

Connecting Europe Facility 2014-2020

TRANSPORT CALLS FOR PROPOSALS 2014

APPLICATION FORM PART D

Technical and Financial Information

Title of the proposed action	A55 Junctions 15 and 16
Proposal number	26234542

1. GENERAL DESCRIPTION OF THE GLOBAL PROJECT INCLUDING NEEDS AND OBJECTIVES

The global project is to improve the A55 Trunk Road in North Wales as part of a programme to improve hinterland connections with TEN-T ports in Wales via the Core Network. The A55 trunk road is a key element of the UK and European strategic road network. It is a part of the Core TEN-T Network and provides the main economic artery for the whole of North Wales. It forms part of Euroroute 22 which is the Trans European Route from Dublin in Ireland to Ishim in Russia. Of the 235 miles of E22 in the UK the two at grade roundabouts at Junctions 15 and 16 are the only roundabouts on the route from Holyhead to Hull and are a constraint to the free flow of traffic on this strategic route.

Main Objectives of the Global Project

The Welsh Government's commitment to this global project is well established, and has been for a number of years.

The **Programme for Government 2011-2016** identifies as a key action, the need to deliver the priorities of the National Transport Plan (NTP) for Wales. Delivery of this project will contribute to objective of 'Improving Infrastructure by delivering the priorities of the NTP & maximise the accessibility and safety of the trunk road network.'

The **Wales Spatial Plan (WSP)** recognises the importance of the east-west corridors and in particular the TEN-T routes as priority and further identifies: "Improvements to the strategic transport links and infrastructure have the potential to deliver safer and more reliable journey times on current networks, and a TEN-T east-west corridor of international importance, which is essential to the regeneration of the Area's economy and employment base and in overcoming its peripheral location."

The **Wales Transport Strategy (WTS)** focuses on the role that transport can play in delivering the Welsh Government's wider policy objectives in areas such as spatial planning, economic development, education, health, social services, the environment and tourism and developed 5 strategic priorities.

- i. Integrating local transport
- ii. Improving access between key settlements and sites
- iii. Enhancing international connectivity
- iv. Increasing safety and security
- v. Reducing greenhouse gas emissions and other environmental impacts

The **National Transport Plan (NTP)** sets out the importance of improving reliability, journey times and safety along the east-west road corridor in south Wales and notes the intention to '*Appoint designers to develop options for the A55 at junctions 15 and 16 (NTP reference 94),*'

The **Wales Infrastructure Investment Plan (WIIP)** sets out 'improving transport links, particularly East-West transport links' as a high level investment priority.

In addition to these policies, the Minister's for Economy, Science and Transport Edwina Hart's written statement in July 2013, recognised that targeted improvements to tackle pinch points and improve the efficiency of the network across Wales have the potential to make a real difference. Improving the junctions will also support the ambitions of the Snowdonia and Anglesey Enterprise Zone Boards

Scheme-Specific Objectives

The main objectives of the project are to:

- Reduce greenhouse gas emissions and other environmental impacts from transport

- Integrate local transport
- Enhance international connectivity
- Increase safety and security
- Facilitate economic regeneration in the Anglesey / Menai area.

These over-arching objectives are split into 7 scheme-specific objectives as follows;

- Improve road safety by reducing the risk of road accidents occurring
- Improve journey time reliability by removing sub-standard junctions and accesses
- Improve journey times from A55 Jct 14 to Jct 16A
- Reduce incidence of stationary traffic backing up into Pen-y-Clip and Penmaenbach tunnels
- Improve maintenance and emergency facilities, reduce delays to traffic during incidents and planned maintenance operations
- Improve journey times and access for public transport from A55 Jct 14 to Jct 16A
- Improve pedestrian and cyclist access across the A55 and between the local communities connected by the A55, avoiding the need to utilise the A55 mainline.

2. DESCRIPTION OF THE PROPOSED ACTION

2.1. General description of the proposed Action including needs and objectives

The global project will improve a physical bottleneck on the Core Road Network due to the existing junctions 15 and 16 on the A55 being at grade.

Improvements delivered by the global project will be facilitated by the provision grade separated junctions which will facilitate the free flow of traffic, reduce pollution and improve safety

The outputs of the global project will be to:

- Improve road safety by reducing the risk of road accidents occurring
- Improve journey time reliability by removing sub-standard junctions and accesses
- Improve journey times from A55 Jct 14 to Jct 16A
- Reduce incidence of stationary traffic backing up into Pen-y-Clip and Penmaenbach tunnels
- Improve maintenance and emergency facilities, reduce delays to traffic during incidents and planned

maintenance operations

- Improve journey times and access for public transport from A55 Jct 14 to Jct 16A
- Improve pedestrian and cyclist access across the A55 and between the local communities connected by the A55, avoiding the need to utilise the A55 mainline.

This action relates to the activities necessary to advance the A55 Junction 16 and 16 scheme, developing an outline design to commence the statutory consent process. Activities will include procurement and appointment of a design and build contractor, completion of the engineering design, an Environmental Statement and draft Line Order, Sider Roads Order and Compulsory Purchase Orders (CPO)

This action is fundamental to the realisation of the global project and is integral to the decision making process required for its realisation, including engagement with stakeholders.

Key Stakeholders include:

The Public;

Landowners, Local Residents, Local Lobby Groups, Local Traders, Road Users

Elected Representatives

Local Councillors, AMS, MPs

Other Interested Parties

This work will include all necessary consultations with statutory authorities and statutory consultees

2.2. Contribution of the proposed Action to the Global Project and expected results

This action is fundamental to the realisation of the global project and is necessary to facilitate effective, value for money in order to deliver the project.

Progression through this action will result in the scheme moving from the preparation stage to the construction programme, dependent upon the successful completion of the necessary statutory procedures, a detailed economic appraisal and the availability of funding through the normal budgetary process.

