CABINET – 9TH FEBRUARY 2022

SUBJECT: B4251 YNYSDDU TO WYLLIE HIGHWAY IMPROVEMENT

REPORT BY: CORPORATE DIRECTOR FOR ECONOMY AND ENVIRONMENT

1. PURPOSE OF REPORT

1.1 This report is provided for Cabinet to consider if further road safety measures should be implemented along the B4251 or whether the existing and newly introduced control measures are sufficient.

2. SUMMARY

2.1 This report summarises the position in relation to road safety measures already implemented along the B4251 between Wyllie and Ynysddu and sets out options for further safety works for cabinet consideration in light of the substantial removal of tree cover adjacent to the road.

2.2 A road safety review of the above road was undertaken in March 2020. This review did not recommend the installation of a Vehicle Restraint System (VRS) or other additional fencing. However, the road safety review report recommended other road safety measures, stating that overall, the road was in good condition and well maintained.

2.3 Road safety measures suggested by the report were implemented during the summer of 2020. These measures included, resurfacing, chevron signing and speed limit reduction.

2.4 Following the completion of these safety measures a significant tree felling operation commenced in September 2020 to remove “Ash Dieback”. The removal of these substantial trees opened-up the embankments and created additional perceptions of danger and renewed requests for a VRS. In November 2020 a review of the site was undertaken to consider the concerns being raised.

2.5 This review examined a number of options that sought to address the concerns being raised. These options included the installation of VRS, the installation of fencing and “do nothing”

3. RECOMMENDATIONS

Cabinet is asked to consider the content of this report and endorse the following

recommendations:

3.1 Taking into consideration all the relevant factors, to support the installation of a concrete post and chain-link fence along this section of highway.

3.2 Should scheme progression be approved, to approve and allocate funding from the Corporate Projects capital budget to enable the design and construction of the B4251 Highway Safety Improvement scheme to progress at an estimated cost of £350k.

3.3 To approve funding from the Corporate Projects capital budget for the advance design fees already incurred in undertaking this study of £50k.

4. REASONS FOR THE RECOMMENDATIONS

4.1 While various recommended safety measures were put in place following the safety review in March 2020, the removal of mature trees along this route renewed public concerns of road safety prompting officers to review further safety options. The measures recommended are considered the most appropriate for this section of road and are in accordance with relevant design standards.

5. THE REPORT

5.1 A safety Improvement Study was commissioned with AMEY consultants in March 2020. The study area focused on the then de-restricted section of the road (road has now had a 40mph restriction placed on it) which begins at the north end of Ynysddu and terminates just south of the Gelligroes roundabout on the A472 and also included the 40mph section leading to the roundabout at that time. The road runs north to south adjacent to the Sirhowy River, it has 5 no. bus stops and a bridge over the Sirhowy river. There are reflective road studs throughout the de-restricted section. The street lighting in the area was changed from permanent lighting to a part-night regime between midnight and 5.30am in 2010 in accordance with the inter urban route policy for part night lighting.

5.2 The road is classified as a Single carriageway (S2), with several bends and straight sections. The carriageway is approximately 10.0m wide with a 1.8m footway running the length of its western edge (these dimensions vary in places, but not significantly). It has a central hatched area, which serves to increase separation of opposing traffic flows and reduce lane widths. The centre of the road is crowned however the radii are super-elevated. There is currently one section of VRS, approximately 20m in length, on the eastern edge before the parapet of the river over-bridge. The verge areas on both sides of the road are predominantly lined with established mature trees, however, many of these were removed in September 2020 as part of the ash die back programme. Due to the lack of a continuous footway on the eastern edge there are no formal pedestrian crossings.

5.3 There are eight bends along the section of road which were part of the review. The stretch of road within the study area is a well-established route which does not conform to current highway design standards like many of the roads within the country. The speed limit was previously designated as 60 mph but was later reduced to 40 mph, as recommended in the report. This speed reduction reduced the potential to cause a hazard for all road users.

5.4 A Speed Limit Review exercise carried out by the Authority prior to the 40mph change identified that the average speed of traffic within the then national speed limit (60mph) section of road was 40.5mph. This figure is well below the maximum 60mph limit allowed on a de-restricted road of this type and as such demonstrates that the majority of drivers navigate the road at an appropriate speed for the conditions.

5.5 Since 2014 there have been 9 no. recorded accidents within the area of the study with 5 of these classed as 'slight accidents'. The data shows that the accidents are spread throughout the entire length of the study area, including one 'slight' accident within the then 40mph section at the north end of the route. Although the majority of accidents appear to have occurred on straight sections it must be noted that the straight sections are relatively short, the longest being approximately 300m and at the average speed (40.5mph as outlined in Section 5.4 above) the bends are encountered in quick succession. Therefore, even when on a straight section the driver is always exiting a bend or preparing to enter the next.

