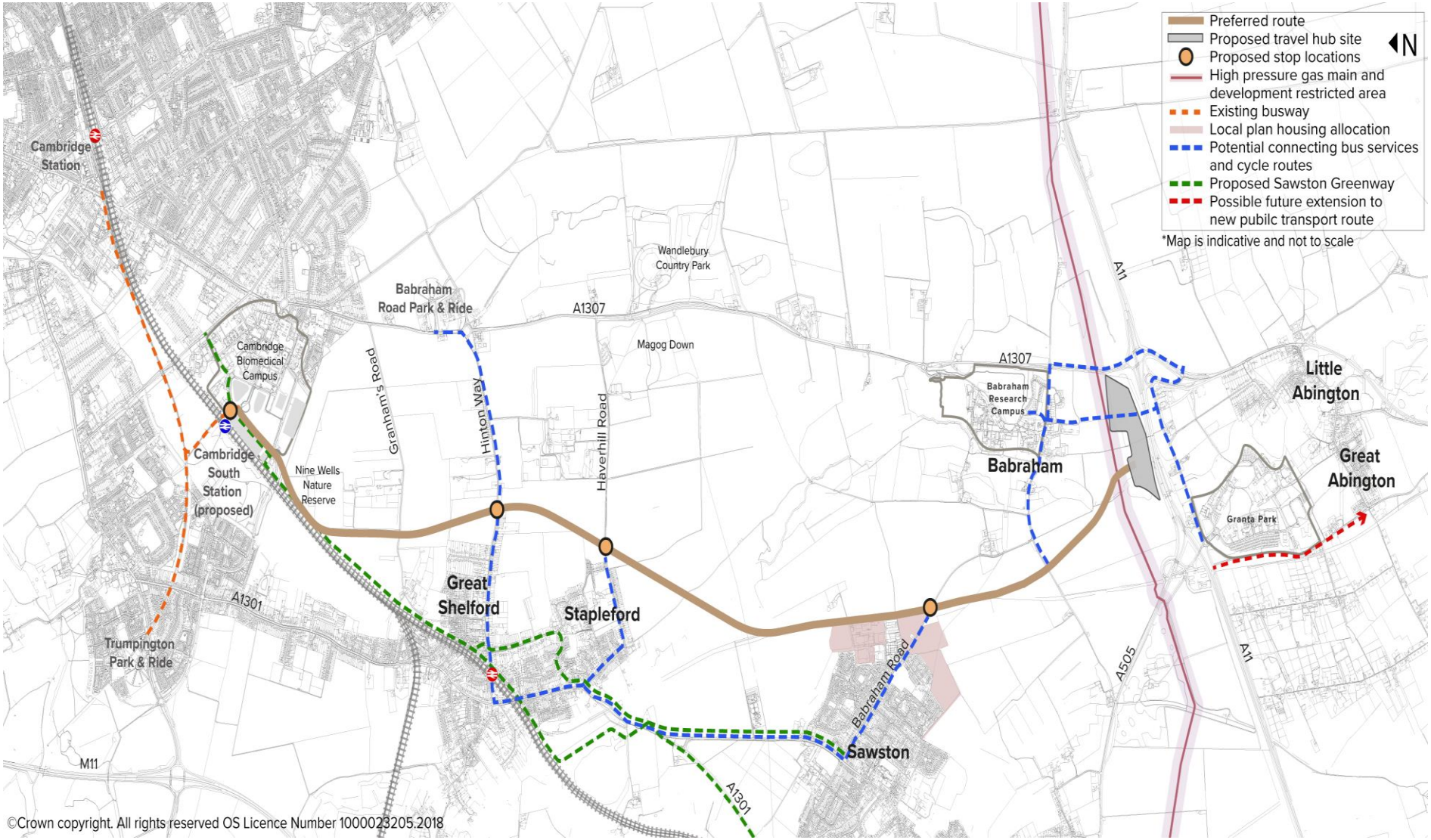
# Site B – Brown Route



# Capital Costs

The funding ask for the project is £132.3 million, constituted by the total capital infrastructure cost of the preferred scheme option of £129.9 million plus prior year scheme development costs of £2.4 million

## Capital Costs – Infrastructure Adjusted for Risk

| Cost Item | Cost (£ million) |
|---|---|
| Construction | 68.7 |
| Design | 9.5 |
| Project Management | 12.6 |
| Environmental Mitigation | 2.9 |
| Statutory undertakings | 12.5 |
| Land Costs | 11.5 |
| Inflation | 12.2 |
| TOTAL | 129.9 |
| | |

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# Questions

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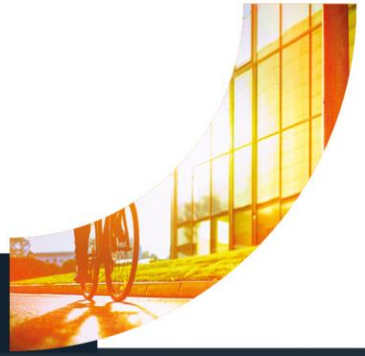
# 7. Phase 2 Next Steps

## Jane Osayimwen (GCP)

# Phase 2 - Recommendations to GCP Joint Assembly

1. To note the outcome of public consultation
2. To endorse the key conclusions of the Outline Business Case and Recommendation:
   - a preferred high quality public transport route between the A11 and the Cambridge Biomedical Campus;
   - a preferred Travel Hub site.
3. Authorise the further development of the scheme design and mitigation measures, and submission of a Transport and Works Act Order for the preferred route including full Environmental Impact Assessment.



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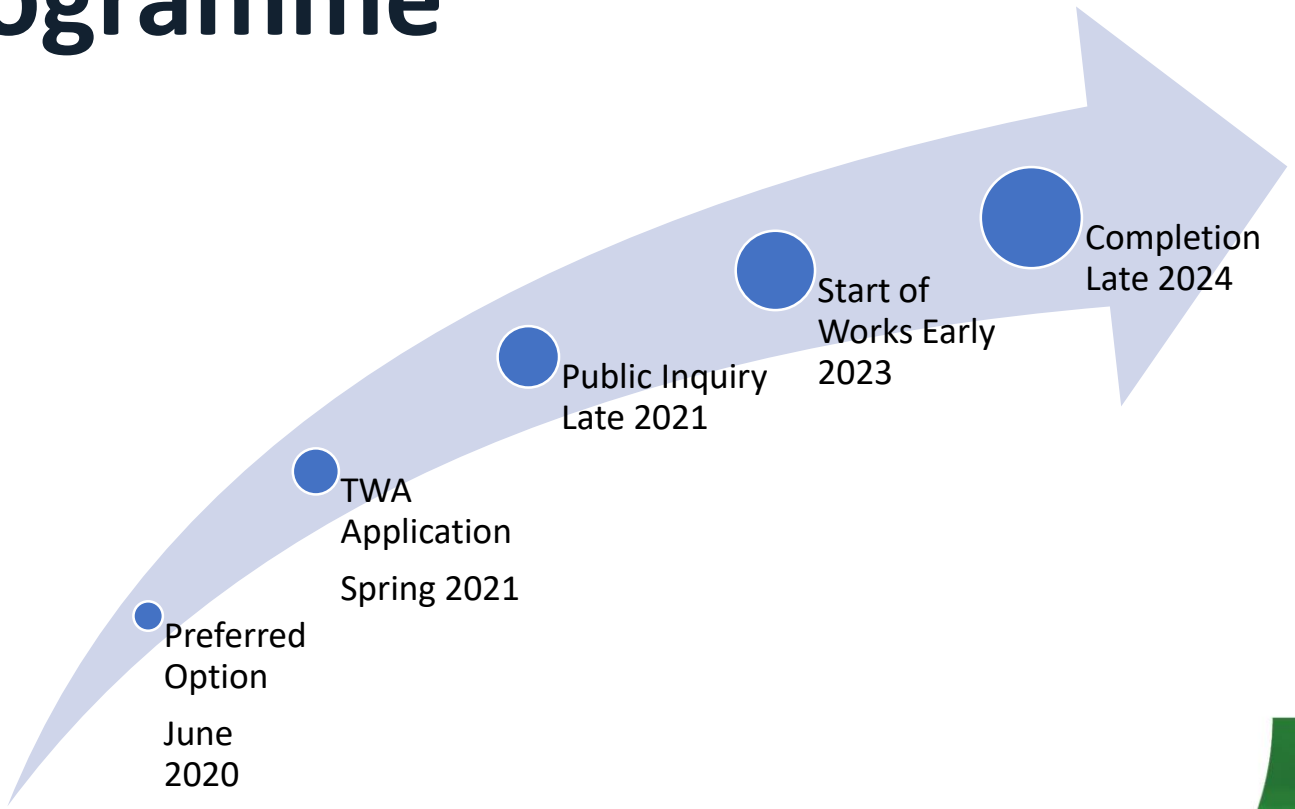
# Programme

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# Questions

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# 7. Any Other Business