The A55 Junctions 15 and 16 project is an integral part of the Welsh Government's programme to improve hinterland connections with TEN-T ports in Wales via the Core Network.

The scheme is expected to result in more reliable journey times, shorter journey times and safer journeys – by removing the existing at grade roundabout junctions - from and to the TEN-T port of Holyhead, improving links via North Wales with Ireland, the UK Midlands, and Europe.

Delivery of the proposed action will be achieved by achieving the following of milestones to the agreed target dates:-

Milestone 1 – Procurement and appointment of a design and build contractor – Completion date Spring 2016

Milestone 2 – Outline Design Development; Completion Date: Completion date Autumn 2016

Milestone 3 – Stakeholder engagement; Completion Date: Spring 2017

Milestone 4 – Prepare Draft Orders and Environmental Statement; Completion Date: spring 2017

2.3. Description of the Activities of the proposed Action (including their interdependencies)

Activity 1: Procurement and appointment of a design and build contractor

The scheme will be managed by Welsh Government Transport Division with an appropriate technical and commercial advisor procured to provide support as required.

The intention is for the global action to be delivered via an Early Contractor Involvement (ECI) design and build contract, using the NEC Professional Services and Engineering Construction target cost Contracts. These types of contract have been successfully used on a number of other schemes within Wales and throughout the UK.

In order to deliver the proposed action a team will initially be appointed to design the scheme via an ECI design and build contract. Should the proposed action be successfully delivered and the statutory consent process negotiated, the intention would be for the same contractor to then deliver the global project.

ECI is a well established procurement method for projects of this type where the contractor's team is involved early in the development stage, to bring buildability expertise to influence the design development and to drive efficiency and manage costs and risk.

Activity 2: Outline Design Development

The contractor's design team shall analyse the junctions design for the global action to establish an understanding of road geometry, traffic conditions, and the environment and use this to establish the extent of work, including additional surveys and modelling work required for completion of the outline design.

The contractor will develop an outline design to maximise benefits to the highway network whilst taking into account economic, social and environmental factors. The contractor will procure, in accordance with Public Procurement Policy, and manage all necessary topographical, site investigation, traffic, environmental and other surveys.

The activity will demonstrate a scheme of work in sufficient detail covering construction implementation, and operational factors, to enable relevant Orders to be prepared to enable the successful completion of the statutory procedures ultimately leading to a decision to progress the works.

The activity will be completed by presentation of an outline design developed taking into account economic, social and environmental factors.

Activity 3: Stakeholder engagement

The contractor will publically present the outline design at regular intervals throughout it's development. Scheme design will have been developed in accordance with the Design Manual for Roads and Bridges. Key stakeholders, including local/national/international businesses, landowners, schools, Councils, environmental bodies and the public, will be consulted both formally and informally to examine the constraints and scheme delivery criteria to better understand the potential implications of the proposed design and make suggestions for changes.

Following this liaison, the feedback received will inform the ongoing refinement of the outline design and Environmental mitigation measures to complete the scheme on which the draft Orders will be based.

Activity 4: Prepare Draft Orders and Environmental Statement

The draft Line, Side Road and Compulsory Purchase Orders will be prepared and published simultaneously to reflect the developed outline design and identify the land that will be compulsorily acquired.

The Environmental Statement will be prepared to present the results of the Environmental Impact Assessment undertaken in Activities 2 and 3 including the impacts identified and the package of mitigation measures to be delivered by the global action. Notices must be published in the local press informing the public of the publication of the draft Orders and specifying the time within which objections may be made.

The Environmental Statement will be produced to provide decision makers and the public with an accessible

document which:

- Reflects the environmental assessment activities completed
- Provides a clearly auditable trail of assessment decisions

The Environmental Statement will provide clear information on environmental measures to be implemented by the project and give due weight to significant environmental effects.

This activity will complete the proposed action, and provide all of the design development necessary to proceed through the statutory consent process and inform the subsequent decision making process as to whether the global action should proceed to construction.

The Welsh Ministers are the Order-making authority and the Competent Authority for EIA.

2.4. Location of the proposed Action

The A55 Junction 15 and 16 scheme is in the county and local authority administrative area of Conwy in North West Wales. The scheme consists of replacement of at grade roundabouts with grade separated junctions at Penmaenmawr and Llanfairfechan will facilitate the free flow of traffic, reduce pollution and improve safety.

2.5. Action Plan (graphic representations)



Please provide a Gantt chart detailing the critical path and including the milestones of the proposed Action and their interdependencies.

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Overview of Actions

Activities	Expected Results	Milestones	On critical path (yes / no)	Means of Verification
Activity 1 : Procure ECI contractor	Appointment of ECI Contractor to develop the outline design	ECI Contractor appointed	Yes	Contract awarded to ECI contractor and signed by both parties
Activity 2: Design Development	- Consideration of design constraints; - Environmental Surveys;	- Outline Design Complete	Yes	- Production of 1 :2500 design plans ready to proceed to public exhibition - Production of environmental survey reports.
Activity 3: Stakeholder Engagement	- Engaged stakeholders; - Optimised design; - Reduced risk.	- Formal, minuted meetings held - Holding of multiple local exhibitions.	Yes	- Holding of exhibits ; -Production of exhibition report. - Response of stakeholders to proposed design
Activity 4: Prepare Draft Orders and Environmental Statement	- Completion of preliminary design of project; - Completion of Environmental Impact Assessment.	- Draft Orders prepared; - Environmental Statement prepared.	Yes	- Draft Orders publication - Environmental Statement publication.