5.6 The police reports for the accidents do not identify any direct cause from the road layouts or features.

5.7 A visual inspection of the road was undertaken as part of the study where the condition of the following features were observed.

- **Carriageway surface** – Generally in good condition. Two areas of depressions noted and resurfacing works undertaken in Sept 2020 to rectify these as recommended has been completed.
- **Kerbing** – Varying upstands but the majority were in good condition. Some unevenness noted but kerbs still aligned which still delineate the edge of carriageway so is not considered a hazard. Some vegetation clearance was also required on a small 25m section which has been completed.
- **Road markings** – Gateway features, central hatching and bus stop markings were all in good condition and well maintained.
- **Road studs** – Installed throughout the national speed limit area were all in good condition. It was noted two number were missing which have now been replaced.
- **Signage** - There are various road traffic signs throughout the study area. All signs and reflective bollards were in good condition. Routine cleaning and vegetation clearance was recommended and undertaken while additional signage was installed in 2020 as recommended by the report.
- **Street lighting** – Street lights were upgraded to LED's in 2019 and were all in good condition. This road has been subject to part night lighting between the hours of midnight and 5.30am since 2010.
- **Carriageway falls and drainage** – As an existing aged road, drainage is likely to be substandard when compared to new guidance. However, the survey was conducted on a wet day with intermittent rainfall during which the drainage appeared to be working as intended. There were several instances of minor ponding against the kerb line, but no major areas extending across the running lane. Two gullies appeared to be blocked and routine maintenance has addressed these concerns.
- **Bus stops** – Bus stops are located within the best locations possible, however, there are some issues whereby cars have to overtake stationary buses, although the reduction of the speed limit to 40mph has reduced this risk. It should be noted that a footpath only exists on one side of the carriageway.
- **Existing safety fence (VRS)** – There is approximately 20m of safety fence on the

south bound approach to the river bridge. The end terminal does not comply with current standards. CCBC have a Capital works programme addressing similar issues around the County Borough that they are actively working through.

5.7.1 A Road Restraint Risk Assessment Process (RRRAP) was previously independently undertaken in 2019 that identified areas where VRS could be considered based on the road having a 60mph speed limit. However, this kind of assessment is not strictly suitable for this stretch of road as it is predominantly written for use on high speed trunk roads and motorways i.e. roads constructed to appropriate design standards and having speed limits of 50mph or greater. The Provision of Road Restraint Systems on Local Authority Roads (PRRSLA) offers more appropriate guidance to Local Authorities on the provision of Road Restraint Systems. This guidance can be utilised by local highway authorities to create a pragmatic system for decision making. Based on the assumption that the speed was to be reduced to 40mph, a draft risk scoring assessment in accordance with the PRRSLA guidance was undertaken and the result scored 9 (9-13pts = Medium priority). See Table 4 and 5 in Appendix 1. It should also be noted, as mentioned in the PRRSLA guidance the installation of VRS can itself cause a hazard; this is due to VRS being designed and tested to be impacted at a certain angle at a certain speed. The use on particularly tight radii can cause the impact angle to be far too steep which will then become a hazard in itself to the occupier of an errant vehicle and other vehicles on the road at that time. There is the possibility that the VRS will deflect any errant vehicle back into the line of oncoming traffic.

5.8 CONCLUSION

Due consideration is needed to determine what if anything is required here when balanced against the facts of the historical accident statistics and police reports along with improvements and speed reduction already implemented in 2020.

The previous independent report discounted the reconstruction of the highway and the installation of safety fence (VRS). This is further supported when the type of roads for which VRS is designed to be used on is considered and the fact that the installation of a VRS on the stretch of road would be a non-compliant design which has the potential to cause serious accidents.

However, it is possible that a wooden post and rail or concrete post and chain-link fence could be installed which may reduce the risk of a vehicle leaving the road given the topography of the area. This would also provide some form of protection to both pedestrians and vehicles. A timber post and rail fence or concrete post and chainlink fence would cost around £300k to £350k respectively and could be erected relatively quickly.

The do-nothing option based on the actions already implemented (reduction in speed limit to 40mph, installation of new chevrons and some additional resurfacing) is also a viable option which members of Cabinet can consider

A summary of the works already undertaken and future options includes:

- Road Safety Review – **Completed**
- Reduction of speed limit **– Completed**

- Installation of additional Chevron signs – **Completed**
- Minor resurfacing works **– Completed**

To do nothing with reliance on the measures already taken above is an option. If this is not desirable, then further options include:

- Further detailed design and supervision for installation of VRS, estimated cost of £50k. Initial unbudgeted costs of circa £50k have already been incurred and will be required in addition to the £1.65M for the installation of a non-compliant VRS system.
- Erection of a timber post and rail fence (with metal stock proof netting) – Estimated at £300k
- Erection of concrete post and chain-link fence (the recommended option)– Estimated at £350k

6. ASSUMPTIONS

6.1 A detailed design and contract estimation have been undertaken to ensure that costs provided are achievable. The current volatile market does present some cost uncertainty of labour and materials which will be mitigated against by using internal resources and approved suppliers where possible.

7. SUMMARY OF INTEGRATED IMPACT ASSESSMENT (IIA)

7.1 The proposed works form part of our Highway maintenance work stream and as such do not require an IIA.

8. FINANCIAL IMPLICATIONS

8.1 There is currently no specific funding set aside to progress any of the options outlined above. Should any of the above schemes move to progression then the finance would need to be provided to fund £1.65m for the VRS option, or £300k for the timber post and rail fence or £350k for the concrete post and chain-link fence. In addition circa £50k has already been spent on initial design fees (unbudgeted) and will need to be considered and added to the funding relating to the option selected by Cabinet. The current construction market and material supply volatility could, however, affect these budget estimates.

8.2 Taking into consideration all the relevant factors, the recommendation in this report is to support the installation of a concrete post and chain-link fence at an estimated cost of £350k. As already outlined, costs of £50k have been incurred in relation to advance design fees. It is recommended that the total costs of up to £400k should be funded from the Corporate Projects capital budget.

9. PERSONNEL IMPLICATIONS

9.1 None

10. CONSULTATIONS

10.1 The views of the consultees listed below have been incorporated and addressed within the report. There were no views which differ from the recommendations.

11. STATUTORY POWER

11.1 There is no statutory power or guidance binding the authority to undertake the works. Should the decision to progress be made works will be undertaken in accordance with our statutory duties under the Highways Act 1980 to maintain the highway.

11.2 This is a cabinet function.

Author: Chris Adams, Highway Engineering Group Manager

Consultees: Cllr Jamie Pritchard, Cabinet Member for Environment and Infrastructure
Christina Harrhy, Chief Executive
Cllr Philippa Marsden, Leader of Council and Local Ward Member (Ynysddu)
Cllr John Ridgewell, Local Ward Member (Ynysddu)
Cllr Colin Gordon, Local Ward Member (Pontllanfraith)
Cllr Gez Kirby, Local Ward Member (Pontllanfraith)
Cllr Mike Adams, Local Ward Member (Pontllanfraith)
Cllr Tudor Davies, Chair of Environment and Sustainability Scrutiny Committee
Cllr Adrian Hussey, Vice Chair of Environment and Sustainability Scrutiny Committee
Mark S Williams, Corporate Director for Economy and Environment
Marcus Lloyd, Head of Infrastructure
Robert Tranter, Head of Legal Services and Monitoring Officer
Stephen Harris, Head of Financial Services & S151 Officer
Clive Campbell, Transportation Engineering Group Manager
Gareth Richards, Highway Services Group Manager
Kevin Kinsey, Principal Engineer
Anwen Cullinane, Senior Policy Officer – Equalities, Welsh Language

Appendix 1 Table 4 & 5 from PRRSLA (See below)

APPENDIX 1

TOTAL RISK RANKING SCORE	CATEGORY	OUTCOME
14 or more	Higher Priority	(see Table 5.2)
9-13	Medium Priority	
0-8	Lower Priority	

Table 6.9 - Resultant Risk Categories

CATEGORY	RISK LEVEL	OUTCOMES
Higher Priority Site	Risk cannot be accepted save in extraordinary circumstances.	Where the risk assessment has defined a site as Higher Priority the installation of a RRS is justified in terms of the level of risk. Further consideration is then required to determine if the site meets the other appraisal criteria. Even at high risk sites non-RRS interventions may reduce the risk to a level where a RRS can be omitted.
Medium Priority Site	Intervention may be required to introduce control measures to drive residual risk towards the Lower Priority Site category. The residual risk can be tolerated only if further risk reduction is impracticable or requires action that is grossly disproportionate to the reduction in risk achieved.	Where the risk evaluation has identified a site as Medium Priority a RRS may be justified however a non-RRS approach to reducing the risk may prove sufficient to negate the need for a RRS. If suitable effective measures cannot be introduced then the appraisal process would normally continue in order to consider the other criteria.
Lower Priority Site	Level of risk regarded as generally acceptable. Further effort to reduce risk is not likely to be required as resources to reduce risk would be grossly disproportionate to the risk reduction achieved.	Where the risk evaluation identifies a site that is lower priority further appraisal is not required and the level of risk does not normally support installation of a RRS. Simple low cost measures that could reduce the risk can still be considered.

Table 5.2 - Site Risk Categories