



## CABINET – 7TH JUNE 2017

**SUBJECT: A468/A469 PWLLYPANT ROUNDABOUT HIGHWAY IMPROVEMENT SCHEME**

**REPORT BY: HEAD OF ENGINEERING SERVICES**

---

### 1. PURPOSE OF REPORT

- 1.1 To seek Cabinet approval to utilise funding for and progress the construction of the A468/A469 Pwllypant roundabout highway improvement scheme.

### 2. SUMMARY

- 2.1 The A468/A469 Caerphilly Northern Bypass is the main artery linking Caerphilly and settlements in the north of the borough to the trunk road network (A470, M4) and Cardiff. It is already heavily overloaded at peak periods and all junctions are at, or in excess of, capacity at peak times. The Pwllypant roundabout is the busiest node on this section of the strategic highway network and in the whole of the county borough.
- 2.2 The proposed Pwllypant roundabout highway improvement will increase capacity on the roundabout such that it will not be overcapacity at the completion and will perform satisfactorily taking in to account known proposed developments (identified through the LDP review process) up to 2031. It would also improve journey time reliability for bus services and encourage public transport use and reduce traffic travelling through Caerphilly town thereby improving air quality.
- 2.3 The scheme will be funded from developer contributions (S106) and Welsh Government grant funding. It is intended that construction will commence in September/October 2017 and take about twelve months to complete.

### 3. LINKS TO STRATEGY

- 3.1 The proposed scheme contributes to the following Well-being Goals within the Well-being of Future Generations Act (Wales) 2015:
- A prosperous Wales,
  - A healthier Wales,
  - A more equal Wales,
  - A Wales of cohesive communities, and
  - A globally responsible Wales.
- 3.2 To work towards the Council's corporate objective of improving peoples' living environment through targeted actions, regulation, information and advice.

- 3.3 Engineering Services Division Objective: To provide safe and efficient transport and land drainage infrastructure through quality services delivered by means of cost effective management, maintenance and improvement of the networks.
- 3.4 Engineering Services Division Objective: To work towards a safer environment through positive measures to reduce road accidents and particularly by protecting and providing for vulnerable road users.

## 4. THE REPORT

### Background to the scheme

- 4.1 The adopted LDP (2010) that covers the period up to 2021 identifies a number of sites with potential for development for housing. A traffic analysis was undertaken to identify the highway improvements necessary to mitigate against the traffic generation from these proposed sites. This resulted in the Caerphilly Basin highway obligation Supplementary Planning Guidance (SPG) for the following improvements in and around Caerphilly town:
- A468/A469 Pwllpant Roundabout - Network efficiency junction improvement
  - A468/A469 Trecenydd Roundabout - Network efficiency junction improvement
  - Tafwys Walk - Junction Improvement
  - Piccadilly - Gyratory Improvements
  - A468 Bedwas Bridge Roundabout - Network efficiency junction improvement
  - A468 Pwllpant to Bedwas Bridge - Network efficiency improvements
  - The A468/A469 Trecenydd roundabout improvement was delivered in 2012/13 and is the only improvement delivered so far.

### The Pwllpant Highway Improvement Scheme

- 4.2 The A468/A469 Caerphilly Northern Bypass is the main artery linking Caerphilly and settlements in the north of the borough to the trunk road network (A470, M4) and Cardiff. It is the point where the A468 from the east, A469 from the north and A468/A469 from the south merge and is the busiest junction in the county borough. The junction lies on the strategic highway network within Caerphilly County Borough and the roundabout handles significant volumes of traffic throughout the day, approximately 37,000 AADT flow (Annual Average Daily Traffic), and is important for commuter traffic to Cardiff and connectivity to the trunk road network (A470/M4). It has been identified in the Council's adopted LDP and LTP and is the highest priority highway scheme yet to be delivered.
- 4.3 The A468/A469 Caerphilly Northern Bypass is already heavily overloaded at peak periods and all junctions are at, or in excess of, capacity at peak times. The current design of the roundabout inhibits the efficient functioning of this key junction. The roundabout is not of a standard to adequately cope with the current level of traffic using the strategic route. It has significant negative impacts on the village of Llanbradach.
- 4.4 This results in problems of congestion and extensive queuing during peak periods, and limits the efficiency of the strategic highway network. For example during the morning peak, traffic queues are experienced on the Lower Rhymney Relief Road, as a result of congestion at Pwllpant Roundabout affecting southbound traffic travelling towards Cardiff. During peak periods queuing traffic stretches back to previous junctions on the network, e.g. Coed-y-Brain and Wingfield roundabouts (the latter is a distance of approximately 2km), this then has knock-on impacts to the functioning of these junctions.
- 4.5 Extensive queuing on all approaches to the roundabout during peak periods leads to unreliable journey times for all road users, including commuters, freight/ industrial traffic and public transport. Congestion at the roundabout impacts on accessibility and transport links between the trunk road network (A470/M4), key settlements and employment areas in Cardiff and Caerphilly and settlements to the north i.e. in the Heads of the Valleys area, which negatively impacts on measures to encourage economic development and regeneration.