2.6 Risk Assessment Grid by activities

Activity N°	Risk	Impact	Likelihood	Control	Mitigating measure(s)
1	Delay or failure to award ECI contract	High	Low	Under Experienced Project Team. Well established Process Controls.	Tender process to follow EU Procurement procedures ECI contract will be awarded under free market conditions
2	Delay or fail to develop scheme to appropriate standards Delay or fail to complete Environmental Assessment Report	High	Low	Under Experienced Project Team. Well established Process Controls.	Extensive previous research and development work carried out in route area, including extensive environmental surveys. Scheme included in NTP and appropriate resources allocated to complete Environmental Impact Assessment Report.
3	Stakeholder liaison identifying an unforeseen reason the route could not be developed.	High	Low	Under Experienced Project Team. Well established Process Controls. Public Liaison Officer	Extensive previous research and development work carried out in route area, including extensive environmental surveys. Public Liaison Officer involved throughout to manage stakeholder contact.
4	Delay or fail to complete Outline Design	High	Low	Experienced Project Team. Well established Process Controls Internal Gateway Approval Process.	Extensive previous research and development work carried out in route area, including extensive environmental surveys. Appropriate resources allocated to complete preliminary design.

3. RELEVANCE: CONTRIBUTION OF THE PROPOSED ACTION TO THE TEN-T POLICY OBJECTIVES AND EU DIMENSION

3.1. Contribution of the proposed Action to TEN-T Core Network corridors, or classification as a project of common interest

The action relates to the scheme development proposals for the global project to improve Junctions 15 and 16 on the A55 in North Wales.

The NSMED Core Network Corridor Report recognises the importance of peripherality and that linking the peripheral regions via the comprehensive and core network to the centre should be considered as a counterbalance to the focus on the Corridors. This means consideration should be given to traffic flows from the peripheral regions to the wider national and European transport network which originate in the comprehensive network and connect via the core. The UK and Ireland are included in only one core network corridor (NSMED corridor) but contain more peripheral areas which are either outside the core network, or outside the corridor. As highlighted in the report, although not on the Corridor, Wales has two road branches of the Core Network along the north and south coastlines, linking to the ports of Holyhead in the North, Fishguard and Milford Haven in the West and Cardiff and Newport in the South.

Improving hinterland connections from the Corridor via the Core Network to Holyhead port, is an important element in linking the peripheral areas to the Corridor.

3.2. Contribution of the proposed Action to TEN-T priorities

The proposed action relates to the scheme development proposals and is a fundamental and essential element in the delivery of the global action to improve these junctions on the A55.

The global project will improve road connections on the Core Network in a more isolated, peripheral area. The road network plays a vital role in promoting economic growth in Wales where around 88% of freight movements are by road.

3.3. Contribution of the proposed Action to the objectives of the priority under which the proposal is submitted.

The global project will remove bottlenecks on the Core Network, specifically the hinterland connections to the Holyhead Port, providing more reliable and safer journey times.

The proposed action relates to the scheme development proposals and is a fundamental and essential element in the delivery of the global action to improve these junctions on the A55.

3.4. Contribution of the proposed Action to the internal market, the cohesion policy and the Europe 2020 strategy

The improved road network delivered by the global project will help promote territorial cohesion by strengthening the TEN-T network in order to improve accessibility in more peripheral areas that are on the Core Network. Business and Industry from across the Union will benefit from more reliable, faster and safer journeys for the movements of goods and passengers via the Core Network to Core Ports.

3.5. Socio-economic benefits of the proposed Action at macro level

More reliable, faster and safer journeys will enhance economic growth and job creation. To ensure that our economy remains competitive in a global market, we have to be able to move efficiently the goods we need and produce. Strengthening transport links is vital in helping industry exploit world-wide markets and attract inward investment.

The A55 is the principal route serving the Snowdonia and Anglesey Enterprise Zones, which has been selected to specialise in the energy industry. This project will improve the cross-border connectivity of the area with Ireland via the ports, key settlements in Wales from the east as well as the English borders and Europe - supporting the Enterprise Zone in generating jobs and growth and improving social cohesion.

3.6. Added-value of EU funding on the financing of the proposed Action and the commitment of the different stakeholders

Assistance under CEF would provide increased impetus to the achievement of milestones and project delivery. It would raise awareness of and engagement with EU policies and the TEN-T programme in the UK and specifically in Wales, at the same positively raising Wales' profile throughout Europe.

3.7. Cross-border section

This section aims at verifying whether or not any section of the proposed Action corresponds to the definition of cross-border sections in Article 3 (m) of the TEN-T Regulation.

- A. Does the proposed Action require actions/construction works on both sides of the borders between two Member States? ☒ No

If yes, indicate which Member States are directly concerned and which activities each of them will be carrying out.

- B. Does the proposed Action ensure, via a third country, continuity of a core network corridor between two Member States? ☒ No

If yes, indicate which Member States and third country are directly concerned and which activities each of them will be carrying out.

- C. Is the proposed Action located on a section which ensures the continuity of a project of common interest between the nearest urban nodes on both sides of the border of two Member States or between a Member State and a neighbouring country? ☒ No

If yes, provide justification for classifying the proposed Action (or part of the proposed Action) as cross-border and explain which activities the Member State(s) will be carrying out.

- D. Has a written agreement been concluded between the Member States concerned or between the Member States and third countries concerned relating to the completion of the cross border section, in accordance with Article 7 (2) of the CEF Regulation? ☒ No

If yes, describe the main elements of this agreement and attach a copy of it in annex.

- E. Have the Member States concerned made a joint commitment regarding the proposed Action, i.e. (a) concluded a formal written agreement at appropriate level, (b) agreed a common financial plan or coordinated financial plans, (c) agreed on a common timetable for studies and works, including a coordinated date of opening to service, (d) agreed on how the Member States concerned coordinate their procedures for assessing environmental effects and socio-economic effects thereof, and how they use their best endeavours to conduct a trans-national enquiry prior to the granting of the building permit? ☒ No

Clarify and detail as appropriate, and attach copies of the related documents

- F. Have the Member States (and potentially third countries) concerned created a common, technically and financially indivisible structure for the implementation of the action? ☒ No

If Yes, explain the role and legal status of this structure, and attach the relevant legally binding agreement(s).

