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**Vale of Glamorgan**

**(A4226 FIVE MILE LANE HIGHWAY IMPROVEMENTS)**

**Compulsory purchase order 2016**

**and the**

**Vale of Glamorgan Council**

**A4226 (FIVE MILE LANE) CLASSIFIED ROAD**

**SIDE ROADS order 2016**

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**Proof of evidence**

**of mr Michael Clogg**

**(on behalf of the order making authority)**

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national assembly for wales reference: 3155453/3155473

Vale of Glamorgan Council reference: PMU/5ml

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1. The WelTAG Stage 1 Assessment of March 2012
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3. **QUALIFICATIONS AND EXPERIENCE**
   1. My name is Michael Clogg and I am currently employed by the Vale of Glamorgan Council (the Council) as the Operational Manager for Highways and Engineering in the Council’s Environment and Housing Services Directorate with responsibility for all matters associated with the improvement, maintenance and making safe of the public highway. I am based at the Council’s Offices at the Alps Depot, Wenvoe and have held this post since February 2014 and before that I was employed by the Vale of Glamorgan as a Principal Engineer Highway Projects.
   2. I have nearly 30 years’ experience in Civil Engineering and significant experience in delivery of highway projects from feasibility through to construction within a local highway authority setting in Local Government. I have a Bachelor of Engineering Honours degree in Civil Engineering from University of Glamorgan as well as being a Chartered Civil Engineer and a member of the Institution of Civil Engineers since 2005.
   3. I have been in involved with various aspects of the development of a proposed scheme to improve the A4226 Five Mile Lane classified road of Five Mile Lane since commencing my employment with the Vale of Glamorgan Council as Principal Engineer in October 2007 and thereafter in my capacity as Operational Manager for Highways and Engineering overseeing and agreeing the highways details and specifications input from consultants appointed at various stages of the scheme development.
4. **DECLARATION**
   1. I confirm that my duty to the Inspector and the Welsh Ministers as an Expert Witness overrides any duty to those instructing or paying me, that I have understood this duty and complied with it in giving my evidence impartially and objectively and that I will continue to comply with that duty as required.
   2. I confirm that I am not instructed under any conditional arrangement. Furthermore, I confirm that I have no conflicts of interest of any kind other than those disclosed in my evidence.
5. **INTRODUCTION AND SCOPE OF EVIDENCE**
   1. In July 2013 Edwina Hart AM, the Minister for Business, Enterprise, Technology & Science announced funding for the A4226 Five Mile Road Improvement Scheme (referred to in this Proof of Evidence as the Scheme). The consultancy, Parsons Brinckerhoff, were appointed by the Welsh Government to take forward the Scheme design, and the Council were asked to manage the delivery of the Scheme in December 2013.
   2. The proposals stem from the strategic plans of both the Welsh Government and the Council. The Scheme will provide strategic and direct access to the St Athan and Cardiff Airport Enterprise Zone, supporting job creation and employment and will improve highway infrastructure, road safety and provision of a new cycle route.
   3. The principle of the delivery of the Scheme by the Council was accepted by the Cabinet of the Council on 15th October 2015 and the details of the required Compulsory Purchase Order (CPO) and Side Roads Order (SRO) were approved at a Full Council meeting on 25th January 2016.
   4. I have provided this Proof of Evidence in support of the CPO and associated SRO in order to enable an objective decision to be made which will enable the implementation of the proposed Scheme.
   5. The evidence which I have prepared is based on factual information obtained during the development of this scheme over many years, and where appropriate represents my professional engineering judgement based on local highway knowledge as well as the relevant criteria and standards applicable to the safe design, operation and management of the public highway over many years.
   6. References to documents and appendices are references to the deposit and library documents and the appendices which are set out and numbered in the Vale of Glamorgan Council’s Statement of Case in this matter unless otherwise stated.
6. **CONTEXT FOR CONSIDERATION OF THE SCHEME**
   1. The existing A4226 (Five Mile Lane) is a single carriageway road, in a rural location within the Vale of Glamorgan which currently fails to meet appropriate highway standards. In order to enhance safety along the road and meet the aim of creating a strategic route to the St Athan and Cardiff Airport Enterprise Zones, there is a need to undertake a number of improvements to upgrade the road, so that it meets modern highway standards in accordance with the DfT’s Design Manual for Roads and Bridges (DMRB).
   2. The setting of the existing road and surrounding area is shown on Figure 2.1.of the Environmental Statement. Five Mile Lane is a north-south oriented single carriageway non-primary A-Class road (A4226) forming part of the local highway network within the Vale of Glamorgan Council area. The route is approximately 7 km in length and links the Port Road West at the Waycock Cross junction near Barry in the south, with the A48 at the Sycamore Cross junction near Bonvilston in the north.
   3. Together with part of the A48, the Five Mile Lane provides an alternate and substitute route to that of Port Road East (A4050) for traffic travelling west to Barry and the south-western rural Vale from the primary route network (PRN) A-roads and strategic highway network which converge at Culverhouse Cross on the west side of Cardiff.
   4. Due to its strategic importance as an alternative route for the local authority highway network, for highway maintenance purposes the A48, Port Road and Five Mile Lane are all inspected by the Local Highway Authority as Category 2, Strategic Routes in accordance with ‘Well-maintained Highways’, Code of Practice for Highway Maintenance Management. The current nature and character of Five Mile Lane actually conforms to the description of a category 3a, Main Distributor Road; however, due to its significance to the resilience of the local highway network and for through traffic, it is inspected and maintained as a higher Category 2 road.
   5. The northern section of Five Mile Lane between Sycamore Cross and Blackland Farm (approx. 1200m) was previously improved in the 1970’s and provides for a single 7.3 metre wide carriageway with 6 to 9 metre verge width either side. The carriageway is kerbed and is provided with gullies for positive drainage. However, this road does not currently comply with the standards for a Single 7.3m All-purpose road (S2) as defined in the DMRB, due to the absence of a 1 metre hard strip either side of the carriageway. The speed limit is 60mph.