- 4.6 Problems of congestion and queuing traffic at the junction results in through traffic diverting through Caerphilly town centre, which contributes to the existing air quality problems (there is a designated Air Quality Management Area (AQMA) within Caerphilly town centre), reduces the attractiveness of the town centre for pedestrians and cyclists and has impacts on journey time reliability of town centre bus services. The level of through traffic diverting through the town centre has a negative impact on measures to encourage active and sustainable travel in and to Caerphilly town centre.

#### Funding

- 4.7 It was the intention that all improvements, including Pwllypant Roundabout, would be wholly funded from S106 developer contributions under the SPG, from housing development within the Caerphilly Basin area. However, the introduction of the community infrastructure levy (CIL) in 2014 meant the SPG came to an end and insufficient funds were amassed to fully fund the Pwllypant scheme.
- 4.8 The current estimated funding required to deliver the scheme is £5.305m (based on the expired preferred bidder's construction tender cost of £3.48m). The current total of Caerphilly Basin S106 funds available is £3.593m, leaving a shortfall of £1.712m to find. Approximately £420k of WG funding (under Metro Phase 1) has been utilised to complete the design works and develop the scheme to the current position.
- 4.9 A bid for Welsh Government (WG) Local Transport Funding (LTF) in 2017/18 was submitted for the maximum £1.5m available and has been successful. The net projected shortfall of £212k can be met from uncommitted WG funding from the Ysbyty Ystrad Fawr (YYF) highway improvement scheme (current balance £700k after adjusting for other commitments against this funding). WG approval has been granted to proceed on this basis.

The funding profile for the project is detailed in the table below:

	Year 1 2017/2018 (£,000)	Year 2 2018/2019 (£,000)	Year 3+ 2019+ (£,000)	Total (£,000)
Design & accommodation works	55	30	-	85
Construction	1525	2985	-	4510
Project Management	20	20	35	75
Monitoring & evaluation	-	20	30	50
Post construction (e.g. part 1 claims)	-	185	400	585
Totals	1600	3240	465	5305

#### Risk

- 4.10 Officers have undertaken a risk identification exercise as part of the scheme development and a risk register has been produced as a result. Currently, £400k of risk has been allocated for unforeseen risks over the life time of the scheme. The majority of this risk is likely to arise during the construction period. This sum is incorporated within the table above.
- 4.11 Officers have identified areas where the scope of the works could be reduced or value engineered, to a value in excess of £100k, without affecting the overall aims and benefits of the scheme. These will be discussed with the contractor prior to awarding a contract.

- 4.12 The costs associated with post construction elements of the scheme such as part 1 claims have been estimated based on the results of a noise survey and subsequent noise model. It is not possible to fully define these costs at the present time, but it is considered that realistic costs have been allocated based on historic scheme cost outturns.
- 4.13 There is a risk that the costs could increase from the retendering exercise, especially in light of the recent UK government budget announcements and the fact that fuel prices are beginning to rise again.

#### Key Features

- 4.14 Please see attached plan of proposed scheme layout in Appendix 1.
- 4.15 The scheme incorporates the following features:
- Signalisation of the roundabout (i.e. full time traffic lights as a result of the introduction of a controlled pedestrian crossing facility on the arm to/from Trecenydd roundabout).
  - Incorporation of a pedestrian crossing facility on the East Bound lane of the A468/A469 within the traffic control signalisation (formalising the existing uncontrolled crossing). For this reason the whole of the traffic signal system for the roundabout will need to operate continuously.
  - New footway linking the existing pedestrian over bridge on the A468/A469 to the footway on Pontygwindy Road.
  - A469 from Llanbradach – additional filter lane and extension to existing filter lanes.
  - East Bound lane of A468/A469 dualled approach to roundabout and dualled exit from roundabout.
  - Pontygwindy Road - additional filter lane and extension in length to existing filters.
  - A468 Bedwas Arm - dualled approach and exit to roundabout.

#### Benefits of the Scheme

- 4.16 The existing roundabout is currently overcapacity at peak periods and the proposed improvements will increase capacity on the roundabout such that it will not be overcapacity at the completion and will perform satisfactorily taking in to account known proposed developments (identified through the LDP review process) up to 2031.
- 4.17 The scheme as detailed in the preceding key features section will improve the capacity of the junction and improve traffic flow along this strategic route, which will improve efficiency, making better use of the existing highway network and future proof the junction.
- 4.18 There are 18 bus movements each hour on a weekday and the current traffic levels in the morning and afternoon peak impact significantly on the ability to maintain reliable bus services, particularly as some of the services are on key strategic routes (for example service 26 between Blackwood and Cardiff and service 50 between Bargoed and Newport). The proposed scheme would improve journey time reliability for bus services and encourage public transport use, accessibility to town centre facilities and social inclusion.
- 4.19 Greater control of the junction will better manage traffic demand and improve safety.
- 4.20 The scheme will lead to a reduction of traffic travelling through Caerphilly town centre resulting in improved accessibility and attractiveness of the town centre and environmental improvements and relief in terms of air quality, pedestrians and cyclists.