- G. Provide information on the financial viability of the cross-border action and on the timetable for carrying it out. Explain which guarantees are issued - preferably jointly - by the Member State(s) to ensure this viability and the timetable. This applies also if the applicant is not a Member State. Please attach these guarantees in annex. ☒ No

3.8. Bottleneck

Does the proposed Action addresses improving a bottleneck in the sense of Article 3 (q) of the TEN-T Regulation? ☒ Yes

If yes, indicate which bottleneck will be improved and which activities of the proposed Action will facilitate this.

The global project will improve a physical bottleneck on the Core Road Network due to the A55 Junction 15 and 16 currently being at grade roundabouts.

The replacement of at grade roundabouts with grade separated junctions at Penmaenmawr and Llanfairfechan will facilitate the free flow of traffic, reduce pollution and improve safety.

4. MATURITY OF THE PROPOSED ACTION

4.1. Approval of the proposed Action

The Welsh Government is committed to delivering the global project which is included in a number of Welsh Government policy documents.

The Wales National Transport Plan (NTP) includes a programme for the implementation of Strategic Road Improvements (SRIs) to remove bottlenecks on the key network, to improve road safety and the environment by providing bypasses of towns situated on the trunk road network, thus relieving the effects of heavy through traffic.

Construction of the preferred option will be dependent upon the successful completion of the necessary statutory procedures, a detailed economic appraisal and the availability of funding through the normal budgetary process.

The scheme will be managed by Welsh Government Transport Division with an appropriate technical and commercial advisor procured to provide support as required.

The intention is for the project to be delivered via an Early Contractor Involvement (ECI) design and build contract, using the NEC Professional Services and Engineering Construction target cost Contracts. These types of contract have been successfully used on a number of other schemes within Wales and throughout the UK.

ECI is a well established procurement method for projects of this type where the contractor's team is involved early in the development stage, to bring buildability expertise to influence the design development and to drive efficiency and manage costs and risk.

The scheme will be progressed in line with Welsh Government Transport Division's linear Key Stage Approval process to obtain financial approval for projects through all stages of design and construction. Each key stage will be subject to a review by members of a Project Board prior to seeking Ministerial approval to continue to the next stage. Performance in delivery of the project will be monitored in accordance with the Division's Roads Procedures Guidance System, to provide governance approval through all stages of design and construction.

4.2. Political commitments to the proposed Action (and Global Project)

The Welsh Ministers have devolved responsibility for Road Transport and have shown a strong commitment to deliver this project.

The **Wales Spatial Plan**, which sets the framework for all development priorities and decisions in Wales, regional and local, recognises the importance of the east-west corridors and in particular the TEN-T routes as priority and further identifies: 'Improvements to the strategic transport links and infrastructure have the potential to deliver safer and more reliable journey times on current networks, and a TEN-T east-west corridor of international importance, which is essential to the regeneration of the Area's economy and employment base and in overcoming its peripheral location.

The **Wales Infrastructure Investment Plan** sets out that 'improving transport links, particularly East-West transport links' as a high level investment priority.

Wales' **National Transport Plan** sets out the importance of improving reliability, journey times and safety along the east-west road corridor in south Wales and the intention to 'Appoint designers to develop options for the A55 Junctions 15 and 16'. The recently refreshed National Transport Plan builds on that commitment by promoting the scheme to a specific intervention, in the wider context of the importance of improving TEN-T routes in Wales and particularly hinterland connections to ports. The refreshed plan reflects the laying of a formal written statement before the National Assembly for Wales in July 2013 by Welsh Minister for Economy, Science and Transport recognised that smaller targeted improvements to tackle pinch points and

improve the efficiency of the network across Wales have the potential to make a real difference, as well as the Minister's acceptance of recommendations by the industry-led Wales Freight Task & Finish Group to prioritise improvements to TEN-T road routes serving ports.

4.3. Public consultation

As is standard with all our road construction schemes, engagement with the public will be an integral part of the implementation of the action, involving local communities, industry and business, statutory authorities, service/utility organisations, and other interested bodies, including environmental, to establish any relevant constraints or factors that should be taken into account when implementing the proposed improvements.

Engagement with the local community will be a particularly important aspect of the proposed action. Engagement will include initiatives in local schools, public information exhibitions and supermarket information days.

Feedback from all stakeholders, especially the ports, will be considered in the proposed action to ensure effective implementation of the global action during the construction stage.

4.4. Readiness / technical maturity of the proposed Action

The Welsh Government is committed to delivering the global project, subject to the successful completion of the necessary statutory procedures, a more detailed economic appraisal and the availability of funding through the normal budgetary process.

The process of procuring an agent to provide us with more detail on the technical and commercial aspects of the project, which will help inform the Preliminary Design Submission and Orders, is underway and we expect to appoint in spring 2015.

4.5. Building permits

Subject of building permit procedure	Date of award of building permit	If relevant, <u>foreseen</u> date of award of building permit	Foreseen start date of works
Not applicable			

4.6. Procurement

4.6.1 Procurement in general

The Welsh Government, as a public entity, complies with all EU Procurement Regulations.

We also follow the good practice set out in 'Transport Division's Procurement Strategy and 'Selection and Monitoring Processes' guide. Known as the 'Chwarae Teg' guide ('Fair Play' in English), its objective is: **cho**osing businesses using **w**hole life considerations to **a**chieve value for money **r**esults through the **a**ward and **e**xecution of contracts to deliver **t**ransport related **e**conomic **g**rowth.