   6. The section of carriageway from Blackland Farm south to the River Waycock (approx. 4000m) varies in width between 5.6 to 6.6 metres. The route here has no verges, is lined by mature hedgerows and has a number of tight bends with no positive drainage to deal adequately with runoff. The current vertical and horizontal alignment of the carriageway does not comply with the highway standards required in the DMRB for the speed limit of the road of 40mph. The stopping sight distance (SSD) along this section of road, particularly at the four existing major / minor road junctions, is also substandard at various locations.
   7. The remaining section of the present highway, some 500 metres south of the River Waycock, generally climbs at a gradient between 6% to 8.5% to Waycock Cross roundabout. The effective carriageway width is some 5.1 to 5.5 metres, with minimal positive drainage, which is considered to be of a poor standard. This section of road again does not comply with DMRB standards, and there is substandard SSD on approach to Waycock Cross roundabout junction. The speed limit along this section is 40mph.
   8. There is currently no system of street lighting existing along Five Mile Lane between the A48 Sycamore Cross and the Waycock Cross junctions. The nature and character of the route make it difficult to safely and adequately accommodate highway warning signs at appropriate locations. There is minimal positive drainage along the route, which causes issues with flooding and ice during the winter months.
   9. The improvement works which would be needed for online improvements along the existing route to meet DMRB highway standards would be extensive, and have been concluded to be impracticable. The proposed highway improvement scheme which is now proposed will comprise of a combination of some online improvements and new offline sections, to ensure that the entire route meets DMRB highway standards for an A-Class road.
   10. A small number of rural residences, private businesses and community facilities are located throughout the study area for the route. Private businesses in the vicinity of the study area include the Welsh Hawking Centre and Cottrell Park Golf Club near Bonvilston. The Welsh Hawking Centre is a visitor attraction located along Five Mile Lane itself, and adjacent to the Barry Woodland Site of Special Scientific Interest (SSSI). Cottrell Park Golf Club is a public golf course that lies to the east of the Sycamore Cross junction with the A48. Community facilities include the Amelia Methodist Trust Farm (Whitton Rosser Farm), located to the west of Five Mile Lane. The Farm is open to the public with no admission charge. The volunteer charity supports adults with learning difficulties and disadvantaged young people.
   11. There are two public rights of way that connect with Five Mile Lane, and no existing dedicated cycle paths, or cycling facilities along the existing length of the road.
   12. The current traffic noise and vibration levels experienced on the existing road network vary depending on time of day and year, and it is likely that the trends found in national traffic data would be relevant and applicable on these sections of roads. The road surface is generally in good condition, and the speed limit ranges from 60mph to 40mph as explained above . Farm traffic and HGV movements along the existing route as well as the road geometry serve to slow traffic below the speed limit at points along the existing Five Mile Lane.
   13. Between the A48 in the north and Barry in the south, Five Mile Lane passes over the River Waycock. It also passes 50m to the west of the source of the Moulton Brook, crosses a continuous channel of water that flows from Ffynnon Whitton Mawr into Ford Brook, and crosses and runs adjacent to a number of other smaller culverted tributaries and drains within the Waycock catchment.
   14. The Vale of Glamorgan is of geological interest as it is the only place in Wales where Jurassic strata can be seen on land. However, there are no geological SSSIs, RIGS or quarries within the footprint of the Scheme. There is a history of limestone quarrying within 250m of the existing carriageway, however all operations have now ceased.
   15. There is indicative evidence of one former landfill site near the Scheme at Blacklands Farm. It was licensed from December 1990 to December 1991, and there was no known restriction on the source of the waste. However, the type of waste deposited included ‘inert’, which means the waste should remain largely unaltered once buried, and could include constituents such as glass, concrete, bricks, tiles, soil and stones.
   16. As I have already indicated above, he existing nature, character and alignment along the route of Five Mile Lane make it impracticable to deal with its deficiencies as a route byundertaking online highway improvements alone, so as to meet the criteria and guidance in DMRB highway standards for an A Class road, with speed limit of either 40mph or 60mph. As a consequence, any improvement scheme here needs to comprise a combination of online improvements and new offline sections, to ensure that the entire route meets DMRB highway standards, and achieves an appropriate level of safety for all vehicles, as well as accommodating the anticipated traffic flows.
7. **SCHEME BACKGROUND AND DEVELOPMENT**
   1. Records show that Five Mile Lane has previously been a ‘hot spot’ location for road accidents with a generally fairly even distribution along its whole length, however, the Sycamore Cross junction has a higher frequency of accidents. Accident data for the five-year period 2005-2009, confirm that there were 24 personal injury collision accidents along the route, of which two were fatal accidents, four were serious accidents and 18 were slight accidents. These accidents result in 34 casualties in total. The two fatal accidents occurred on the northern ‘improved’ section of Five Mile Lane between Sycamore Cross and Blackland Farm. .
   2. Vale of Glamorgan Council has previously endeavoured to improve safety on the road through the introduction of speed limits, resurfacing, improved signage, lighting, a core static safety camera and solar powered LED cat’s eyes. However, the road still contains a number of sharp bends, has substandard forward visibility at various locations (including side roads) and is also narrow in places, making it difficult for two large vehicles such as farm traffic, lorries or buses to pass safely. Along most of its length, the speed limit is 40 miles per hour, and safe overtaking is generally not possible.
   3. Pedestrians, cyclists and equestrians are not catered for in the main by the present route. Those vulnerable user groups who do use the route are effectively doing so at considerable risk to their safety due to the character and nature of the route, as explained previously.
   4. In March 2012, Arup published an Interim Scheme Assessment Report as part of a WelTAG Stage One Assessment (Arup, March 2012) on behalf of the Vale of Glamorgan Council, which examined the potential to improve Five Mile Lane in detail. The WelTAG Stage One Assessment (the Assessment) identifiedfive route alternatives which were considered for the Scheme, termed the Red Route, Green Route, Purple Route, Blue Route and Orange Route. Each option was reviewed with consideration of its environmental, social and economic impacts and benefits, which have been summarised below:-

* Blue Route – Impacts on noise, air quality and social aspects would be beneficial or moderate beneficial. Impacts on heritage would be moderate adverse due to effects around Whitton Lodge. Impacts on the Transport Planning Objectives and vehicle travellers would be moderate beneficial;
* Purple Route – Similar to the Blue Route but with a moderate beneficial effect on air quality only;
* Red Route – Similar to Purple Route but with no moderate beneficial effects;
* Orange Route – Similar to Blue Route but with a significant beneficial effect on noise and vibration and a neutral effect on air quality; and
* Green Route – Similar to Red Route, but with a significant adverse impact on the water environment.
  1. The Assessment recommended that the ‘Orange Route’ and ‘Purple Route’ be considered in further detail for development of a new route alignment, based on a Wide Single Carriageway between Sycamore Cross and Waycock Cross. It also recommended consideration of major junction improvement at Sycamore Cross; minor improvement at Waycock Cross junction; and minor works along Five Mile Lane to improve visibility at junctions.
  2. The major junction improvement work at Sycamore Cross, comprising signalisation of the previous staggered uncontrolled junction, was subsequently designed and tendered during financial year 2012/13, with construction works commencing in November 2012. It was substantially completed by the end March 2013. The works were fully funded by a grant from the Welsh Government. The minor improvement works to at Waycock Cross junction and along Five Mile Lane itself were not progressed due to funding constraints.
  3. In July 2013 the Welsh Government Transport Minister announced the intention to fund improvements to Five Mile Lane, as a means of improving access to the St Athan and Cardiff Airport Enterprise Zones. In addition, the Vale of Glamorgan Council included the commitment to improve the access road within its draft Local Development Plan as published in October 2013.
  4. Parsons Brinckerhoff was commissioned by the Welsh Government in 2013 to build on the WelTAG Stage One Assessment work previously undertaken by Arup. The design and environmental information available on the two route corridors previously identified for further consideration in the WelTAG report were provided by the Vale of Glamorgan to Parsons Brinckerhoff for further detailed consideration and development. These two routes were subsequently developed further into a single option that made best use of the existing Five Mile Lane, and took the route offline along the more constrained sections between Blackland and Grovelands Farms and at Sutton Fach Farm, after taking into account various criteria including environmental matters, drainage, earthwork constraints, DMRB requirements and ground conditions.
  5. In 2014, a detailed business case was developed to set out the strategic, economic, financial, commercial and management case for the implementation of a new road realignment scheme for Five Mile Lane, and in late 2015 the Vale of Glamorgan received a formal grant offer from the Welsh Government for the full funding of the realignment of the route, including financial provision for costs relating to the purchase of land covered by the proposed Compulsory Purchase Order. The scheme objectives and benefits as identified in the business case are summarised in section 7 below. As consequence, the full Council of the Vale of Glamorgan resolved and endorsed in January 2016 the acquisition of the land to implement the proposed A4226 Five Mile Lane Road Improvement and realignment scheme (as developed by Parsons Brinkerhoff) through use of the Council’s compulsory purchase powers.
  6. The works are therefore being progressed by the Vale of Glamorgan Council with Welsh Government funding. Both organisations are committed to improving A4226 Five Mile Lane Road, in accordance with the identified Transport Policies and Business Case, in order to improve access to the Cardiff International Airport and the St Athan Enterprise Zone and encourage economic development and inward investment, as well as to deal with the serious deficiencies of the present route, which I have explained.
  7. The scheme is supported by a comprehensive Environmental Impact Assessment (EIA) and Environmental Statement (ES) in accordance with best practice, which has enabled the Council to identify and where necessary take into account measures to avoid, reduce and, if possible, neutralise any predicted significant adverse impacts upon the environment, or to enhance the beneficial impacts of the Scheme.

1. **TRANSPORT AND PLANNING POLICIES**

6.1 The National Transport Plan (NTP) details the Welsh Government’s approach to putting transport onto a carbon reduction pathway, whilst at the same time ensuring that it can continue to support sustainable economic development and social inclusion. The prioritisation of the NTP has brought forward investment that will make the transport system in Wales work better to help tackle poverty, increase well-being and assist economic growth.

6.2 The NTP has been subject to a Strategic Environmental Assessment (SEA), Habitats Regulations Assessment (HRA) and Equality Impact Assessment, which were all published in 2009. Section 9.2 of the NTP HRA states that ‘*all projects in the NTP will be subject to a project level HRA / AIES, regardless of the findings of the screening or appropriate assessment stages of this HRA*’.

6.3 Paragraph 3.20.4 of the NTP states ‘*we are enhancing surface connectivity to Cardiff Airport by funding an express bus shuttle service between the airport and the city centre and Cardiff Bay, and funding improvements to the A4226 road (Five Mile Lane)’*.

### 6.4 Vale of Glamorgan Council is a unitary authority responsible for county-wide planning policies. The development plan for the Scheme comprises:

* The Vale of Glamorgan Adopted Unitary Development Plan 1996-2011 (UDP) (2005); and
* Vale of Glamorgan Draft Local Development Plan (LDP) (2013).

### 6.5 The Vale of Glamorgan Adopted UDP provides the strategic and detailed policy framework within which provision will be made for development and conservation needs within the county. The Plan concentrates on the issues that the Vale of Glamorgan Council consider necessary to address in order to protect and enhance the environment of the county, whilst providing detailed guidance for future development proposals. Although now out of date the UDP provides development guidelines until the Local Development Plan is adopted.

6.6 Vale of Glamorgan Council is currently in the process of drafting a Local Development Plan for the County. Once adopted, the Local Development Plan will provide a strategic direction to future growth and development within the Vale of Glamorgan. The Draft LDP focuses on the principles of sustainable development, particularly on environmental enhancement and improving economic productivity across the region. The Draft LDP indicates that sustainable transport improvements that serve the economic, social and environmental needs of the Vale of Glamorgan Council and promote the objectives of the South East Wales Regional Transport Plan and the Local Transport Plan will be favoured. Key priorities for the delivery of strategic transportation infrastructure in the plan include the proposed improvements to the A4226 between Waycock Cross, Barry and Sycamore Cross A48 (Five Mile Lane). Another witness (Mr Ian Robinson) is generally dealing with matters of town and country planning as they affect the current scheme, including the fact that planning permission was granted for its implementation, in December 2016.

7. **SCHEME OBJECTIVES AND BENEFITS**

7.1 The scheme aims to improve access and journey time reliability to the St Athan and Cardiff Airport Enterprise Zones, to reduce congestion along the A4050 Port Road, A4050 Port Road East and the A4226 Port Road West between Culverhouse Cross and Waycock Cross Roundabout, and to improve highway safety over that of the present route. The proposal also includes provisions to improve access and safety for Non-motorised Users (NMUs) in the form of a combined footway and cycleway comprising sections of new path and upgrades to the old road alignment.

### 7.2 The key objectives of the proposed route realignment and improvement works as outlined in the detailed business case for the scheme are as follows :

* Objective 1: Improve network resilience across the Study Area
* Objective 2: Reduce journey time variability from Culverhouse Cross interchange to Cardiff Airport Enterprise Zone
* Objective 3: Reduce journey time variability from Culverhouse Cross interchange to St Athan Enterprise Zone
* Objective 4: Discourage strategic traffic from utilising inappropriate routes to gain access to Cardiff Airport and St Athan Enterprise Zones
* Objective 5: Maintain access to local amenities and reduce community severance
* Objective 6: Improve access to Cardiff Airport and St Athan Enterprise Zones for Public transport and Non-Motorised Users (NMUs).

7.3 The main benefits of the Scheme works can be described as follows:

* Improved strategic access for Heavy Goods Vehicles (HGVs) and development traffic to the St Athan and Cardiff Airport Enterprise Zones;
* Improved safety for cyclists and pedestrians through creation of a safer route, much of which will be off the new road \(a major reduction is anticipated of motorised vehicles travelling on the bypassed section of old road, which will have a lower speed restriction);
* Improved access for regional and local businesses by providing better access to the M4 and distant markets, and more reliable journey times for customers and freight;
* Improved reliability and safety for private road users through the straightening and widening of Five Mile Lane;
* Greater resilience on the network by providing a more appropriate alternative route to the Port Road Link;
* Improved safety for highway maintenance activities;
* Improved perceptions of safety of this link for motorised and non-motorised users; and
* Local economic benefits realised through construction of the Scheme.

7.4 Parsons Brinckerhof carried out a cost benefit analysis of the proposed scheme in 2014, which indicated an overall positive net present value (NPV) in both high and low traffic forecasts.

**8. Conclusions**

8.1 The construction of the Scheme is seen by the Council as a key component in the Local Transport Plan, the National Transport Plan and the emerging Local Development Plan.

8.2 When completed the scheme will both meet its objectives and provide the significant transport and highway safety benefits as set out above, with appropriate mitigation taken where necessary to minimise or negate adverse environmental or ecological impacts identified through the robust EIA and ES process.

8.3 The A4226 Five Mile Lane Road Improvement scheme is fully supported by the Welsh Assembly Government who are funding the project, and the full Council of the Vale of Glamorgan who endorsed the proposal in January 2016.

8.4 The proposal for carrying out the works comprised in the scheme was presented to the Vale of Glamorgan Planning Committee and Granted Deemed Planning Consent in December 2016, subject to various conditions.

8.4 Based on the detailed information presented above, I consider that it is in the public interest that the land required for the scheme be acquired to progress this scheme, and I respectfully submit that both the CPO and the SRO should be confirmed to enable the project to proceed at the earliest opportunity.