#### Programme

- 4.21 In order to meet the WG requirement to spend the £1.5m LTF funding by April 2018, the works need to commence in September/October 2017. In order to meet this timescale, procurement for the construction contract needs to be progressed ASAP alongside advance preparatory and environmental works (i.e. slow worm maintenance works, a bat survey, and

orders for diversion of statutory undertakers' equipment). The scheme has a planned duration of 52 weeks.

- 4.22 In order to meet the required timeframes to achieve the LTF funding spend by March 2018 a decision on the content and recommendations within the report is required by Cabinet. As confirmation of the LTF funding has only recently been received from WG this report has not previously been included on the forward work programme. However, any delay to the procurement process would mean that this funding would not be fully utilised. Unspent sums would be lost leaving a shortfall and jeopardising delivery of the scheme. The WG LTF funding is £1.5m and notification of award of this funding was only received on 22 March 2017.

#### Wider Highway Network Considerations

- 4.23 Officers have been liaising with neighbouring local authorities and WG about proposed highway works in the area and what mitigation is possible to minimise the impact on road users as significant disruption is anticipated.
- 4.24 WG proposals for highway improvements to J28 of the M4 and improvements to the A467 Bassaleg Roundabout have recently begun. Officers will continue to liaise with neighbouring local authorities and WG to review ongoing and planned works and minimise any possible disruption.

#### Communication

- 4.25 To date CCBC has given three formal briefings to Councillors within the Caerphilly Basin area (Cllr T Williams, who at the time was Cabinet Member for Highways, Transportation & Engineering, attended all three briefings) to enable them to comment on the proposed scheme layout and to agree Public Information day proposals. Not all councillors attended these meetings. In addition to this, Councillors within the Caerphilly Basin area have received a number of email updates regarding feasibility works, Public Information Day feedback etc. Local Community Councils, Fire, Police and NHS ambulance representatives have also been sent the scheme proposal drawings.
- 4.26 Since the recent local government elections, briefings with the new Councillors and Cabinet Member have since taken place.
- 4.27 A briefing has been given to the Caerphilly Town Centre Management Group to highlight details of the proposed scheme to Caerphilly Town Centre businesses.
- 4.28 Three Public Information Days were held in January and February 2015 in Caerphilly Library, Pwllypant community centre and Penyrheol community centre to enable residents and local businesses to view and comment on the scheme proposals. These were advertised widely including letter drops to residents within the vicinity. Plans were also left in Llanbradach community and Trecenydd community centres.
- 4.29 Articles drawing awareness to the scheme proposals have been included in several editions of Newslite, local newspapers and Social Media. There is a dedicated link to Pwllypant roundabout improvement on CCBC's website. This will be maintained and updated throughout the construction works.
- 4.30 Formal feedback regarding the proposed scheme layouts was received via a snap survey that was published on CCBC's website during February 2015. Responses from visitors who attended the three Public Information Days and left completed feedback forms were also input into the online survey. In total 60 responses to the survey were received of which 85% were supportive of the scheme, not all people responding to the survey left formal responses. A summary of the feedback from the snap survey is contained in Appendix 2.

Following formal briefings to Councillors within the Caerphilly Basin area, a controlled pedestrian crossing was added to the A468/9 arm. Caerphilly Basin Councillors have been supportive of the scheme proposals to date.

Feedback from the Caerphilly Town Centre Management Group was limited but concerns were raised regarding disruption to businesses within the Town during the construction works.

Only Gwent Police from the emergency services have provided formal feedback. They are supportive of the scheme.

- 4.31 The appointed Contractor will be required to develop and implement a communication strategy/plan (this was previously part of the quality submission for the tender), to proactively engage with the local community and keep them and road users informed of progress and developments. This will require close liaison with Officers and the Council's Communications team.