The Welsh Government's guide, **Community Benefits: Delivering Maximum Value for the Welsh Pound**, also outlines good practice for ensuring community benefits are realised from public procurement. This document points towards the importance of training and recruitment opportunities benefitting the local community. The A40 Llanddewi Velfrey to Penblewin design and build contract would include provision of targeted training and recruitment as a core requirement of the contract fitting clearly with this objective.

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4.6.2 Contracts already awarded and procedure(s) applied

None yet.

4.6.3 Procurements planned during implementation

The process of procuring an agent to provide us with more detail on the technical and commercial aspects of the project, which will help inform the Preliminary Design Submission and Orders, is underway and we expect to appoint in Spring 2015. This will be followed by the procurement of a contractor to design and build the action and we expect to appoint in early of 2016.

4.7. Pending legal/administrative/technical issues

None expected for the proposed action. The global action is subject to the normal statutory procedures and will be informed by detailed design guidance; any issues arising are expected to be routine.

4.8. Information on funding sources (state budget(s), regional / local budget(s), applicant's self-financing, EIB loan(s), other loan(s))

Source of financing	Global project (€)	Proposed Action (€)	Description / Comments
State budget(s)			
Regional / local budget(s)	42,250,000	1,690,000	Plans to improve the A55 Junctions 15 and 16 have been identified in the Wales National Transport Plan and are included in the Welsh Government Economy, Science and Transport Department's Capital Programme for Infrastructure Improvement which envisages the works (Global Project) being delivered within the 2017 – 2019 period. At each approval gateway, the Welsh Government Transport Division Strategic Board evaluates the business case and investment proposals and if justified, gives agreement to seek Ministerial approval for the project to proceed.
Applicant's self financing			
EIB loan(s)			
Other loan(s)			
TEN Financing		1,690,000	Assuming 50% Grant aid.

Other EU Funds			
TOTAL (€)	42,250,000	3,380,000	

4.9. Public-private partnership

Not applicable.

4.10. Revenues of the proposed Action

None.

5. IMPACT OF THE PROPOSED ACTION

5.1. Impact of the study as a decision-making tool

The proposed action will inform the Investment Decision Maker (Welsh Government), who will rely on the outputs from this Outline Design, the draft Orders and Environmental Statement for decision making.

A Public Local Inquiry will likely be subsequently held to independently assess the proposals. The will result in an Inspector's Report to the Welsh Government's Minister for Economy, Science and Transport, who will then have to decide whether to proceed with construction.

If it is determined to proceed the Welsh Government will progress the scheme through the statutory procedures.

This action directly informs the decision making process and is integral to the delivery of a value for money global project.

5.2. Impact of the study in terms of policy-making and developing best practices

The processes followed in scheme design and appraisal are an essential part of enabling the efficient delivery of improvements to the strategic road network in Wales.

Improvements to the strategic road network have been established in Wales policy through the publication of the National Transport Plan (NTP) and the Wales Transport Strategy (WTS).

Appraisal of options is undertaken in accordance with the Welsh Transport Appraisal Guidance (WelTAG) to evaluate route and design options around 3 key areas: Social, Environmental and Economic.

During the proposed action the purpose of the scheme appraisal process is to review the project design in an increasing level of detail in order to evaluate it's contribution to the scheme specific objectives and the Welsh Government policy objectives. Design consideration will focus on:

- minimise any potential detrimental environmental impact
- ensure good design in light of all relevant factors
- Provide good value for money.

The appraisal process focuses on best practice in the delivery of the following;

- Public and stakeholder consultation
- Strategic route appraisal

5.3. Ex-ante evaluation(s)

In February 2008 Consultants were commissioned by the North Wales trunk Road Agency (NWTRA) to examine road safety improvements along the A55 in the vicinity of Llanfairfechan and Penmaenmawr with a focus on considering options for improving Junctions 15 and 16 by removing the at grade roundabouts. The initial study was completed in April 2009 and concluded that new grade separated junctions should be progressed to provide safety improvements.

In February 2011, following the inclusion of the scheme in the Welsh Assembly Government's National Transport Plan, a review of the scheme options was undertaken to update existing scheme options, address further potential options and undertake an options appraisal workshop.

The original options at Junction 15 were:

- 15.1 Westbound slips only
- 15.2 Full grade separated diamond type junction
- 15.3 East facing slips with overbridge
- 15.4 East facing slips with underbridge via Shore Road East
- 15.5 East facing slips with underbridge and T-junction

Option 15.6 did not fully meet the objectives and Option 15.7 had similar benefits to another option but at greater cost so these were discounted

One additional option was considered during the later review:

- 15.8 Westbound exit slip and eastbound entry slip utilising Shore Road East

The original options at Junction 16 were:

- 16.1 All movements – dumbbell roundabout
- 16.2 All movements – diamond type junction
- 16.3 East facing slips and westbound entry slip
- 16.4 As 16.3 with westbound slips at existing roundabout

One additional option was considered during the later review:

- 16.5 All movements dumbbell junction at existing Junction 16A with a new local link to Penmaenmawr

The final options review report in November 2011 recommended that the scheme is further developed to confirm and finalise the objectives and some of the more significant restraints.

5.4. Financial analysis

A full economic assessment of the global action will be undertaken as part of the proposed action in line with UK (Department for Transport) and Welsh Government transport planning guidance. Economic appraisal for transport projects is subject to stringent guidance giving appraisers confidence that the economic appraisal is robust.

The total out-turn cost of the project is anticipated to be £32.5 million (Q4 2010 prices). This includes construction, design, as well as non-recoverable VAT and risk. The risk cost includes an element called 'Optimism Bias' which is an adjustment factor applied to costs used in the economic assessment to reflect a systematic tendency, identified in past engineering projects, to underestimate costs. Optimism bias is included as part of the appraisal of all transport projects in the UK and is good practice to for inclusion for all public investment appraisals. In line with Green Book appraisal, when calculating the Benefit Cost Ratio/Net Present Value of an intervention, appraisals should be consistent with the scheme costs plus optimism bias approach so they can be compared like-for-like.

Not taking into account the wider socio-economic impacts of the overall A55 Junction 15 and 16 scheme – which will be assessed as part of the planned full economic assessment of the scheme - the overall transport related BCR is 3 for Junction 15 and 2.3 for Junction 16.

5.5. Social and economic impact

More reliable, faster and safer journeys will enhance economic growth and job creation. To ensure that our economy remains competitive in a global market, we have to be able to move efficiently the goods we need and produce. Strengthening all modes of transport links is vital in helping industry exploit world-wide markets and attract inward investment but strengthening road connections on the Core Network in more peripheral areas of the Union is vital. The road network plays a vital role in promoting economic growth in Wales where around 88% of freight movements are by road.

The A55 is the principal route serving the TEN-T ports of Holyhead and the Snowdonia and Anglesey Enterprise Zones, which has been selected to specialise in the energy industry.

Anglesey has an established reputation for low carbon energy generation including nuclear, wind and biomass. Given its natural resources (wind, solar and marine), skilled workforce (especially nuclear related skills), supply chain and research and development capability, the island already attracts major interest from the low carbon energy sector.

The Energy Island Programme (EIP) , part of the Enterprise Island Framework, is a key driver for delivering exciting opportunities for Wales' renewable energy sector. Enterprise Zone status emphasises the Welsh Government's commitment to realising the EIP vision.

Anglesey Enterprise Zone has a number of major strategic investment projects in the pipeline, presenting exciting supply chain opportunities for local companies and future companies locating to the Enterprise Zone, including:

- Horizon Nuclear Power's project to build a new nuclear power station at Wylfa will potentially produce 3.3 GW of low carbon energy.
- The decommissioning of the existing Magnox nuclear power station starting in 2014.
- Celtic Array's proposed Irish Sea Round 3 offshore wind farm with a potential yield of 4.2GW of low carbon energy.
- Conygar projects in Holyhead.
- SeaGen Wales' proposed tidal array between the Skerries and Carmel Head producing 10.5MW of low carbon energy.
- Lateral Power's proposed 299MW biomass/eco park; proposed transmission infrastructure

improvements to the National Grid accommodating 7GW plus of low carbon energy.

- A proposed 800 unit mixed use Land & Lakes development in Holyhead.
- The Royal Air Force – RAF Valley offering significant supply chain opportunities.
- StenaLine at the Port of Holyhead, an international strategic gateway port.

Amid the stunning lakes and mountains, at the heart of the National Park lies **Snowdonia Enterprise Zone** – a 123.5527 acre (50 hectare) site centred upon the location of the former Trawsfynydd Power Station, and another site at Llanbedr Aviation Centre and Enterprise Park, just ten minutes away.

Trawsfynydd is a truly unique site in single ownership, with a nationally important energy infrastructure, its own lake (one of Wales' largest) providing natural cooling, advanced security, and a specialist skilled workforce.

It offers the ultimate environment for sustainable and secure green energy and is located close to Anglesey Enterprise Zone, together forming a north west Wales low carbon energy cluster, with an established reputation for attracting major brand investments in biomass, wave, wind and nuclear related industries.

The aim for the Trawsfynydd site is to become a hub for innovative low carbon technology enterprises and associated Research & Development uses.

The decommissioning of the on-site Trawsfynydd nuclear plant will release a potential transferable workforce of 600 highly skilled personnel, and the nearby Centre for Alternative Technology, Bangor and Aberystwyth universities specialise in industry-led energy related research.

The site is also ideal for ICT/digital enterprises, and offers some of the attributes required to become a preferred data centre location. The site offers a secure, resilient and diverse supply of green energy and will ensure a green reputation for any data centre operator.

The site includes a National and local Grid infrastructure delivering a resilient power supply from local wind and hydro-electric installations and power from the grid, including the Nuclear Decommissioning Authority (NDA) owned Maentwrog Hydro-electric station. The lake and fresh Snowdonia mountain air will provide huge savings on cooling. The site offers natural security, away from major settlements with existing security staff, trained to the highest standards and lies under restricted airspace, away from major flight paths.

The global project will improve the cross-border connectivity of the area with Ireland, key settlements in Wales from the east as well as the English borders and Europe - supporting the Enterprise Zone in generating jobs and growth and improving social cohesion.

The proposed action relates to the scheme development proposals and is a fundamental and essential element in the delivery of the global project to improve these junctions on the A55.

5.6. Impact of the proposed Action on traffic management, congestion, modal split, inter-operability, service quality, safety and security

As part of the global project all will be improved as the main objectives are to

- improve hinterland connections for freight and passengers to Holyhead port
- deliver a sustainable solution to remove bottlenecks on the Core Network
- improve road safety by providing free flowing junctions
- improve journey time reliability and safety along the east-west road corridor on the A55.

- improve strategic links via West Wales with Ireland and the rest of Europe
- Improve road safety by reducing the risk of road accidents occurring
- Improve journey time reliability by removing sub-standard junctions and accesses
- Reduce incidence of stationary traffic backing up into Pen-y-Clip and Penmaenbach tunnels
- Improve maintenance and emergency facilities, reduce delays to traffic during incidents and planned maintenance operations
- Improve journey times and access for public transport from A55 Jct 14 to Jct 16A
- Improve pedestrian and cyclist access across the A55 and between the local communities connected by the A55, avoiding the need to utilise the A55 mainline.
- ensure all of these objectives are met with due consideration given to the impact on the environment

5.7. Impact of the proposed Action on regional and / or local development and land use

The Wales Spatial Plan, which sets the regional and local development and land use framework for the whole of the country, recognises the importance of the east-west corridors and in particular the TEN-T routes as priority, and further identifies improvements to the strategic transport links and infrastructure as having the potential to deliver safer and more reliable journey times on current networks, and a TEN-T east-west corridor of international importance, which is essential to Wales' economic and employment base.