#### Access and Traffic Management issues

- 4.32 It is intended to hold an ECE (Early Contractor engagement) briefing with prospective contractor organisations to highlight the need to minimise disruption to motorists, residents and businesses in the area and to stress the need for suitable traffic management proposals.
- 4.33 Increasingly, to avoid the long queues on the A469, motorists are diverting off the A469 at the Wingfield roundabout and travelling through Llanbradach and re-joining the A469 at the Coed y Brain Roundabout. CCBC's traffic management section have met with Llanbradach Councillors and have already implemented additional waiting restrictions at certain key points within the village as a measure to try to prevent congestion forming within Llanbradach.
- 4.34 It is recognised that queues during the construction works will temporarily increase which may encourage motorists to continue to divert through Llanbradach. As a result CCBC's traffic management section is currently trialling additional traffic calming measures within the village of Llanbradach and on the approach to the Coed-y-Brain roundabout.
- 4.35 To ensure the safety of motorists and workers during construction road closures may be required on Pontygwindy Road and Heol Pwllypant for a period of up to 6 weeks. When the final surfacing is laid, staggered road closures may be required on all roads approaching and exiting from the roundabout. The specific road closure requirements will depend on the construction methods proposed by the contractor awarded the works and will be subject to agreement from CCBC's traffic management section.
- 4.36 Officers have sought approval from WG to utilise matrix signs on the A470 to inform motorists of delays due to construction works at Pwllypant Roundabout. In addition to this, as part of the communication plan and temporary traffic management measures, signs at strategic points throughout CCBC will be placed where motorists can then choose to alter their journey route and advising of other works where possible.

## **5. WELL-BEING OF FUTURE GENERATIONS**

- 5.1 This report contributes to the Well-being Goals as set out in Links to Strategy above. It is consistent with the five ways of working as defined within the sustainable development principle in the Act in that all strategic highway improvements are contained in the LDP and LTP.
- 5.2 The LDP places great emphasis on sustainable development and seeks to protect the environment for both the current and future needs of the population, ensuring that there is a viable future for the county borough's towns and villages. As part of the LDP process the Council engages with residents, service users, stakeholders and partners. The LDP is subject to independent Strategic Environment Assessment and Sustainability Appraisal which balance economic, social and environmental issues.

## **6. EQUALITIES IMPLICATIONS**

- 6.1 There are no equalities implications to this report that have not been considered or would adversely affect any individual or group who fall under one of the protected characteristics or wider issues as shown in the Council's Strategic Equality Plan.

## **7. FINANCIAL IMPLICATIONS**

- 7.1 The scheme is estimated to cost £5.305m to deliver (this includes a risk allowance of £400k). S106 funding of £3.593m and LTF funding of £1.5m will be used to deliver the scheme with any shortfall in funding being met by virement from the YYF funds. The LTF award sanctions the use of WG YYF funding to the delivery of the A468/A469 Pwllypant highway improvement scheme.
- 7.2 It should be noted that the S106 agreements contain clauses which require the contributions to be repaid to the developer a set time after the S106 is signed if the schemes listed in the Caerphilly Basin highway obligation SPG are not progressed. Trigger repayments amounting to £38k for some of the S106 agreements occur in 2017, £39k in 2018 and significant repayments of £757k occur in 2019. The proposed funding profile detailed within this report mitigates these trigger payments.
- 7.3 The works will be procured in accordance with the Council's Standing Orders and in consultation with Procurement services to ensure best value is achieved.

## **8. PERSONNEL IMPLICATIONS**

- 8.1 There are no personnel implications.

## **9. CONSULTATIONS**

- 9.1 All responses from consultations have been incorporated into this report and ongoing communication and consultation will continue throughout the project.

## **10. RECOMMENDATIONS**

- 10.1 Cabinet approves delivery of the Pwllypant roundabout highway improvement scheme as a priority highway scheme.
- 10.2 Cabinet supports the use of the £1.5m LTF funding in 2017/18 and approves the preparatory and environmental works necessary and the construction procurement tendering exercise to commence in summer 2017.
- 10.3 Cabinet approves the virement of up to £700k from the YYF funds to the Pwllypant roundabout scheme as necessary balance funding to deliver the scheme.

## **11. REASONS FOR THE RECOMMENDATIONS**

- 11.1 To meet the Council's planning and transport objectives under the LDP and ensure this section of the strategic highway network has sufficient capacity to meet future needs.

## **12. STATUTORY POWER**

- .1 Highways Act 1980.

Author: Clive Campbell, Transportation Engineering Manager campc@caerphilly.gov.uk  
ext. 5339

Consultees: Christina Harray – Corporate Director of Communities  
Nicole Scammell, Acting Director of Corporate Services & S151  
Gail Williams, Interim Head of Legal Services & Monitoring Officer  
Marcus Lloyd – Interim Head of Engineering Services  
Stephen Harris – Interim Head of Corporate Finance  
Kevin Kinsey – Acting Engineering Projects Group Manager  
Kate Dowdall – Senior Engineer  
Gemma Thomas – Principal Engineer (Transport Strategy & Road Safety)  
Trish Reardon – HR Manager  
Anwen Rees – Senior Policy Officer (Equalities and Welsh Language)

Appendices:

Appendix 1 - Proposed scheme layout  
Appendix 2 – Snap Survey Feedback

Background papers: None