5.8. Impact on competition

The global project will impact positively impact on regional, national and European competition.

The improvements to road network will help promote territorial cohesion by strengthening the TEN-T network in order to improve accessibility in more peripheral areas that are on the Core Network.

Business and Industry from across the Union will benefit from more reliable, faster and safer journeys for the movements of goods and passengers via the Core Network to Core Ports.

More reliable, faster and safer journeys will enhance economic growth and job creation. To ensure that our economy remains competitive in a global market, we have to be able to move efficiently the goods we need and produce. Strengthening transport links is vital in helping industry exploit world-wide markets and attract inward investment.

The A55 is the principal route serving the Anglesey and Snowdonia Enterprise Zones, which has been selected to specialise in the energy industry. This project will improve the cross-border connectivity of the area with Ireland via the ports, key settlements in Wales from the east as well as the English borders and Europe - supporting the Enterprise Zone in generating jobs and growth and improving social cohesion.

5.9. Impact on the environment

An Environmental Impact Assessment will be carried out as part of the design development process.

6. QUALITY OF THE PROPOSED ACTION

The breakdown of eligible costs is part of the quality of the proposed action. As this information is provided in section A 3.3 of the Application Form it is not duplicated here.

6.1. Organisational structure

The management arrangements have been successfully used on previous schemes and are focused on ensuring that the scheme is deliverable and maximise the potential for scheme success.

Overall responsibility for the delivery of major road schemes in Wales lies with the Deputy Director of Infrastructure Projects (IP), who reports directly to the Director General Economy Science & Transport, both senior civil servants within the Welsh Government and the Director General an Accounting Officer.

A Core Management Team will be set up responsible for the day-to-day detailed management of the scheme. The Core Management Team will be led by Welsh Government Project Managers, and will includes representatives of the Employer's Agent and members of the contractor's team procured to deliver the scheme. The primary activities will include:

- Promoting the scheme both internally and to external partners and stakeholders;
- Ensuring the scheme delivered is the optimum solution;
- Ensuring scheme activities comply with Welsh Government policy;
- Ensure the scheme complies with its commitment to the Sustainability Objective of the Welsh Government;
- Ensuring the scheme is delivered to budget & programme;
- Ensuring the scheme delivers Value for Money within delegated financial commitments.

The Core Management Team will report to a Strategic Board which oversee the strategic direction of the scheme. The Strategic Board comprises senior personnel from the Transport Division within Welsh Government. The role of the Strategic Board will be to:

- Consider and approve the ongoing Business Case to enable scheme development to continue;
- Agree the final procurement option;
- Approve the preferred bidder;
- Agree on a high level project timetable for delivery;
- Review the scheme against Policy objectives at agreed milestones and provide continued commitment and endorsement where appropriate.

The scheme also includes a Project Board responsible for strategically managing the scheme between key milestones. The Project Board forms a link between the Strategic Board and the Management Team. It comprises of senior personnel from each of the main parties to the scheme. The role of the Project Board is to manage by exception and only intervening with the work of the Project Team where necessary:

- Create an environment in which the scheme can thrive;
- Advise and support the Project Team;
- Setting boundaries between key decision points;
- Championing early dispute resolution where possible; and
- Promoting the ethos of partnering.

The scheme will be progressed in line with Transport Division's linear Key Stage Approval process to obtain financial approval for projects through all stages of design and construction. Each key stage will be subject to a review by members of the Project Board to seek approval to continue to the next stage.

- Key Stages 3: Relates to the development stage and will include the outline design and associated Environmental Impact Assessment documents – This stage is the subject of the proposed action.
- Key Stage 4 is the statutory process stage to seek the powers to build the road. This stage generally involves the publication of draft Orders and if required, a local public inquiry. As well as agreement of the final target cost for construction.
- Key Stage 6 is the construction phase, which will proceed subject to the satisfactory completion of the statutory procedures, the availability of finance and the Minister's decision. This phase relates to the detailed design, construction, defects maintenance and environmental aftercare periods.

Performance in delivery of the project will be monitored in accordance with Welsh Government Transport's Roads Procedures Guidance System to provide governance approval through all stages of design and construction. Output will be based on routes created or reconstructed.

Detailed performance indicators and procedures for monitoring the performance shall be developed for all advisors and contractors involved in the project. Performance shall be measured quarterly in accordance with procedures set out in Infrastructure Group "Supplier Performance Monitoring Regime"

The project will be subject to a monitoring and evaluation plan once operational which will include:

- Traffic flows compared with forecast
- Rates of accidents and seriousness
- Journey time savings and journey time reliability savings achieved
- Non Motorised route usage
- Environmental integration
- Any measurable Wider Economic Benefits

A range of innovative approaches to the design and delivery of the scheme will be implemented in order to minimise the risk of the scheme not progressing through the statutory process and maximising the

opportunities for success. These would include:

Targeted recruitment and training – We would introduce a Targeted Recruitment and Training (TR&T) clause into the contract to maximise the impact of public spending on well-being whilst ensuring compliance with the EU Procurement Directive and avoiding disadvantaging non-local contractors. These clauses have been successfully used on other schemes such as sections of the A465 dualling scheme.

Pro-active public engagement – throughout the development of the scheme, an active approach would be taken to public engagement to ensure people's views are heard and where appropriate incorporated as the solutions developed.

Maximising community benefits – a balanced approach would be taken to the competing needs of drivers and non-motorised transport users to ensure that their needs are well catered for, avoiding the new road becoming an obstacle on the landscape.

In summary:

- Governance arrangements will be established to ensure good project management practices are in place at all levels of the project to ensure the scheme is delivered on time and to budget and that the scheme delivered provides best value for the Welsh Government.
- The scheme has a formal risk management approach and will have a dedicated Risk Manager.
- The scheme will pro-actively seek to maximise local benefits. In particular, the targeted recruitment and training scheme will have a positive impact on the surrounding area;
- Engagement with the local community will be an important aspect of the development of the scheme. Engagement will include initiatives in local schools, public information exhibitions and supermarket information days.

6.2. Control procedures and quality management during implementation

Day to day progress on project will be managed by the Transport Division's Project Director against an agreed delivery programme and expenditure profile.

Formal progress meetings will be held monthly to exchange information, discuss scheme progress, contentious issues and take a forward look at the work ahead. The progress meetings will be minuted and attended by the Welsh Government, the Employer's Agent, the contractor and the engineering and environmental design representatives.

Quarterly Finance Meetings review matters of cost and programme which are presented via dashboards by the project team to the Programme Manager and Head of Procurement.

A Project Board comprising senior personnel from each of the main parties to the scheme will be established. The Project Board manages by exception to monitor performance of the scheme intervening with the work of the project team for issues such as early dispute resolution that cannot be achieved by the project team.

The Welsh Government Community Benefits Measuring Toolkit will be used on the scheme to track primarily the direct contribution made by schemes to the local and national economy in accordance with the Welsh Government guide, "Community Benefits: Delivering Maximum Value for the Welsh Pound." This information is recorded quarterly.

Key Performance Indicators (KPIs)

Performance of consultants will be monitored and tracked by a set of evidence-based standardised KPIs. The KPIs consider the following criteria for evaluation:

- Client Satisfaction – Service
- Client Satisfaction – Product
- Stakeholder and Community Engagement
- Management of Programme and Cost
- Health and Safety Performance
- Environmental Performance.

KPI assessments are conducted quarterly between Employers Agent (EA), Contractor and Client. Contractors/ consultants are required to provide evidence to WG to justify why certain marks are warranted.

6.3. Risk management methods and procedures

Effective identification and management of risk is a key aspect in the management of the final costs and programme of the global action.

The process undertaken in analysing and managing risk on projects is outlined in Part 4 of the Welsh Government's "Value for Money Manual: Risk Analysis and Management."

The scheme has a formal risk management approach to enable informed decision-making, reduce the likelihood of unanticipated events and address unresolved risk items at the earliest opportunity. The action will have a dedicated Risk Manager to oversee the risk management process, management of the risk register and allocation of owners for each risk. A risk register will be developed for all project activities. A quantitative risk assessment methodology will be developed which will be actively managed as a live process throughout the project.

Risks will be considered throughout the development of the project and the risk profile forms a key component of the Key Stage Approval process. Much of the project team's development work in KS3 & KS4 will involve understanding, quantifying and controlling project risks whilst driving value through the design process.

ECI procurement has advantages in relation to managing risk as it provides the opportunity to gain contractor input into the process at the earliest opportunity and enables thorough and transparent analysis. At the start of construction risks are clearly allocated to the parties on the basis of which is best able to positively influence the outcome.

6.4. Ex-post monitoring and audits

Performance during delivery of the proposed action will be monitored in accordance with the Roads Procedures Guidance System to provide governance approval through all stages of design and construction. Output will be based on routes created or reconstructed.

Detailed performance indicators and procedures for monitoring the performance shall be developed for all advisors and contractors involved in the project. Performance shall be measured quarterly in accordance with procedures set out in Infrastructure Group "Supplier Performance Monitoring Regime"

The global action will be subject to a benefits realisation assessment once operational as part of the Scheme Closedown Report process:

Evaluation will initially be completed one year following completion (of road opening) and will include:

A Design Effectiveness Review to consider the technical engineering and environmental design of the scheme.

A Cost Reconciliation Report to identify changes between the Target Cost established at the start of construction and the final Target Cost and out-turn costs at the end of construction. The report will consider the reasons for the changes such as Employer's instructions resulting in Compensation Events, the occurrence of risk events, errors or omissions in the contract works information, rate changes or other unforeseen events.

A Post Opening Project Evaluation (POPE) Report will also be completed to consider how well the project has met the scheme objectives. The POPE will consider aspects such as

- Changing traffic patterns on the route as a result of the scheme.
- How the forecast and predicted traffic impacts compare to those observed after the completion of the scheme.
- How the forecast and predicted journey time savings compare to those observed after the completion of the scheme.
- How the scheme has impacted on the safety and resilience of the route.
- Impact of the scheme on community severance and opportunities for non-motorised users
- How the forecast environmental impacts and effectiveness of mitigation strategies compare to those observed after the completion of the scheme.
- How the predicted Value for Money (Benefits to Cost Ratio) compares to that evaluated after the completion of the scheme.
- Any measurable Wider Economic Benefits

6.5. Communication and visibility given to the CEF Transport co-financing

We consider that European participation in the funding of this project would do much to enhance public appreciation of the positive role Europe plays in the development of UK transport infrastructure and its integration into the wider European transport network.

To publicise this welcome EU involvement in the project we will ensure that the positive EU role is stressed in:

- All media publicity
- All posters
- Signage during construction
- All relevant publications
- The Welsh Government's websites
- Press notices that the Action/ Project has attracted money from the EU
- Any project related materials.

We will also ensure that all Members of the National Assembly for Wales, Members of Parliament and MEPS representing Wales are fully appraised of the European contribution to the Action which provides opportunities to further enhance the positive role Europe is playing in the future of a modernised UK transport infrastructure.

6.6. Other information

None.

7. ANNEXES

All relevant information for assessing the proposal must be provided in the Application Form. The purpose of annexes is to provide additional, supporting information. Annexes or their specific relevant sections should be referred to in the application's relevant parts.

Annex 1: Annex 2:
