Appendix A.1

Record of Determination

IAN 126/09 ANNEX A: Record of Determination, Welsh Government, Economy, Science and Transport. For use with Annex II relevant projects only

Name of project: A483/A489 Newtown Bypass			**Location (including national grid reference):** South of Newtown Powys, Grid ref SO 079,901 to SO134, 922

Qualifying criteria for Annex II relevant project: (please tick which are relevant)

Improvement element of project is >1ha	✓	Project is located within 'sensitive' area	×	Other with potential for significant effect (e.g. adjacent to sensitive site)	✓

A. Description of project:

The project is a 6.5km bypass to the south of Newtown. It would link into the A489(T) Llanidloes Road to the west of Newtown by way of a roundabout. It would cross over the Mochdre Brook then run south of Mochdre Industrial Estate and would interface with the A483(T) at Dolfor Road by way of the A483 Dolfor Road Roundabout. There is a link from this roundabout into the Mochdre Industrial Estate along Hoel Ashley by way of Lower Dolfor Road Roundabout. From the A483 Dolfor Road Roundabout the route would pass over Middle Dolfor Road and under Upper Dolfor Road. It would then run in a north easterly direction across undulating agricultural land to the south of the Vastre and Dyffryn Industrial Estates. The Scheme would pass over Brimmon Lane and Brimmon Farm Underpass and would link into the A489 Kerry Road by way of a roundabout. It then crosses over the main Cambrian railway line east of Dyffryn Industrial Estate before tying into the existing A483(T) Pool Road to the east of Newtown by way of a roundabout.

B. Description of local environment, including statutory and non-statutory designations:

The area to the south of Newtown is rural and dominated by agriculturally improved grassland with patches of semi natural broad-leaved woodland and dense scrub. Hedgerows are present along field boundaries. The main water courses in the area are the River Severn which bisects Newtown (west to east) and lies to the north of the scheme and the Mochdre Brook which is a tributary of the River Severn and is crossed by the scheme on a wide span bridge. The Montgomery Canal Special Area Conservation (SAC) and associated site of Special Scientific Interest (SSSI) lie approximately 870m to the north east of the scheme and the River Wye SAC is approximately 7kms to the south. Mochdre Dingles SSSI, Penstrowed Quarry SSSI and Gweunydd Penstrowed SSSI are located within 2km of the western end of the proposals. Two further SSSIs (Caeau Cwm-ffrwd and Hollybush Pastures lie between 4-5km distant. Hollybush Wood Wildlife site is non-statutory and lies approximately 1km to the west. Glandulais Farm (west part) and (east part) is no longer designated by Powys County Council as a Wildlife Site. There is an Air Quality Management Area (AQMA) for annual mean nitrogen dioxide in the centre of Newtown which encompasses two properties along New Road. The nearest Scheduled Ancient Monuments (SAM)s are Newtown Old Church (MG056) and Newtown Castle Mound (MG160) in Newtown's historic core, and Gro Tump medieval motte and bailey castle (MG059) on its eastern outskirts, none of these are directly affected by the scheme.

C. Summary of main environmental effects of project:

An initial environmental assessment was undertaken as part of the KS2 study in 2009. The main potential environmental effects were identified as follows:

- The scheme is predicted to improve the air quality in Newtown but there may be localised impacts during construction
- Impacts on unknown archaeology. There is evidence of prehistoric, Iron Age and Roman remains within the locality requiring survey and recording as required
- Landscape and visual impacts are predicted and careful mitigation will be required
- Loss of habitats and impacts on protected species including Dormice, Bats, Badgers requiring effective site clearance, habitat enhancement and species /connectivity
- The geology includes mudstones and glacial moraine with relic landslips along the scheme. Geophysical investigation will influence design and alignment. Soils are mainly agricultural. Depth to rock head is currently unknown together with competency of rock in deep cuttings. Potential for localised soil contamination

- The scheme would pass close to some properties and industrial units so noise and vibration could impact specific receptors. There would be short term construction impacts and long term benefits within Newtown.
- The scheme would impact on Public Rights of Way which would require diversions
- The scheme would pass through low grade agricultural land and farm businesses would be impacted. It would pass through Powys Agricultural College land which would be mitigated. Some buildings and potential residential properties may require demolition
- The scheme would pass on an open structure over Mochdre Brook to minimise any impacts on water quality and flood risk. It lies close to the River Severn floodplain and flood risk area along Dolfor Road. There are many small watercourses which could be impacted.
- There could be cumulative effects with other plans and projects eg gas diversion

D. Details of extent of environmental impact assessment work undertaken and summary of any consultation undertaken with the statutory consultation bodies (including CADW, Natural Resources Wales and the relevant Local Authority):

Consultation was undertaken during the Key Stage 2 Study (2007-2009) to include the WelTAG Appraisal and Stage 2 DMRB Environmental Impact Assessment. Consultees included Countryside Council for Wales (CCW), Environment Agency Wales (EAW) – both now Natural Resources Wales (NRW), Cadw, Clywd – Powys Archaeological Trust (CPAT), MWTRA and PCC. Environmental Liaison Group (ELG) meetings were held through the KS2 Study and these have been resumed and will be held quarterly through KS3. In addition informal consultation with the Statutory and non-statutory environmental bodies will be ongoing.

E. Determination decision, statement of case in support of this decision as to whether EIA is/is not required:

The A483/A489 Newtown Bypass is an Annex II 'relevant project' as defined by the Highway (Assessment of Environmental Effects) Regulations 1999. In considering it against the criteria listed in Annex III of Council Directive 2011/92/EU an Environmental Impact Assessment is required. This is due to the characteristics of the project to include its size, the use of natural resources to construct and maintain it, production of waste associated with its construction and potential pollution and nuisance caused etc.); its location and the characteristics of potential impacts as identified in C. above..

File references of supporting documentation for future reference:

Parsons Brinkerhoff (2009) *A483/A489 Newtown Study – DMRB Stage 2 Environmental Impact Assessment*. Welsh Government

Parsons Brinkerhoff (2009) *A483/A489 Newtown Study – Technical Appraisal Report.* Welsh Government.

Welsh Government (2012) *A483/A489 Newtown Bypass – Works Information*

I have determined, following discussions with the Welsh Government's / Trunk Road Agent's Environmental Advisor that a statutory Environmental Impact Assessment is required for this project.

Signature Project Director: Dated:

Authorisation to publish Notice of Determination:

Signature Welsh Ministers' Nominee: Dated:

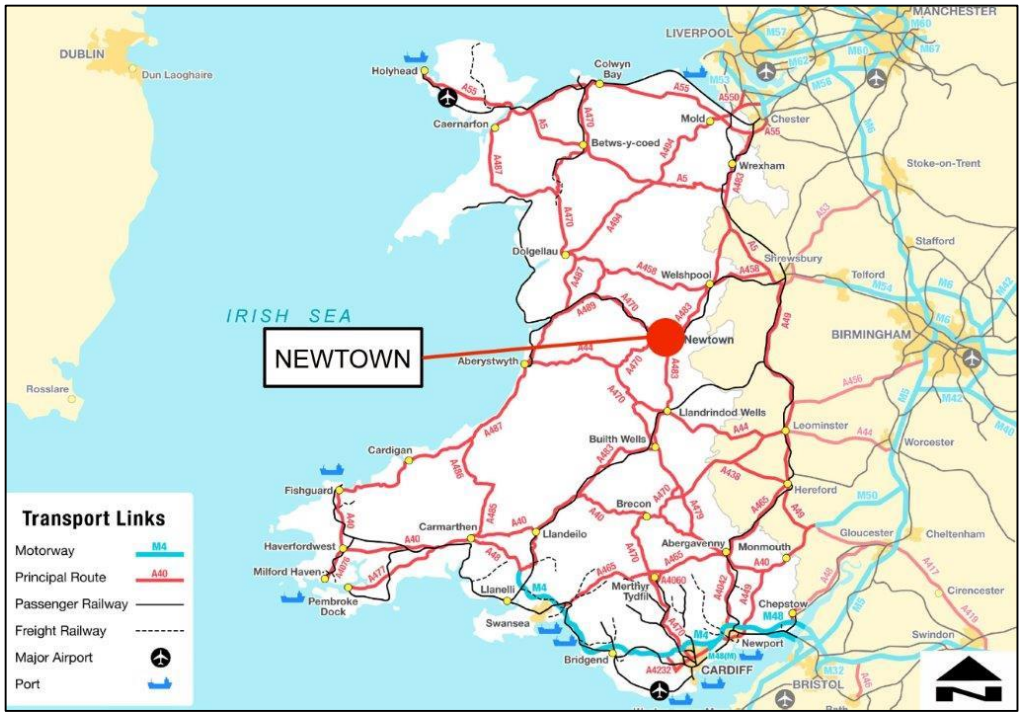

Figure 1 Strategic Context. (Taken from National Transport Strategy 2008)

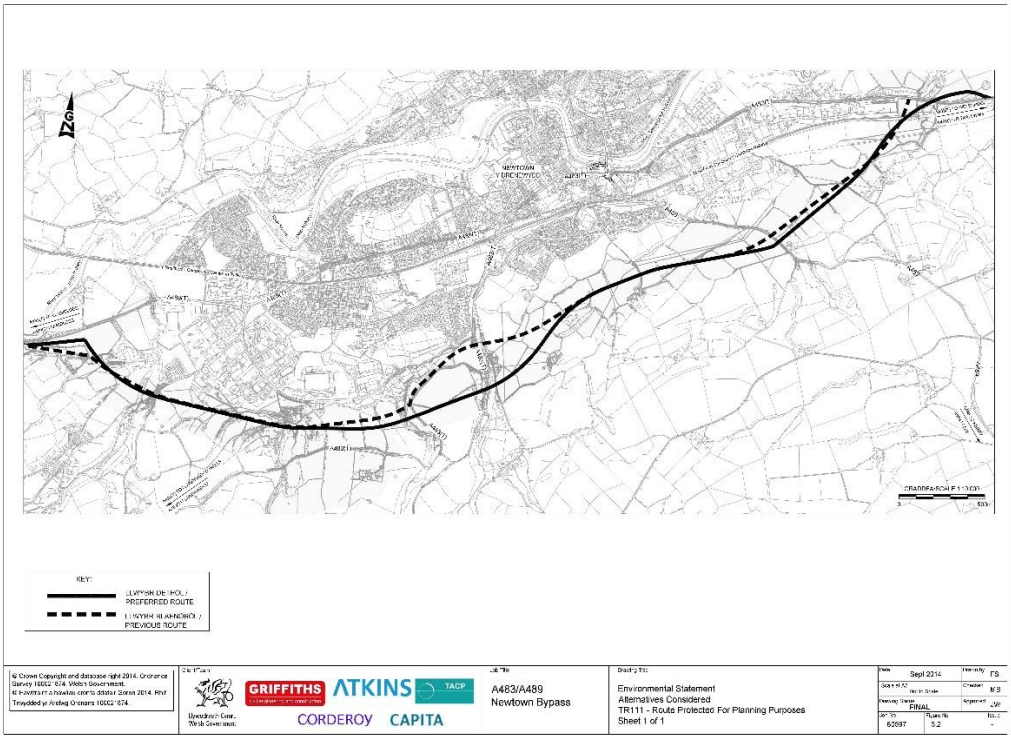

Figure 2 TR111 and Revised TR111

Appendix A.2

Response from Statutory Environmental Bodies

A483/A489 Newtown Bypass

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**			
Document ref No	5105742/ENV/SR/RT203/A1			
Submission reference:				
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW)	Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013			

Comments status key: **C** = Comment, **OBS**=observation only **CFA** = Comment for future action

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
1a	SW	I can confirm that there are no scheduled ancient monuments, historic parks and gardens or historic landscapes affected by this proposal. Cadw, therefore, have no comments to make in respect of the scoping report.	OBS	AFP	Noted.		
1b	CF	**Introduction (Section 1)** The National and Powys Biodiversity Action Plan should be added to the list of policies and plans considered to be of relevance to the assessment.	C	MB	These will be added		
2b	CF	**The Project (Section 2)** The Planning Objective 2 refers to *'meet targets and comply with appropriate environmental legislation and policies by 2015'*. It is not clear what this part of the objective means and what legislation and policies are being referred to.	OBS	JW	These are currently being reviewed and will be updated in the ES.		

A483/A489 Newtown Bypass

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**			
Document ref No	5105742/ENV/SR/RT203/A1			
Submission reference:				
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW)	Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013			

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
3b	CF	**Alternatives Considered (section 3)** We welcome the intention to provide public rights of way and wildlife crossing points (section 3.2) and we look forward to being further consulted on these matters as they are developed.	OBS	MB	Noted		
4b	CF	**Approach to cumulative impacts (section 5.2)** Projects which we advise need to be considered for inclusion in the cumulative assessment are as follows: The Llandinam 132kV grid connection; • The Strategic Traffic Management Plan for the Mid Wales Strategic Search Areas (SSAs); • The proposed Neuadd Goch windfarm; • The proposed Llandinam windfarm repowering; • Single turbine applications in the vicinity of Mochdre, Stepaside and Dolfor villages.	C	MB / JW	Noted. These will be considered in the ES.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
5b	CF	**Air quality (section 5.3)** Further clarification is required on what air quality assessment will be undertaken with regard to ecological receptors as opposed to human receptors. Apart from designated sites are there any other sensitive and important ecological receptors which could be impacted by air quality e.g. veteran trees?	C	ML	In accordance with Annex F of the DMRB Volume 11, Section 3 we will assess the impact of the scheme on air quality at any SAC, SPA, SSSI and Ramsar sites within 200 metres of the affected road network. Other ecological sites such as veteran trees and local wildlife sites have no special status with regard to air quality. Only national and international designations with potentially sensitive vegetation are recognised in air quality legislation. In accordance with IAQM guidance on construction dust impacts we will also identify locally designated statutory sites (e.g. LNR) potentially affected by dust. If a non statutory site (LWS, SINC, LNCS etc.) were to have specific sensitivity to dust then these could also be considered.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
6b	CF	**<u>Cultural heritage (section 5.4)</u>** *Proposed methodology 5.4.3* *Data gathering methodology* Please note the correct use should be made of LANDMAP which should be consulted during the desk based exercise – paying particular note to the Historic and Cultural heritage layers and their aspect areas.	C	AFP	Noted. This will be undertaken.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
7b	CF	Natural Resources Wales LANDMAP Guidance Note 3 provides advice on how LANDMAP should be used within the Environmental Impact assessment (EIA) process for onshore wind farms and their surrounding infrastructure. Although the guidance note is focused on the assessing on shore windfarms the introductory sections of the Note provide background information on the correct use of LANDMAP during the EIA process. This is a revised guidance note replacing an earlier version dated June 2010. Readers should be aware that this is a guidance note on how to use LANDMAP information as part of the landscape and visual chapter of an EIA. It is not exhaustive as to what should be included in the chapter and should be considered alongside the Guidelines for Landscape and Visual Impact Assessment 3 ed 2013). It is the responsibility of elopers to ensure they meet all the requirements of EIA legislation.	OBS	AFP	Noted		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
8b	CF	Also published in May 2013 LANDMAP Guidance Note 4: Guidance for Wales LANDMAP and the Cultural Landscape provides direction in using the LANDMAP Cultural Landscape layer. Further information on LANDMAP can be found by following the link provided below http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/landmap/landmapguidance--newlsletter.aspx	OBS	AFP	Noted		
9b	CF	*Policy context* Please add Cadw's *'Conservation Principles for the Sustainable Management of the Historic Environment in Wales'*, 2011 and English Heritage guidance on the '*Setting of Heritage Assets'*, 2011 to the list of documents which should be consulted.	C	AFP	Noted. These will be added.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
10b	CF	*Criteria for evaluating the cultural heritage resource.* Please note that although it is stated in the scoping report that the criteria are 'prescribed by DMRB', provision is made in the appendices for devolved nations policy and guidance – 'Consultants, contractors and managing agents (if appropriate) are to consult with the overseeing Organisations in the devolved administrations of Wales, Scotland and Northern Ireland regarding the application of this advice….	OBS	AFP	Noted.		
11b	CF	*Cultural Heritage Sub-Topic Guidance: Historic Landscape* In Wales the LANDMAP process should also be followed. Annex 8 contains guidance on the requirements of the devolved administrations.'	OBS	AFP	Noted		
12b	CF	With this in mind the comments on LANDMAP as above should be taken note of.	OBS	AFP	Noted		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
13b	CF	**<u>Landscape (Section 5.5)</u>** *Proposed methodology (5.5.3)* We welcome the opportunity to be involved in discussions to define the study area and to input on defining significant potential viewpoints.	OBS	PMC	Noted		
14b	CF	*Landscape baseline (5.5.3.1)* We welcome the approach to defining landscape character outlined in the scoping report and would like to draw your attention the importance of applying the LANDMAP data in a landscape character based approach. We have appended a guidance note developed by CCW for publication in the new LCA guidance which outlines how LANDMAP can be used in a landscape character base approach which we would be happy to discuss further. (Appendix 1).	OBS	PMC	Noted. Reference to LANDMAP Guidance Note 3 – LANDMAP and Landscape and Visual Impact Assessment added		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
15b	CF	We are keen to emphasise the importance of this approach in integrating the scheme into its landscape setting.	OBS	PMC	Agreed		
16b	CF	We would advise that the section of the assessment which deals with the susceptibility to change of each defined character area should set out clearly what the criteria upon which the susceptibility to change analysis are based on – whether this is landform, scale, scenic quality etc.	OBS	PMC	Noted		
17b	CF	We would expect the baseline to make use of any other published Landscape Character Assessment covering the study area.	C	PMC	This will be reviewed as part of the baseline.		
18b	CF	We would welcome an on-going involvement with any additional work or information might be required to enable an effective assessment to be made, such as additional view points, cumulative photomontages, or alternative options for layouts/infrastructure and access and compound arrangements during construction.	OBS	PMC	Noted		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
19b	CF	*Visual baseline (5.5.3.2)* We welcome the opportunity to work with the contractors in selecting viewpoints. As with the landscape baseline we recommend the development of an appropriate set of criteria upon which to base the visual susceptibility to change.	OBS	PMC	Noted		
20b	CF	Agreement should be sought with the competent authorities on the approach to be taken on visualisations of the scheme and best practice followed in the production of, for instance, photomontages. These discussions should cover the advisability of producing 15 year established mitigation visualisations as described at 5.5.3.5 in the text.	C	PMC	Noted		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
21b	CF	We recommend in addition the production of maps and plans which show clearly for each route option the baseline landscape resource including the landscape character and/or LANDMAP aspect areas and landscape features such as historic hedgerows, veteran trees etc.	C	PMC	The route options were assessed through the WelTAG process during the key stage 2 study in 2009. All options along the scheme will be outlined and assessed in the Options Report. This will include relevant plans and baseline data. The ES will assess in detail the proposed scheme.		
22b	CF	While we welcome the approach that has been outlined for assessing both the landscape and visual effects we would like to note that although tables and matrixes are of use for summarising effects and significance this is no substitute for a well written descriptive text which communicate the scope and nature of the scheme and its likely effects.		PMC	Agreed		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
23b	CF	*Potential environmental impacts and mitigation measures (5.5.4)* We are pleased that the complex topography of the scheme area is noted and the design issues associated with this are recognised. We look forward to working with partners on how the detailed design of ground modelling and associated structures can help the scheme fit its landscape context. This includes a consideration of the existing and proposed drainage system and associated additional attenuation features.	OBS	PMC	Noted		
24b	CF	Use of lighting should be minimised or ideally avoided to avoid light pollution particularly when considering the use of night time lighting in rural area. Design and siting of light columns will be particularly important. This should include mitigation to reduce vehicle headlight spill. The design of structures should take into account noise and impact on tranquillity.	C	PMC	Noted. However the lighting design will also take into consideration health and safety, ecological and other requirements.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
25b	CF	Detailed design and on and off site planting should take into account the local context and include a consideration of local landscape features e.g. –, hedges/cloddau/species mix for amenity and mitigation planting	OBS	PMC	Noted		
26b	CF	Landscape design objectives for each section should be clearly set out with an identification of proposed mitigation measures	OBS	PMC	Noted		
27b	CF	**Nature Conservation** We note that Natural Resources Wales (as CCW) has no record of being consulted on the scope or results of the 2012 ecological surveys. The scoping report often relies on the results of these 2012 surveys to inform decisions about whether further surveys are required in 2013. In the absence of the 2012 surveys then we cannot comment on whether these conclusions are appropriate.	OBS	SS	The 2012 surveys were undertaken prior to the commissioning of the ECI contractor. The 2012 surveys were used in combination with the 2008 Stage 2 Assessment surveys and an updated biological records request to determine the 2013 survey requirements		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
28b	CF	It is not clear what the Regional geographical context is considered to be. Is it Powys?	C	SS	This will be Powys and will be addressed in the ES		
29b	CF	We note the definitions of the value of ecological receptors and that an element of professional judgement will be required to inform the evaluation of ecological features. The assigned values should be justified in the ES.	C	SS	Noted		
30b	CF	The definitions of magnitude of impact mainly concern habitats and you should also include definitions for species.	C	SS	Guidelines from CIEEM have been used		
31b	CF	Where the phase 1 survey identifies semi-natural habitat it may be necessary to undertake NVC surveys to identify the value of these habitats for the ES.	C	SS	Further to the Phase 1 Habitats Survey update no NVC surveys are considered necessary.		
32b	CF	With regard to table 5.6.1 it is not clear which impacts are considered to be significant under the EIA Regulations.	C	SS	This will be clarified in the ES		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	
Document Title:	**Environmental Scoping Report**			
Document ref No	5105742/ENV/SR/RT203/A1			
Submission reference:				
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW)	Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013			

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
33b	CF	At what stage will hedgerow surveys undertaken? (section 5.6.3.7)	C	SS	No specific Hedgerow Regulations Surveys were undertaken. Hedgerows have been surveyed as part of the Phase I update in May 2013 and the Dormouse habitat assessment in June 2013		
34b	CF	It would be useful to have a map showing where the dormouse surveys are being undertaken so that the locations can be related to the project area. What approach will be used if access permission for surveys is refused?	C	SS	A figure of survey areas will be included within the ES, access has not been refused therefore an additional approach has not been required		
35b	CF / JM	Comments have previously been provided on the bat surveys in an email dated 10 May 2013. Six additional flightlines were proposed by JM.	OBS	SS / JW	Email from JW to JM on 10th May 2013 providing rationale for not undertaking proposed flightline surveys. Email from JM on 25th July confirmed acceptance but requested these are reviewed following bat roost surveys.	Review proposed surveys and confirm with JM	SS

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
36b	CF	Will the badger survey identify likely badger crossing points of the proposed route of the road to help inform the location of wildlife crossing points?	C	SS	Notes were made on potential tracks and paths where there was evidence of this on site. Mitigation will allow for badger crossings as appropriate.		
37b	CF	It is not clear what bird breeding surveys are being undertaken. Are you only surveying for early nesting species in February? Clarification is required on the study area for breeding birds. Are surveys being undertaken for barn owls?	C	SS	Previous surveys have shown breeding birds across the length of the scheme. Presence / absence surveys will be undertaken prior to clearance works. Only early nesting birds are being surveyed. Barn Owls will be noted as part of bats surveys on site.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
38b	CF	With regard to great crested newt it would be useful for the report to have collated the information on the existing surveys in 2008 and 2012 so that these could have been reviewed. We suggest that this is completed and Natural Resources Wales are consulted on this to confirm that no further surveys are required. Great crested newts are present in Newtown and the surrounding areas of the Severn valley.	C	SS	These reports are available on the Z Environment share-point site. These can be provided directly if required.		
39b	CF	The report states that there are Powys BIS records for water vole in the study area but then states that it is considered unlikely that this species would be present in the area. This requires clarification. Again it would be useful to collate the previous survey scopes and results to justify the statement that the species is absent and no further surveys are required.	C	SS	The only record is from 1999, approximately 1km from the scheme's eastern end within the Pwll Nature Reserve. Given the lack of suitable habitat within the vicinity of the scheme, we do not consider there will be any impact on Water Voles and have therefore scoped out the need for further surveys.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	
Document Title:	**Environmental Scoping Report**			
Document ref No	5105742/ENV/SR/RT203/A1			
Submission reference:				
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW)	Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013			

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
40b	CF	We agree that white clawed crayfish are unlikely to be present in the watercourses within the study area.	OBS	SS	Noted		
41b	CF	You should consider whether a survey to identify and evaluate veteran trees is required.	OBS	SS	A survey of veteran trees will be carried out prior to construction as appropriate.		
42b	CF	We welcome the intention to provide habitat enhancement, mitigation and monitoring and we look forward to further discussing this aspect of the project with you.	OBS	SS	Noted		
43b	CF	**Annex D: Appropriate Assessment Scoping Report** The terminology in the report requires amendment. We suggest the report is entitled 'Habitats Regulations Assessment Scoping Report'. You should note that an appropriate assessment is only required if it is determined that there is likely to be a significant effect alone or in-combination for a European site.	C	SS	The assessment follows DMRB guidance and the terminology used reflects this guidance.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
44b	CF	We broadly agree with the conclusions of the report in section 4. We look forward to being consulted on the HRA screening report with regard to the potential for a likely significant effect on the Montgomery Canal SAC.	OBS	SS	Noted.		
1c	JD	**Geology and Soils** We have no record of reviewing the 2012 Preliminary Sources Study Report and this Scoping Report's baseline conditions have been limited to these findings.	C	HB / JW	The 2012 report was undertaken prior to the commissioning of the ECI contractor.	A copy will be forwarded to NRW.	MB
2c		We agree with the proposed methodology and the approach to be taken at Stage 1 – Risk Assessment.	OBS	HB	Noted.		
3c		We will comment further on the potential risks to receptors and potential mitigation when further detail is available.	OBS	HB	Noted.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
4c		**<u>Road Drainage and the Water Environment</u>** 5.12.2.1 Baseline conditions outlined for flooding only references our Flood Map. Due to previous flash flooding in Newtown over the past few years further baseline conditions should be considered. Close liaison with Powys County Council Land Drainage Department is advised to understand the full extent of flood risk in the area (including pluvial, sewer flooding). The Project should explore options for upstream storage, or similar, to ease flooding problems downstream.	OBS	IAD / JW	Noted.	PCC Land Drainage to be invited to ELG.	MB
5c		The sewerage undertaker for this area is Severn Trent Water not Dwr Cymru Welsh Water when obtaining drainage information.	OBS	IAD	Noted.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
6c		5.12.2.8 We acknowledge the intention to prepare a hydrological assessment to assess flood flows to all existing and new culverts and pipes, including sensitivity to blockage. This should assess all watercourses. Consent will be required under the Land Drainage Act from Powys County Council on works to ordinary watercourses.	OBS	IAD	Noted		
7c		All future consultation on flood risk should include both NRW and Powys County Council Land Drainage Department.	OBS	IAD	Noted		
8c		5.12.3.6 Our guidance for WFD Geomorphological Assessments is set out in Annex 3. This should act as a broad guide on the level of assessment required under WFD. Further, site specific advice, can be offered when baseline conditions are made available.	OBS	IAD	Noted	NRW requirements under the WFD need to be clarified in terms of water quality and geomorphology.	JW

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
9c		5.12.4 Pollution Prevention Guidelines and industry best practice should be used when preparing the ES and mitigation measures.	OBS	IAD	Agreed		
10c		Potential watercourse crossings should be of clear span structures in preference to culverting to prevent barriers to fish migration and impact on habitat quality and connectivity.	C	IAD / JW	Noted. Structures over water courses will be discussed with NRW.		
11c		Any proposed culverting should be justified and the ES should demonstrate that it is the only reasonable and practical alternative to clear span.	C	IAD	Noted		
12c		Information should be submitted demonstrating any new culverts will not have a detrimental effect on habitats and species present. Opportunities to replace existing culverts with clear span or de-culvert should be explored and presented in ES.	C	IAD	Noted. This will be covered in the Nature Conservation chapter and cross referenced into the water chapter.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
13c		Re-alignment of watercourses should be minimised and proposed only if it can be demonstrated that this is the only reasonable and practical alternative. The ES should set out appropriate mitigation if re-alignment is proposed, for example restoring meanders in the catchment if environmentally beneficial.	C	IAD	Noted		
14c		Any in-stream construction works should be confined to a period running from 1 May to 1 October in order to minimise disturbance to spawning salmonids (Atlantic Salmon and Brown Trout).	C	IAD	Noted		
1d	MW	**Cultural Heritage** We agree with the broad scope of assessment presented in the document, which is in accordance with our own previous recommendations made during KS2 and with the principles of archaeological assessment set out in DMRB and the Institute for Archaeologists standards and guidance.	OBS	AFP	Noted		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
2d	MW	It is assumed that the archaeological consultant has provided a brief for the archaeological assessment which is closely based on the DMRB stages of assessment. A copy of any brief provided should be forwarded to the curator.	C	AFP	These will be provided as requested.		
3d	MW	With regard to 5.4.3 the curator will need to see and approve a written scheme of investigation (WSI) document for each stage of field investigation, or an amalgamated WSI for all stages prior to construction commencing. A WSI would also need to be produced for any mitigation works carried out prior to/during construction. To date we have not been forwarded a WSI and we are aware that the field walkover stage of the assessment began today (22/7/13). A WSI should therefore be forwarded for approval ASAP.	CFA	AFP	WSI will be provided as requested.	WSI documents for the field work associated with the EIA will be provided at this stage; those for post-consent works will be formulated at a later stage, in consultation with CPAT.	AFP
4d	MW	Copies of all subsequent reports arising from the field investigations should be forwarded to the curator for further comment and to allow agreement of appropriate mitigation between the consultant and the curator.	OBS	AFP	These will be provided as requested.	All field work reports and generated data will be forwarded to Andrew Pearson, who will forward these to CPAT.	AFP

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
5d	MW	**Landscape** 5.5.3.1 depending on the final agreed radius of the ZTV mapping it may be appropriate to include the boundaries of the nearest Registered Historic Landscapes on the ZVI, which would include the Caersws Basin and the Vale of Montgomery. It should be said though that we do not anticipate any visual impacts on these distant landscapes.	OBS	AFP	These will be included in the cultural heritage baseline.		
6d	MW	In addition to the scoping document comments given above it should be noted that any curatorial involvement with the scheme outside of the ELG meetings, which may include site/office meetings or monitoring of archaeological contractors during fieldwork, will incur an inclusive daily rate charge of £230 per day. I would be grateful if you could forward contact details for the person I should submit invoices to in the event that these costs are incurred during the project.	OBS	JW	Noted.	The issue has been raised with the Welsh Government	WG

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
1e	CC	Thank you for allowing Countryside Services the opportunity to comment on the Environmental Scoping Report, for the A483/A489 Newtown Study. It is evident from the proposals that preferred route corridor will significantly impact upon existing public rights of way. With reference to a letter dated 6th October 2009, Countryside Services made comments in relation to the proposals at that time. The information contained in that letter is still relevant to this project and as such Countryside Services is requesting to work with the developers on the likely impacts upon the public rights of way network.	C	JW	Noted, we will liaise with PCC.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
2e	CC	Countryside Services notes that within the Scoping Report reference is made to mitigation measures; in particular to the provision of road crossing points. Countryside Services would need to ensure that any proposed crossing point in relation to public rights of way is in line with current legislation and best practice, in terms of meeting requirements under equality and disability law. For example, where crossing points meet the road there would be an expectation to link via ramps not steps and where access furniture is required it would need to be in the form of gates not stiles. These more specific details can be discussed further along in the process, however they must be given due consideration throughout the project development.	C	MB	Noted. We will discuss these issues with PCC further during the project.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
3e	CC	Where the need to divert or alter the current line of an existing public right of way is required then Countryside Services must be consulted at the earliest opportunity to work with the developers to provide the most appropriate alternative available. This includes any proposed alterations under side road orders and public path orders, which would require full consultation in their own right. Within this process the opportunity to rationalise the local rights of way network may be possible and as such the opportunity to investigate this further would be appreciated.	C	MB	Noted. We will discuss these issues with PCC further during the project.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
4e	CC	Countryside Services have been involved in recent years, with similar projects within the county and as such have experience of past issues that have lead to further complications and potentially missed opportunities. As such it is strongly recommended that the Service takes a full and active role in this project with regard to the public rights of way network. The local area officer is willing to work with the developers to look at all potential mitigation and development ideas and is best placed to offer specific guidance on path surfacing and furniture items that would be most acceptable to this scheme.	C	MB / JW	Noted. The ELG is an appropriate forum for these discussions. Additional meetings can be held as appropriate.		
5e	CC	Countryside Services therefore welcomes the opportunity to work with the developers throughout this project and looks forward to ongoing discussions to develop proposals to provide an improved local rights of way network within the Newtown community.	OBS	MB	Agreed.		

Schedule of Comments and Responses

Contractor/Designer	Griffiths/Atkins/TACP	**Employers Agent**	Corderoy/Capita	

Document Title:	**Environmental Scoping Report**		
Document ref No	5105742/ENV/SR/RT203/A1		
Submission reference:			
Date comments received:	10/05/2013 (JM), 01/07/2013 (SW), 20/07/2013 (CF), 01/08/2013 (JD), 22/07/2013 (MW),26/07/2013 (CC), 06/08/2013 (PB).	Reviewer: S. Whiting (Cadw), C. Fielding and J. Davies (NRW), Mark Walters (CPAT) Callum Carr (PCC) Paul Bufton (PCC)	Team respondents Andrew Pearson (AFP) Max Burrell (MB) Jo Wall (JW) Megan Le Mare (ML) Peter McComiskey (PMC) Sam Shove (SS) Heather Broad (HB) Ian Dalgleish (ID)
Date comments returned:	06/08/2013		

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
1f	PB	Thank you for consulting this department on this scoping report. I can confirm that we are in agreement with both the proposed methodologies for air quality and noise and vibration. We request to be kept informed of progress with work on each of the EIA chapters.	OBS	JW	Noted.		

A483/A489 Newtown Bypass

Schedule of Comments and Responses

<table>
<tr><td>Contractor/Designer</td><td colspan="2">Griffiths/Atkins/TACP</td><td>Employers Agent</td><td>Corderoy/Capita</td><td>SOC 025</td></tr>
<tr><td colspan="2">Document Title:</td><td colspan="4">Working Draft Environmental Statement Reports Vol 1,2 and 3</td></tr>
<tr><td colspan="2">Document ref No</td><td colspan="4">5105742/ENV/ES/RT 209 to 211 D1</td></tr>
<tr><td colspan="2">Submission reference:</td><td colspan="4">e-mail and Sharepoint</td></tr>
<tr><td colspan="2">Date comments received:</td><td>23/03/2014 (CP)
25/03/2014 (MW)
31/03/2014 (CG)
15/04/2014 (JS)
16/04/2014 (PB)
21/04/2014 (JM, CP & JD)
24/04/2014 (CC)
30/04/2014 (JD)
20/05/2014 (JD)</td><td rowspan="2">Reviewer:
Claire Parry (CP) – NRW
John Messenger (JM) – NRW
Jim Davies (JD) – NRW
Cy Griffiths (CG) – PCC
Paul Bufton (PB) – PCC
Jon Stoddard (JS) – Capita
Mark Walters (MW) – CPAT
Calum Carr (CC) - PCC</td><td rowspan="2">STATUS of comments:
Received x
Received with comments x
Returned</td><td rowspan="2">Respondance
Jo Wall (JW) – TACP
Max Burrell (MB) – TACP
Peter McComiskey (PMc) – TACP
Andy Pearson (AP) – PAL
David Wells (DW) – CEC
Megan LeMare (MLM) – Atkins
Dan Pope (DP) – Atkins
Ian Dalglish (ID) – Atkins
Steve Preedy (SP) – Atkins
Nick Gorst (NG) – Atkins
Daisy Daniel (DD) – Atkins
Dominic Harries (DH) - Atkins
Janet Duncan (JD) – Atkins
Kevin Skinner (KS) – Atkins</td></tr>
<tr><td colspan="2">Date comments returned:</td><td>10/06/2014</td></tr>
</table>

Comments status key: **C** = Comment, **OBS**=observation only **CFA** = Comment for future action

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
1a	CP (NRW)	There is an urgent point for feedback regarding the quality of the photographs in the draft ES, particularly in relation to the landscape chapter. Figures 7.6a-b Landscape Character Photographs (& Fig 7.8 a-c Townscape Character Photographs) - Many photos are overshadowed and should be re-taken and replaced in the final ES. A map indicating the locations of the photographs should be included.	CFA	PMc	Noted. Photos to be replaced for final ES. Photos are representative examples of character areas and therefore specific image locations are not relevant.		
2a	CP	Figure 7.10 a to w Key Views - Many photos, particularly the summer photos are dark and they do not clearly illustrate a contrast between summer and winter conditions as many of the winter photographs appear to have been taken on a clearer day.	C	PMc	Photos primarily illustrate the change in vegetation cover from summer to winter but clearly both periods are subject to weather and light variations.		
1b	CG (PCC)	Re. impacts on Black Hall Farm and Castell-y-Dail Farmhouse and comments from Andy Pearson in e-mail dated 22nd January 2014. It is tricky to see what could be done to truly mitigate from an historic environment perspective apart from moving the road but what the screening measures suggested may help to prevent complains / objections from the owners? In planning terms an assessment of the severity of impact would need to be weighed against the economic and social benefits of the entire scheme.	OBS / CFA	AP	Noted. The impacts (or lack of) will become clearer with the visualisation graphics to be generated. Screening measures will be developed and outlined in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
2b	CG	I think that the setting of Glanhafren Hall will be significantly affected at the western end of the scheme, as it faces due south with views out in that direction. Current views are of pastoral agricultural land and woodland and it was presumably built in this manner quite deliberately, located as it is, on a rise in the land. The existing road is quite modest and screened by hedging but it seems from your plans that there will be a substantial roundabout and earth banking, raising up the level of the road into the views from the Hall. The historic mapping shows what appears to be large amounts of estate trees both in the field in front of the house and along the road. I don't know if talks with the owner might be able to provide some mitigation in this form?	CFA	AP	This will be reviewed in the light of full scheme information and visualisations for final ES.		
3b	CG	I think that there will be more of an impact on the setting of Glan Hafren House and barn than has been highlighted in the report. Again the existing road is quite modest and the scheme is showing a large roundabout and flyover type arrangement with earth banking, which is a substantial change. I think this is probably less of a concern than Glanhafren Hall, but I think the report should reflect this impact.	CFA	AP	This will be reviewed in the light of full scheme information and visualisations for final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
4b	CG	For assessing the impact of development on the settings of Listed Buildings I think that the report should use a methodology which assesses the impacts on the significance of the asset using the criteria of evidential, historical, aesthetic and communal values. I.e. identifying what the setting contributes to the evidential, historical, aesthetic and communal value of the asset and then assessing the likely impact of the proposal on this significance (See Cadw's 'Conservation Principles' (2011) and English Heritage's 'The Setting of Heritage Assets' (2011)). The methodology currently reads more like a landscape impact assessment, which uses a different approach. The relevant policies, legislation and guidance documents, such as these, should be added to those already referenced in the report.	CFA	AP	Noted. Section on the assessment of setting to be added into Methodology. (Nb: English Heritage documentation will not be referred to as it does not apply in Wales). The general approach to assessment of setting should become clearer in the updated version of the impacts section in the final ES.		
5b	CG	Please could a cumulative impact assessment be included for impacts on setting of Listed Buildings? To include impacts of visual, noise, landscape etc.	CFA	MB/AP	Listed buildings / structures in close proximity to the scheme will be considered in the in-combination effects assessment within Chapter 15 of the ES Volume 1.Noise data and visualisation will be used to inform the assessment.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
6b	CG	Please could visualisations of views from and impacts on setting of Listed Buildings be provided where impacts on settings have been identified? Useful info would include sections so that vertical height can be judged and photomontages so that visual intrusion can be assessed.	CFA	AP	Request noted. Visualisations to be included in the final ES to be agreed with CG.		
7b	CG	Since assessing impact on setting of Listed buildings uses a different methodology to that for archaeological remains, I think the report would benefit from having the section on Listed Buildings separated out from the comments regarding archaeological sites.	CFA	AP	This will be addressed in the final ES.		
1c	JS	**1.6 Consultation** Consider inserting more information on the date of the Inaugural Environmental Liaison Group (06/02/09) and second ELG (02/09/09) to demonstrate that environmental issues have been considered from an early stage in the process	CFA	JW / MB	Yes. This will be addressed in the final ES.		
2c	JS	**2.2 Context** Consider making reference to the online improvements as part of the overall scheme proposals.	CFA	JW / MB	Online improvements form the 'de-trunking' works for the Scheme. This will be noted in the overall scheme proposals. .		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
3c	JS	**2.5 Project Description** Consider splitting this section into distinct headed sections as undertaken later in document under 2.6.3 :- • estern tie in to Mochdre • Mochdre to Dolfor etc It would be easier for the reader who is unfamiliar with the route to follow	CFA	JW / MB	Agreed – this will be expanded and developed in the final ES and will use appropriate sub-headings.		
4c	JSTOD	**2.5.1 Ongoing Design Development** 4th bullet – typo *relct* should read *relict*	CFA	JW / MB	Noted.		
5c	JS	2.6.1 Methodology and Overview Consider fragmenting the second to last paragraph to read .....*and ensures the topsoil and associated seed bank is returned to its original area. It also provides a bund*.....	CFA	JW / MB	Noted.		
6c	JS	2.6.2 Site Compound and Delivery Routes Consider amending to *.....and the last three months would mainly comprise of preparing the landscape plots.....*	CFA	JW / MB	Noted.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
7c	JS	2.6.6 Dolfor Underbridge *Insert piled foundation on the western abutment*	CFA	JW / MB	Noted.		
8c	JS	**3.1.4 WelTAG Stage 2 Appraisal** Consider inserting the date of the of the public exhibition at the end of 2nd para	CFA	JW / MB	Noted.		
9c	JS	**3.2 Design Alternatives assessed through KS3** Typo The lline	CFA	JW / MB	Noted.		
10c	JS	**4.20 LANDMAP** Para numbering ? Typo *wales*	OBS/CFA	JW / MB	Noted.		
11c	JS	4.21 typo *Conolbarth*	OBS/CFA	JW / MB	Noted.		
12c	JS	5.1.2.1 Air Quality Legislation Set by expert organisations such as DEFRA & WHO?	OBS	MLM	Noted		
13c	JS	**5.2.3.4 Ecological Receptors** Consider inserting *in terms of air quality* following need only be considered	OBS	MLM	Noted		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
14c	JS	7. Landscape 7.1.1 General 1st line Suggest omission of *impact* and replace with *effects*	CFA	PMc	The ultimate intension is to assess the landscape and visual impact through consideration of effects and therefore we consider the terminology to be appropriate.		
15c	JS	7.2.2 Zone of Visual Influence Pls confirm if observation height of 1.8 metres AGL is correct Would it be worthwhile explaining why DTM mapping was not used and why the ZVI was not generated digitally?	OBS	PMc	Noted. To be confirmed and will be in accordance with DMRB Explanation re DTM mapping is not used to be provided.		
16c	JS	7.3.1 Landscape Structure Refer to 2nd para 'subtly undulating valley slopes and minor side valleys..' These are referred to as ' incised' in 7.3.4 which seems a more appropriate description Also.. Reference in description to '*vineyards'* could be construed as misleading (visions of the Dordogne!) as there is just one	OBS OBS	PMc	7.3.1 2nd para relates to the whole study area whereas 7.3.4 relates to a particular character area. Noted.		
17c	JS	**7.3.5 Townscape Character Assessment** 4th para 2nd line Consider replacing *north-south* to *west east*	OBS	PMc	Noted – to be reworded		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
18c	JS	**7.3.5 Townscape Character Assessment** River Severn – described as an *Open, green corridor* Consider amending the description as the river valley could be considered as contained by localised topography and bankside vegetation	CFA	PMc	Noted. The corridor is considered open in character along its length through Newtown providing longer views and characterised by riverside vegetation. However in the wider context it is contained within the valley form.		
19c	JS	**7.3.5 Townscape Character Assessment** Do we need to include description of all the 33 townscape character areas as we are by-passing the town to the south? There is very little adverse effects as recorded in Table 7.17 The by-pass is the main focus for the ES and not the on-line improvements although we could refer to them in the ES as part of the overall project	OBS	PMc	These have been included as they fall within the ZVI and provides consistency with previous studies.		
20c	JS	**7.3.6 Visual Baseline Assessment** **2nd para** *'The town enjoys an attractive rural backdrop to views' ?* Are not the views from the town to the rural backdrop largely restricted to within the townscape and settlement boundary?	C	PMc	There are many views across the town from the higher ground that have a countryside backdrop.		
21c	JS	**7.6 Summary and Conclusions** **8th para line 5** Consider replacing *visible* with *visually significant*	C	PMc	The significance relates to the totality of the view and therefore assigning elements within it their own significance is not appropriate		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
22c	JS	**Generally** Would it be useful to describe the principal forms of mitigation techniques appropriate to the landscape structure/character of the scheme such as hedgerows, woodland blocks/plantations/strips, re-profiling embankments?	C	PMc	Greater detail will be provided in the final ES.		
23c	JS	**7.6 Summary and Conclusions** Could we suggest that the extensive planting for landscape mitigation purposes would also have some (significant) benefits to biodiversity and this is reported in the following chapter 8 Nature Conservation?	C	DW	Potential benefits to biodiversity have been identified in Chapter 8: see table 8.6.1 and section 8.7		
24c	JS	**8 Nature Conservation** **8.1.1 General** Typo *constrainsts*	OBS	JW / MB	Noted		
25c	JS	**8.1.1.2 Key Policies and Plans** *and revised in 2014*	CFA	JW / MB	Noted		
26c	JS	**8.2.1 Invertebrate Surveys** **4th para 1st line** Insert - *in order **to***	CFA	JW / MB	Noted		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
27c	JS	**8.2.1 Fish Surveys** Consider inserting names of watercourses identified by NRW as being of importance to fish	C	JW / MB	Fisheries surveys have been carried out and will be included in the final ES.		
28c	JS	**8.2.1 Amphibians** Would it be worthwhile noting how many ponds were surveyed in 2008 to illustrate any trends compared to the 14 surveyed in 2012?	C	DW	This information is in the Appendices, but will be added in to this section as well. Number of ponds from 2008 surveys to be included.		
29c	JS	**8.3.2 Plants and habitats** **1st para 5th line** Typo amend to *Glandulas* Pls also check labels on drawings and text for consistency	CFA	JW / MB	Noted.		
30c	JS	**8.5.1 Badgers** **5th para – last line** Consider re-structuring of sentence	C	DW	Noted. This section will be revised in the final ES following the badger update surveys of 2014.		
31c	JS	**8.5.2 Fish** **Refer to Figure xxx for culverts** **Typo -** accommodate	CFA	JW / MB	Noted.		
32c	JS	**8.5.2 Reptiles** SRG would not be considered within the highway verge anyway	C	DW	Noted		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
33c	JS	**8.5.2 Otters** Mammal resistant fencing – if crank top fencing is required can we consider the location of this carefully, preferably out of sight. We need to discuss this with NMWTRA. Mammal resistant fencing proposals appear not to be indicated on the Environmental Masterplan	C	JW / MB	No crank is proposed on the mammal fencing. Mammal fencing was not included in the Draft ES due to changes in the site extents. These will be shown on the Environmental Master Plans in the final ES.		
34c	JS	**Generally** Consider the overall effects of the scheme in terms of the net loss/gain for example of hedgerow and woodland habitat. Could we demonstrate that there overall and in the long term, there may be some positive effects?	C	DW	Some positive effects are predicted: see table 8.6.1 and section 8.7 Habitat areas have not been included in the draft ES as the Scheme alignment was not finalised. Habitat area loss/gains to be included in final ES.		
35c	JS	**9.1.2 Scope** Consider inserting *barytes or* in front of barites Typo – *Penstrows* should read *Penstrowed*	C	NG / SP	Agreed Noted		
36c	JS	**9.3.2 Geography and Topography** Consider inserting the following text ; *The Scheme would run approximately with the contours – but is dissected by several incised river valleys containing minor tributaries of the River Severn*	CFA	NG / SP	Agreed		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
37c	JS	**10.2 Methodology for assessment of effects due to operation** Consider the application of road salt during the winter months	C	NG / DD, ID / KC	It is not anticipated that there will be any requirements for importing or exporting material to or from the site other than replacing safety fences and, during severe winters, the application of salt from road gritters, which are based at Llanidloes. Implications of road salt on water quality will be addressed in the final ES.		
38c	JS	**10.5.1 Construction Mitigation** Consider omitting the reference to essential landscape mitigation as it could be considered that any mitigation proposed would be essential as opposed to non essential or desirable.	C	NG / DD	Agreed		
39c	JS	**12.4.2.3** Typo - *propsed*	CFA	MB	Noted		
40c	JS	**13.2 Methodology** **Last line** Typo as should read *has*	CFA	MB	Noted		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
1d	PB	I am happy with the Air Quality assessment methodology but am concerned about the housing development which as I understand it has outline consent south of Heol Treowen. I am unclear of the status of this development however if it has the potential to be developed under its current consent then it should be included as a receptor.	CFA	MLM	A receptor for the housing development will be included in the model re-run for the final ES		
2d	PB	I suspect that above point may be also be relevant to noise.	CFA	DP	As above. A receptor for the housing development will be included in the model re-run for the final ES		
1e	CP	**Chapter 7 Landscape** **7.2 Methodology** It would be helpful if this section included the relevant guidance as a fully referenced bullet pointed list. Section 7.2 could contain more frequent cross references to relevant tables and figures and give a clearer explanation. Methodology states that the LANDMAP character areas have been considered. A clear explanation of how this was done needs to be included.	C	PMc	Noted, to be expanded upon in the final ES		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
2e	CP	**7.2.2 Zone of Visual Influence** This section is too long - more subheadings required. The first paragraph could be more explicit in terms of the exact guidance that has been consulted to devise the parameters for the ZVI.	C	PMc	Noted.		
3e	CP	Figure 4.1 showing LANDMAP character areas. This map needs an OS underlay to make sense.	C	JW	Noted. LANDMAP Aspect areas will be shown on an OS base in the final ES.		
4e	CP	The paragraphs describing Tables 7.1 to 7.12 are quite convoluted and would be better explained with a flow diagram to explain the relationships and cross references between the different criteria.	C	PMc	Noted.		
5e	CP	Chapter 7 Tables - The shade of green could be made lighter to enable reading of a monochrome print out.	OBS	PMc	Noted		
6e	CP	**7.2.6 Visual Impact Assessment** There appears to be some inconsistency in the terms used this paragraph as the writing refers 'Magnitude of Visual Effect' and Scale of Visual Effect' but Table7.10 is called 'Scale of Visual Impact'.	C	PMc	These refer to different stages of the assessment process. The wording will be reviewed to provide greater clarity in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
7e	CP	**7.2.4 Affected Properties** and **7.2.7 Visual Impact on Affected Properties** These paragraphs contain some repetition of each other.	OBS	PMc	Noted. To be reviewed for final ES		
8e	CP	**7.3 Baseline Conditions** **7.3.1 Landscape Structure** What does this bulleted list add? A prose description of existing landscape would improve readability. There needs to be more inter – relation and cross reference between LANDMAP and the landscape structure (7.3.1) section	C	PMc	A prose description is included in the landscape character descriptions. The bullets are included to provide a clear concise overview of the study area.		
9e	CP	**Figure 7.1** is confusing as the key shows symbols that do not appear on the map and vice versa, there is an inconsistency of representation. A section of woodland abruptly ends at a grid line.	OBS	PMc	To be revised for final ES.		
10e	CP	**Chapter 7 Landscape** A land use map should be included, in Volume 2 with the Figures, it could show different land uses in transparent colour blocks over an OS basemap and with LANDMAP aspect areas and their labels shown in a contrasting colour.	C	JW / PMc	Landuse is assessed elsewhere and the proposed approach is considered to be confusing.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
11e	CP	**7.3.2 Zone of Visual Influence** Repetition with 7.2.2, there needs to be a clearer distinction between 'methodology' and 'baseline' and explanatory text should be under the appropriate sections.	OBS	PMc	Noted. This will be reviewed.		
12e	CP	**7.3.3 Landscape Designations / Studies** Repetition of information from 7.2 methodology section, cross reference to a relevant map required.	C	PMc	Noted this will be reviewed and references added.		
13e	CP	**7.3.3 Landscape Designations / Studies** Information on designations could be more descriptive by giving grid references and describing some of their characteristics when relevant to landscape and visual issues.	C	PMc	Designations are noted but are not particularly relevant to this assessment.		
14e	CP	**7.3.3 Landscape Designations / Studies** The text describing LANDMAP aspect areas would be better represented in a table with maps.	C	PMc	Data will be included as an appendix to the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
15e	CP	**7.3.3 Landscape Designations / Studies** Aspect area names should be given in full with MNTGM in front. Bullet point 1 generally gives the level 3 classification except for VS212 Llandinam hill and Scarp mosaic and VS254 Kerry Ridgeway where the wording is not exactly as in the level 3 classification.	OBS	PMc	Noted. Noted. This will be reviewed.		
16e	CP	**7.3.3 Landscape Designations / Studies** Bullet point 2 under each heading is derived from the 'summary description' in LANDMAP, however these descriptions ARE NOT complete quotations from LANDMAP. Complete descriptions should be quoted.	C	PMc	Noted. This will be reviewed and cross referenced to the appendix noted above but it is intended as a summary of relevant points.		
17e	CP	**7.3.3 Landscape Designations / Studies** Bullet point 3 – the scenic quality scores are all correct Bullet point 4 – these are all correct. For VS650 River Severn Flood Plain the text has been para-phrased although it has not altered the meaning.	OBS	PMc	Noted.		
18e	CP	**7.3.4 Landscape Character Assessment** **Figure 7.5** shows too much information. Separate maps could show i) landscape character areas, ii) landscape value iii) the relationship between the ES character areas and the LANDMAP character areas.	C	PMc	This will be reviewed to ensure the appropriate information is displayed effectively in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
19e	CP	**Figures 7.6a-b** - some of these photographs are dark and should be replaced in the final ES	C	PMc	Noted. These will be replaced in the final ES		
20e	CP	**7.3.4 Landscape Character Assessment** Baseline paragraphs on landscape are relatively vague. Considering the potential landscape impact of the scheme this section is out of balance, i.e weak/vague, in comparison with the Townscape Character Assessment. The concluding paragraph should clearly state that the landscape in study area is of medium to high sensitivity.	C	PMc	Descriptions to be reviewed and reworded as appropriate.		
21e	CP	**7.3.5 Townscape Character Assessment** Paragraphs 1 – 5 are good baseline information, I think they should be included earlier in the chapter.	OBS	PMc	Noted. These paragraphs relate specifically to the townscape component of the study.		
22e	CP	**Figure 7.7** some segments are transparent showing the OS underneath, and some are not, see 32, 23, and 3! Some segments are not shaded.	C	PMc	To be reviewed in the final ES.		
23e	CP	**7.3.5 Townscape Character Assessment** Townscape components list p 90 should refer to a land use map, with numbered features that relate to a list. The text in the ES could be prose giving a description that evokes a sense of place.	C	PMc	Land use is not directly related to character and is described elsewhere		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
24e	CP	**7.3.5 Townscape Character Assessment** *"The entire urban area is covered by the townscape character areas, although some lie outside the ZVI. However all are included for completeness"* Is this consistent with the methodology used for landscape?	C	PMc	This approach ensures consistency with previous studies and provides consideration of the total town area.		
25e	CP	**Fig 7.8 a-c** Many photos are overshadowed and should be re-taken and replaced in the final ES. A map indicating the locations of the photographs should be included.	C	PMc	Noted.		
26e	CP	**7.3.5 Townscape Character Assessment** The final paragraph should give a summary of the sensitivity of the town.	C	PMc	Sensitivity is included for each townscape character area. It is not appropriate to provide an overall sensitivity for the town.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
27e	CP	**7.3.6 Visual Baseline Assessment** **Figure 7.10 a to w** – the numbering of this figure was so confusing I have put together a cross reference table to aid with interpretation. I strongly recommend that the numbering is revised for the final ES. Many photos are overshadowed and should be re-taken and replaced in the final ES. Many of the summer photos seem to have been taken in more overcast conditions than the winter photos, making it difficult to make a clear comparison.	C	PMc	Noted. The photos are intended to represent winter and summer conditions but clearly weather and sun aspects will be variable. We will attempt to improve the quality of the photos for the final ES.		
28e	CP	**7.4.1 Landscape Impact Significance** The impacts could be stated more clearly for example, for 3, Eastern River Corridor results in a permanent change to character area, this could be stated more clearly at the start of the paragraph. The statements of impacts should be clear rather than hidden in the main body of text.	C	PMc	The wording to be reviewed but the final results of the assessment are clearly stated in tabular form.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
29e	CP	**7.4.2 Townscape Impact Assessment** The text on Townscape Impact Assessment is lengthy and the concluding table 7.17 shows all of the long term impacts as 'none'. As a comment on the chapter as a whole, it seems that the landscape impacts are buried among vast amounts of text. It should be possible to condense the Townscape Impact Assessment through use of tables and maps in order to give an appropriate emphasis to the landscape impacts.	C	PMc	Noted. To be reviewed in final ES		
		This seems a fair assessment – it is outside of NRW scope but surely the effect on Garth Owen estate would be of greater magnitude as the scheme passes very close.	C	PMc	Much of Garth Owen is screened from the near elements from the near elements of the scheme by existing buildings and topography.		
30e	CP	**7.4.3 Visual impact Assessment** This section is not clear and it would be better represented in a series of tables. The 6 figure grid references for the viewpoints should be included.	C	PMc	Grid references to be added.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
31e	CP	**7.5. Proposed Mitigation** **7.5.2 Construction Impacts** Only five bullet points of text, this section appears very weak. More details should be given, including maps showing construction compounds.	C	PMc	This section will be revised in the final ES.		
32e	CP	**7.5.3 Operational Impacts** This seems to be a fair assessment, although the impacts are hidden within blocks of text. They should be stated clearly at the beginning of the paragraph and them followed by more explanatory text.	C	PMc	This section is a description of the effects and not impact on individual receptors.		
33e	CP	**Chapter 8 Nature Conservation** **8.3.1 Designated Sites** Regarding Montgomeryshire Canal and River Severn, shouldn't this cross reference to a chapter on hydrology?	C	DW	Noted. Cross reference to chapter 16 to be added.		
34e	CP	**Chapter 8 Nature Conservation** **8.4.3 Construction Impacts** There should be a more detailed explanation of impacts under this section. The types of impact could be clearly listed, in bullets points and further explained in accompanying text.	C	DW	This section will be expanded in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
35e	CP	**Chapter 8 Nature Conservation** **8.4.4 Operational Impacts** This paragraph is a good summary but as stated above types of impact could be clearly listed, in bullets points and further explained in accompanying text.	C	DW	This section will be expanded in the final ES.		
36e	CP	**8.4.5 Summary of Predicted Effects** This section should contain cross references to 8.5 Proposed Mitigation 8.5.1 Construction Mitigation and 8.5.2 Operational Mitigation	C	DW	Predicted effects are described in the absence of mitigation, following the format specified in IEEM/DMRB guidelines. The mitigation sections which follow address these predicted effects.		
37e	JM	**Chapter 8 Nature Conservation** **Table 8.2.1** The categories on the table seem to be muddled between two different elements of surveying i.e. i) visual inspection and ii) known or confirmed roosts. A worst – case scenario e.g. cluster of trees used by barbastelles would need exceptional mitigation to be licensable	C	DW	The table is taken from the BCT survey guidelines. As the left hand column is most pertinent to the assessment of potential for roosting bats, other columns could be omitted. It is recognised that the mitigation needs to be specific to the identified impacts.		
38e	JM	**p.163 Otters** DMRB states that surveys should take place 2km either side of the proposed route. National Otter Survey protocol states 600m but this is for a biological recording survey rather than a survey to assess potential impacts of development.	C	DW	As otter have been recorded on most major streams crossed by the Scheme, and safe crossing points for otters are incorporated into the design for these and other watercourses, the areas surveyed are considered sufficient for a robust assessment of other impacts on otters (disturbance in holts etc).		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
39e	JM	**P175-176 Dormice** Assessments of suitability of hedges have been shown to be unreliable in the evidence given at the on-going conjoined wind farm public inquiry, also nest tubes may not be entirely reliable.	C	DW	Noted, however as fruiting hazel is rare in many of these hedgerows there is no alternative to a combination of tube surveys and hedgerow assessments. A suitably precautionary assessment based on these methods is still considered the least worst option.		
40e	JM	**P176 Otters** Results need to be viewed in the light of previous comments on p 163. A no or low environmental impact assessment does not necessarily mean that a project can be legally licensed.	C	DW	As otter have been recorded on most major streams crossed by the Scheme, and safe crossing points for otters are incorporated into the design for these and other watercourses, the areas surveyed are considered sufficient for a robust assessment of other impacts on otters (disturbance in holts etc). Impacts and licensing requirements are described later in the chapter.		
41e	JM	**P193 8.5.1. Construction mitigation** We need to see the finalised amounts for **"**the loss of XXXha of broadleaved woodland and scrub will be mitigated by planting of XXXha of locally native and ideally locally sourced trees and shrubs..."	C	DW	To be updated in the final ES		
42e	JM	**P194 – 5 8.5.1. Construction mitigation** Slow worm habitat has not been included in this section. A paragraph addressing losses and gains on slow worm habitat needs to be added.	C	DW	There is limited scope for habitat provision for slow worms until the end of the construction period, when vegetation will be established on cutting/ embankment slopes.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
43e	JM	**P196 8.5.1. Construction mitigation Roosting bats** Bat conservation trust, Bat Survey GPG 2nd ed states that all category 1 trees need to have activity surveys, which is essential information for EPS license applications. Bat boxes may not be appropriate mitigation.	C	DW	Trees have recently been re-surveyed, and the need for further surveys based on these findings will be assessed in the final ES.		
44e	JM	**P197 8.5.1. Construction mitigation Dormice** Not satisfied that this addresses the severance issues due to the time that will elapse before new planting can become sufficiently established to replace commuting routes. NRW has records of dormice having been found in category D hedges	C	DW	As hedgerows being severed are connected via the wider hedgerow network, the proposed planting will strengthen connectivity on each side of the Scheme. A time delay before this planting becomes suitable is inevitable for a Scheme of this size. Categorisation of hedgerows will be reviewed, to consider whether category D hedgerows close to more suitable habitat need to be considered licensable.		
45e	JM	**P197 8.5.1. Construction mitigation Otters** An avoidance method statement needs to be produced	C	DW	Noted. This will form part of the CEMP for the Scheme.		
46e	JM	**P197 8.5.2. Operational mitigation Reptiles** NRW welcomes the proposed mitigation for reptile habitat	OBS	DW	Noted.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
47e	JM	**P198 8.5.2. Operational mitigation** **Roosting bats** The provision of bat boxes needs to be shown to be appropriate	C	DW	Trees have recently been re-surveyed. The mitigation proposals will be refined in the final ES, if necessary, based on these findings.		
48e	JM	**P198 8.5.2. Operational mitigation** **Commuting & Foraging Bats** NRW need to know whether the under-road crossing points will be completely open or grilled up and /or trash screened. We can assess the suitability of crossings at the detailed design stage.	C	DW	Under road crossing points will be open.		
49e	JM	**P199 8.5.2. Operational mitigation** **Dormice** Permanent living structures would be preferable to dead hedges under the Mochdre and Dolfor valley spans.	C	DW	Although the structures are reasonably large, there will be insufficient rainfall for planting under the bridge decks. Some vegetation is likely to persist along the watercourses, and dead hedging will provide a physical link until the vegetation re-establishes.		
50e	JM	**P199 8.5.2. Operational mitigation** **Dormice** Dead hedging has not been mentioned in relation to any other connectivity issues	OBS	DW	It is not considered necessary in relation to other species, as otters, badgers bats etc. are no more likely to use these crossings if a dead hedge is provided than if not, given the retained stream channels and locations of structures.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
51e	JM	**P204 Table 8.6.1. Summary of Residual Impacts after Mitigation** **Dormice** The ES does not make it clear whether connectivity issues have been resolved	C	DW	We consider that there is no residual fragmentation impact on dormice. Text to be revised in final ES		
52e	CP	**Dormouse Survey 2013 (April 2014) Nest Tube Survey Locations Figure No 1a sheet 1** There is a purple symbol, signifying that dormouse nests were found 2008& 2012, in the middle of a field labelled Glandulas Holiday Home Park. This seems strange, evidence of dormice would be expected to be found in a hedge. Suggest this record is checked.	C	JW / MB	Noted. To be reviewed.		
53e	JD	Executive summary and section 3.4.1 state that the attenuation will be designed to contain the 100 year + CC volume, with the outflow restricted to a 5 year event. Our guidance suggests restricting to the 1 in 1 year event. Can you supply justification for why you have proposed discharging at the higher 5 year event? There could be a risk that the increased runoff caused by the development would mean that the rainfall causing a 1 in 1 year pre-development flow could result in a higher runoff post-development.	C	DH	We confirm that we are attenuating all runoff from the highway to at least the existing Greenfield values. We have tested events from 5 year to 100 climate change. We will test the 1 year event to ensure compliance.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
		Therefore, if there were a discharge equivalent to the 5 year pre-development event rate, this could be considered as a detriment. Section 5.1 Summary states “to restrict the proposed discharge to no more than the pre-development Greenfield run-off”. Based on the above text with regards to the 5 year event, this statement could be seen as inaccurate. Further discussion and/or justification should be given	C	DH	Noted: We will address this in a revision of the drainage strategy document based on the outcome of the action in the comment above.		
54e	JD	3.3.1 – In the Levels of Service section, it states a 20% increase in rainfall intensities. Can you confirm this figure is the most appropriate (not 30% for example).	C	DH	Email from Jim Davies at project inception – October 2013 confirmed a 20% increase should be applied.		
55e	JD	3.4.2 – Incorrect reference to ADAS 124. There are two methods, ADAS 345 and IH124, both of which are described in the EA Flood Estimation Guidelines. DMRB refers to IH124.	C	DH	Noted. This should read IH124. However, the drainage strategy does state that this methodology has not been used. This is in line with more recent Environment Agency guidance on assessment of small catchments.		
56e	JD	3.4.2 – Text states “Only that part of the road sub catchment area which would drain naturally to the proposed discharge point is considered in the calculation of the Greenfield discharge”. If the development results in other parts of the road sub-catchment artificially draining to the proposed discharge point, this should have been included in the volume calculations? Can you confirm if this is the case.	C	DH	We would confirm that where a greater area is draining to a discharge point in the post scheme compared to the existing predevelopment situation, The runoff will be attenuated to the lower pre development area runoff.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
57e	JD	3.4.2 – Text states “Any part of the road catchment which would drain to another location in the pre-scheme situation is ignored for the purpose of the Greenfield runoff calculation”. Is there a risk of increased runoff exacerbating the situation somewhere else? It is difficult for us to understand this without seeing what catchments you will be applying the greenfield runoff rates to.	C	DH / ID	Plan of catchments will be provided in final ES.		
58e	JD	It would be useful if we could see the calculations undertaken for the greenfield runoff rates and storage volume calculations. This would enable us to understand the catchment areas being assumed for each point, as well as the 100 year plus CC flows and the storm durations that have been assumed.	C	DH / ID	Calculations of the Greenfield runoff will be provided. Plan of catchments will be provided in the final ES. Micro drainage model used to size storage as is industry practice. A range of storm durations tested and the critical duration for each catchment will be confirmed. Model outputs for the size of storage will be provided.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
59e	JD	**Appendix K1 (FCA)** Mitigation measures set out for structures (watercourse crossings) and road intrusion into floodplain have been proposed. We acknowledge the principle of these from a flood risk perspective but from the information within the ES and FCA it is not clear how 50% blockage scenario at the Mochdre Brook bridge will be mitigated? There should be further explanation within the text in 4.2.2 and if there is any increase in flood risk elsewhere, due to the blockage factor, discussions included to quantify the consequences and risks. It is our opinion that a 50% blockage is conservative and therefore may only need clarification as to whether there is .increased risk to third parties. However, the appendix A is missing and we cannot provide any further comment without review of this.		DH	The risk of blockage of the existing Mochdre bridge on Mochdre Lane has been tested. This is not subject to any works as part of the scheme. The risk of blockage won't be affected positively or negatively. What the model results demonstrate is that even if the existing bridge on Mochdre Lane were to block during a 1% chance event including climate change, the new bridge would be out of the resulting flood outline. The new bridge therefore, will have no detrimental impact on flood risk as it won't affect overland flows. Additional Figure and text to be added to Section 5.2.2 Post Scheme to clarify this point. Appendix A, Figures and Drawings will be provided in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
60e	JD	**Appendix K1 (FCA)** We note the proposed routing of watercourses. The FCA should identify all diversions / re-routing and ensure that no detriment is caused due to these proposals, for example creation of new flow paths. The mitigation measures should be done in association with Powys (consenting process) and any landowners.	C	DH	The impacts of re-routing have been considered, evidenced by the pre and post flood outlines presented in the draft FCA. Additional evidence in consideration of design changes post the draft FCA will be provided in the FCA of the final ES.		
61e	JD	**ES Section 9** has given little detail on how erosion / mobilisation of soils and associated sediment migration to watercourses would be controlled. Will more detail be available in the Sediment Erosion Management Plan? The impact of soil loss during construction given the topography /potential rainfall should not be under estimated from a Water Quality, fisheries and Flood Risk Management point of view.	C	TD/JW	Noted. A method statement regarding sediment erosion management will be prepared for approval by NRW prior to construction.		
62e	JD	**ES Section 8 (p.158)** refers to the Mochdre Brook and Dolfor Brook as being the two watercourses most likely to be of value for fish. While the Mochdre Brook is the most valuable watercourse from a fisheries perspective, due to it being used as spawning habitat by Atlantic salmon as well as supporting brown trout populations, we maintain that other watercourses such as the Green Brook are also of value.	C	DW	Noted. Other watercourses, including the Green Brook, have been included in surveys undertaken earlier this year, and the results will be presented in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
63e	JD	We would expect the Green Brook to support populations of brown trout and possibly bullhead. Fisheries surveys will be required if the design team wish to confirm that these species are not present. If so, any fisheries survey would need to be carried out by suitably qualified and experienced staff using appropriate methods and permission would need to be gained from NRW. We should be contacted before any fisheries surveys are commissioned.	C	MB / JW	Noted. Fisheries survey has been carried out prior to receipt of these comments. The results will be included in the final ES.		
64e	JD	**ES Section 8.3.2 (p.170)** considers the value of the watercourses that will potentially be impacted by the scheme. Again, all watercourses other than The Mochdre and Dolfor Brook appear to be considered of little importance. We do not think this is appropriate and would require further evidence to support this assessment.	C	DW	Noted. Fish surveys of watercourses have been undertaken and the valuation of watercourses in the ES chapter will be reviewed, and amended if necessary in the final ES.		
65e	JD	**ES Section 8.3.3 (p.172)** states that that the Mochdre Brook is the only watercourse crossed by the Scheme with known fish populations of any value. The Mochdre Brook is the only watercourse crossed by the Scheme that is surveyed for fish by NRW, this should be made clear in the ES. We would expect other watercourses to support populations of brown trout and possibly bullhead although no surveys to confirm the presence of these fish species have been carried out.	C	MB	The final ES will state that the Mochdre Brook is the only watercourse crossed by the Scheme that is surveyed for fish by NRW. Fisheries survey has now been conducted.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
66e	JD	ES Section 8.3.4 (Table 8.3.4) (page 177) assesses the Mochdre Brook and Dolfor Brook watercourses and the fish populations are of "Lower" ecological value while the "other watercourses" are considered as being of "Negligible" value. We suggest that these values are re-considered as the Mochdre Brook supports significant populations of Atlantic salmon and brown trout. Both species are listed within Section 42 of the NERC Act and page 165 of the ES states that such populations are considered of "High (UK)" value.	C	DW	The valuation of watercourses will be reviewed following surveys earlier this year, and amended in the final ES if necessary. Only a small proportion of the Brook lies within the zone of influence for the Scheme, consequently while the Brook as a whole may be of UK value for these species, the parts potentially affected by the Scheme may still only merit a lower valuation.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
67e	JD	**Page 165** advises that small populations of Species of Principal Importance for biodiversity under the NERC should be considered as "Lower" rather than "Negligible" value. We expect the Dolfor and Green Brooks to support populations of brown trout. The existence of brown trout populations in the other minor watercourses (those to be crossed by culverts C3a and C11) is less certain but the habitat is suitable for them. It appears to follow that the Green Brook and possibly the other watercourses mentioned above should be considered as being of higher than Negligible ecological value. This is important as due to being assessed as being of "Negligible" value all watercourses apart from the Mochdre and Dolfor Brooks appear to have been effectively screened out of the ES.	C	DW	Fish surveys of watercourses were undertaken earlier this year, and valuation of watercourses in the ES chapter will be reviewed, and amended if necessary in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
68e	JD	**Table 8.4.4A (page 179)** makes no reference to direct physical damage to or mortality of fish caused by dewatering of watercourses or through machinery working within the watercourses. Fish rescues, carried out by appropriately trained and experienced staff using appropriate methods, may be required to mitigate this impact. The mitigation measures from the ES should state that we are to be contacted before any fisheries rescues are commissioned.	C	MB	Final ES will state that fish rescues will be carried out as appropriate by suitably trained staff and NRW will be contacted before any fish rescues are commissioned.		
69e	JD	**Table 8.4.4B page 186** makes no reference to impacts on fish populations through the fragmentation of habitat and populations caused by the installation of barriers to migration in the form of new culverts. We appreciate that clear span structures are proposed for the Mochdre Brook and Dolfor Brook but this is not the case for the Green Brook, which is highly likely to support populations of brown trout, and other un-named watercourses which do not appear to be considered within the ES.	C	DW	Final ES will consider culvert design as potential impacts on fish populations.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
70e	JD	**Section 8.5.2 (page 197)** makes little reference to impacts on fish populations through the fragmentation of habitat and populations caused by the installation of barriers to migration in the form of new culverts. This section states that arch structures are being considered at C3, C8 and S4 but is should be noted that if "fish friendly" structures are not used it is highly likely that the proposals will impact on brown trout which are listed within Section 42 of the NERC Act. There is also no mention of "fish friendly" structures being considered for C11.	C	TD	Arch structures are being used at C3a and C8 with depressed inverts. Refer to Schedule of Comments (SOC) 601.		
71e		**Table 8.6.1** makes no reference to impacts on fish populations through the fragmentation of habitat and populations caused by the installation of barriers to migration in the form of new culverts.	C	DW	Final ES will consider culvert design as potential impacts on fish populations.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
72e	JD	**Section 8** this section has referred to our advice from our walkover of watercourses crossed by the project (comments sent to design team on 11 February 2014). However, we feel it has not been used to inform the Draft ES findings adequately. If the advice provided is beyond the scope of this project, we advise that the Final ES presents this using sufficient evidence. For example, WFD compliance requires any plan/project not to prevent a waterbody from achieving Good Ecological Status; therefore proposing culverts on the basis that culverts exist on that waterbody currently is not adequate justification.	C	DW/JW	Noted. Refer to SOC 601.		
73e	JD (General)	**Appendix k.2 WFD (Table 4-1)** this is full of errors and should be reviewed and amended for the final ES. Wi	C	JD/KS	Noted. The preliminary WFD assessment was prepared in November 2013 and was produced prior to receiving updated water body summary sheets from NRW. The content in this report will be reviewed and updated for the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
74e	JD (General)	**Table 5-1** This is a similar table to 4-1 but not as many errors: **GB109054049310** - length is 51.14km - Specific pollutants as Copper and Zinc but could add Diazinon (uncertain) and Dichlorvos (very certain). (This is because previous 2013 data used was DRAFT and final classifications have been produced. **GB109054044730** - Length is 7.62km **GB40902G203400** -Protected Area designation – is correctly labelled as Drinking Water Protected Area, but incorrectly labelled as Nitrates Directive	C	JD/KS	As above for73e the tables differ because of available information at the times when each of the preliminary and detailed reports were produced. We will review and update the information of both tables taking on board NRW's comments in the final ES.		
75e	JD (General)	**Page 22** states '*The Mochdre Bk – source to conf R Severn (GB109054044730)is also assessed as having Moderate Ecological Potential, resulting from Moderate fish classification. It is not a HMWB so there are no relevant mitigation measures.* This should say Moderate Ecological Status (not potential as that only applies to HMWBs – which as the text goes on to say this is not).	C	JD/KS	Accepted. This will be updated in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
76e	JD (General)	**Page 22** states '*The Secondary Uplands – Secondary Combined (GB40902G203400) is assessed as Poor overall water body status, with Overall Good Quantitative Status and Fail for Overall Chemical status. The Chemical status failure is related to a combination of the impact of abandoned former metal mines in the area and ineffective farm land/yard management within the catchment.* The underlined text should be removed.	C	JD/KS	Noted – will remove.		
77e	JD (Fish)	**Page 27** states that "NRW currently believe that the other watercourses (other than the Mochdre Brook) have less value for salmonids although the Green/Dolfor Brook may have possible spawning habitat." Brown trout are salmonids and in our opinion both the Dolfor and Green Brooks constitute reasonable brown trout habitat. We expect both brooks to support populations of brown trout. This section also suggests that the authors have not seen our updated comments based on the site walkover carried out in January 2014.	C	MB	Noted. Comments from NRW Jan 2014 site walkover will be reviewed when drafting final along with findings of fisheries survey. Refer also to SOC 601		
78e	JD (Fish)	**Page 32** we expect European Eel to be present year round in the River Severn near Newtown. It is, however, unlikely that eel will be present in any watercourse effected by the scheme except the Mochdre Brook.	OBS	JD / KS	Noted. Text will be clarified in final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
79e	JD (Fish)	**Page 35** states "NRW have advised that culverts of about a 40m length or greater are likely to impact on migratory salmonids". There seems to have been a misunderstanding here as a poorly designed culvert of any length (even 1 metre) can prevent migration by migratory salmonids.	C	MB	Noted. This will be clarified in the final ES.		
80e	JD (Geomorph)	**Page 19 (Element F):** - Bullet point 3: Why? Morph maintenance issues?	C	JD/KS	We assume NRW are questioning why there is a constraint to not always using a depressed invert culvert in the instance where a watercourse has a reasonable or good hydromorphological or ecological value. If this is the case the constraint will in part be maintenance issues, risk of substrate washout on high gradient streams and also cost.		
81e	JD (Geomorph)	- Bullet Point 5: Same as C5 & C6 but with some less sinuosity but greater incision due to the large steep valley. Culverts are not recommended. Beds are recommended to be left alone and bottom-less culverts or flexi-arch solutions are derived.	C	JD/KS	The design team have considered NRWs comments and have updated scheme elements at locations such as C3 and C8 (where hydromorphological value has been assessed as highest). We note NRWs recommendations but consider that at some locations these are aspirations rather than essential. Refer to SOC 601.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
82e	JD (Geomorph)	- Bullet Point 6: If enhancements are considered further this should be assessed within the WFD assessment.	C	JD/KS	Noted. Any enhancements to be completed as part of the scheme will be included within the WFD compliance assessment Contained within the final ES		
83e	JD (Geomorph)	**Page 23:** Open watercourse in poor condition – We did not observe "choked with sediment", this implies a significant artificial external pressure of which no/limited were observed. However, the channels are naturally very active (mainly vertical but potentially lateral if destabilised) due to their catchment characteristics.	C	JD /KS	Noted– terminology will be changed. What was seen at the time of survey was a stream with high sediment load (including leaf litter). We will remove the word “choked” in final ES.		
84e	JD (Geomorph)	**Page 35: Potential Impacts on Morphology:** - Potential destabilising impact of physically having to install the culvert; - Risk lateral/vertical movement if otherwise a wandering channel (large culvert to accommodative future vertical & horizontal changes or bottomless?); - Potential associated silt management and erosion protection works; - Loss of riparian zone; - Proposed mitigation in comparative terms? Cumulative impact?	C	JD/KS	Noted – the aim of the paragraph was to provide a very generic and simple overview of the key impacts of new culverts / extensions, but further detail will be added in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
85e	JD (Geomorph)	**Page 40, C3a New:** Note the design team is considering options, and advise following: This watercourse presents good natural flow diversity, dynamic equilibrium and environmental potential. Wider than stated 1.5m to 2m wide on average. The watercourse is relatively steep, but it has incised and meandered to largely accommodate this change. Whilst still mobile, with unconsolidated bank sides, it is in a state of dynamic equilibrium with the exception of the downstream section near the existing culvert where excess gravels have dropped out due to the reduction in gradient. Given the quality of the watercourse upstream, in addition to the mobile bank/bed material, the gradient and the potential to destabilise the reach it is recommended that a structure providing ~5m lateral movement that does not involve removing the bed is implemented (clear span, large bottom-less culvert, large flexi-arch).	C	MB	Clear span flexi-arch structure is proposed at C3. Refer to SOC 601 and accompanying report *A483/A489 Newtown Bypass: Outcome of Water Framework Directive Review and NRW Comments at Culverts C3a and C8, June 2014*		
86e	JD (Geomorph)	**Page 41, C4 New:** Same as C5 & C6 (see 88 below) but with some less sinuosity but greater incision due to the large steep valley. Culverts are not recommended. Beds are recommended to be left alone and bottom-less culverts or flexi-arch solutions are derived.	C	DH/ JW/ TD	Refer to SOC 601 and accompanying report *A483/A489 Newtown Bypass: Outcome of Water Framework Directive Review and NRW Comments at Culverts C3a and C8, June 2014*		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
87e	JD (Geomorph)	**Page 41, C8 New:** further advice to design team who are considering mitigation options: The Green Brook in this location is mobile and is actively eroding and incising as the watercourse meanders tightly, with very high sinuosity in parts, in order to reduce the presently very steep gradient. A very large >10m wide box culvert may be possible if a >1.5m deep natural bed can be formed. However, this has a high likelihood of destabilising the bed (as it would be uncompacted loose replaced substrate) post construction which would cause further erosion which may subsequently block the downstream culverts causing flooding. As such a structure providing ~5m lateral movement that does not involve removing the bed is advised (e.g. clear span, large bottom-less culvert, large flexi-arch).	C	DH/JD/MB	Refer to SOC 601 and accompanying report *A483/A489 Newtown Bypass: Outcome of Water Framework Directive Review and NRW Comments at Culverts C3a and C8, June 2014*		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
88e	JD (Geomorph)	**Page 42, C5/C6 New:** The steep sides, deeply incised, and highly sinuous channels in parts are likely to be highly unstable if disturbed (e.g. dug up and replaced within a culvert). This instability is likely to be further exacerbated when the trees are removed. As such box section culverts in these locations would need to be a minimum of 3m wide, probably 5m, with considerable consideration related to the depth of bed in order not to result in a "hanging" culvert in future years. However, their gradient and mobility this is likely to be very difficult to predict and as such culverts are likely to cause geomorphological instability and significantly increase future liabilities.	C	JW / TD	Measures will be taken both upstream and downstream of all culverts to reduce water velocity and prevent erosion. This will minimise the likelihood of hanging culverts in future years. All water courses will be maintained in the long term by the trunk road agent and they will undertake remedial measures as required. Refer to SOC 601 and accompanying report *A483/A489 Newtown Bypass: Outcome of Water Framework Directive Review and NRW Comments at Culverts C3a and C8, June 2014*		
88e	JD (Geomorph)	(Cont.) At present the watercourses have high levels of erosion through deep incision, however their mobility is significantly constrained due to the presence of the trees. Given the above it is recommended that the beds are left alone and bottom-less culverts or flexi-arch solutions are derived.	C	JW / TD	Culvert C3a and C8 (two of the larger water courses) specific structural baffles will be constructed in the base. For further details see SOC 601		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
89e	JD (Geomorph)	**Page 43, S4 (potential new culvert)** Since the walkover it can be seen that the Green Brook is trying to renaturalise itself at this point. As such it may be in poor quality but has the very real potential to be good. Clear span or flexi-arch would be preferred but if a culvert is proposed a large box section should be required with enough room for the watercourse to meander (~5m wide) and provide a 600mm deep natural bed.	C	JW / TD	Refer to SOC 601 and accompanying report *A483/A489 Newtown Bypass: Outcome of Water Framework Directive Review and NRW Comments at Culverts C3a and C8, June 2014*		
90e	JD (Geomorph)	**Page 43, C9/C10 New:** From the walkover we recommend that it would be good to get this section deculverted and the straightened Green Brook meandering too. There is a large gradient difference on the Dolfor and as such would require significant meanders within the adjoining field to dissipate this energy. This field (near to the new roundabout) could be turned into a woodland area for public enjoyment, increased habitat, and potentially be used as a flood storage area if the culverts are prone to flooding downstream. These options are likely to require the importation of material to form the features required.	C	JW / TD	Noted. Refer to SOC 601 and accompanying report *A483/A489 Newtown Bypass: Outcome of Water Framework Directive Review and NRW Comments at Culverts C3a and C8, June 2014*.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
91e	JD (Geomorph)	**Page 50, Cumulative impacts assessment:** Bullet Point 4: Note our advice on design and mitigation in table 6-1 Bullet Point 5: Agreed; Bullet point 6: We welcome this consideration and support it; Bullet point 7: We welcome and support this; Bullet point 9: Welcome and support Table 6-2: We presume that the category 'open watercourse in poor condition' includes ones which are recovering, such as S4?	C	JD / KS	Noted. The cumulative impacts assessment text will be revised in line with final design information for the final ES. Yes the category open watercourse in poor condition includes ones that are recovering such as S4. The categorisation of culverts is described on p 23 where there is also a cross reference to a table of baseline descriptions in Appendix B.		
92e	JD (Geomorph)	**Page 51, last para 6.3:** We consider that there are still morphological risks associated to some of the proposed culverts - that may result in unacceptable maintenance and prolonged retrofitted measures (e.g. erosion control). However we accept that whether this would effect WFD status downstream is difficult to quantify.	C	MB	Noted.		
1f	MW	In 6.3.4 World Heritage Sites the nearest World Heritage Site is the Pontcysyllte Aqueduct and Canal at Froncysyllte near Llangollen rather than the cited Edwardian Castles in Gwynedd. There would be no indirect impact on this WHS.	CFA	AP	Noted. To be revised in final ES		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
2f	MW	In 6.4.2 Construction Impacts a new direct impact has been identified at the location of the proposed flood compensation area immediately south of Glanhafren Hall at the west end of the scheme. This will directly impact the known route of the Forden to Caersws Roman road which has been accurately located on aerial photography taken by RCAHMW in 1995 and 2006. The indicated flood compensation area will need to be removed from the scheme, or relocated where there is no impact to cultural heritage. The significance of impact would be Major.	CFA	AP/JW	Potential impacts noted. Subsequent to these comments further work and a trial trench has been undertaken in this location with input from CPAT to agree an acceptable design.		
3f	MW	The Operational Impacts on the four Grade II listed buildings in 6.4.3 are noted. As stated it will be difficult to realistically mitigate for impacts on the setting of these buildings due to the proximity of the road corridor. Suitable mitigation will probably take the form of screening with tree/hedge planting and minimising the removal of features in the landscape which would have been contemporary with the listed buildings and part of their setting as working farms.	C	AP	Noted. Needs to be read in conjunction with comments from Cy Griffiths (1b – 4b) above.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
4f	MW	We agree with all other aspects of the Cultural Heritage section of the ES with the caveat that there is still some remaining trial trenching and geophysics to be completed which may identify further direct or indirect impacts. The proposed mitigation in 6.5.2 reflects our current knowledge at the time of publication of the draft ES and is appropriate to the known impacts.	C	AP	As the final field survey is completed the baseline will probably alter slightly, whilst the scheme design has also changed in certain respects since the writing of the draft ES. However, this comment indicates that the principle of mitigation (i.e. preservation by record) is appropriate.		
1g	CC	FP9 Mochdre – We note that the footpath has been described as not being affected. As part of the proposals it will actually be stopped up. This will need to be reflected in various tables and text.	C	MB	Noted. This will be reflected in tables and text within Final ES.		
2g	CC	BW5 Mochdre – As described will be stopped up on its present route and it should be made clear it will be diverted along the toe of the western side of the bypass to cross the proposed caravan park access bridge. This will need to be reflected in various tables and text.	C	MB	Noted. This will be reflected in tables and text within Final ES.		
3g	CC	BW2 Mochdre – section from proposed access road and bridge to western area of caravan site to junction of public footpath 3. In Table 12.6.2 it is described as having ‘no onward connection’. The bridleway links with in with public footpath 3 and is a through route. We would suggest that this section is downgraded to footpath status.	C	MB	Noted. This will be reflected in tables and text within Final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
4g	CC	We would support the proposal for pedestrian footway negotiating the Kerry road roundabout that would link public footpath 22 and the minor public road network to the east.	C	MB	Noted. This has been agreed and will be included in the final ES		
1 h	MD	Looking at the landscape plans, I am struck by the apparent extent of the proposed tree/woodland planting, both in terms of how much of the scheme length is planted and also its proximity to the carriageway, as opposed to grassland areas. I realise that screening is required in various places so would expect significant planting in places to achieve this, but would question whether it is desirable to see planting so near to the carriageway with all the problems that creates, with missed opportunities to create a more balanced grading of different vegetation/habitat types, including the creation of species-rich grassland in particular wherever possible.	C	JW / PM	To be revised based on the scheme design that will be assessed in the final ES and taking account of all relevant components as they have developed eg signage, drainage, access etc.		
2h	MD	Soil – The ES talks about handling of soil in terms of safety, contamination, storage & containment during construction etc, but doesn't particularly say anything about how soils will be handled and used to optimise the conditions needed for effective habitat creation & landscaping (e.g. considering whether top-soiling is best avoided on grassland areas).	C	JW / PM	Noted. Top soil will not be used for species rich grassland.		
3h	MD	I couldn't see any reference to proposed approaches / spec for seeding and planting.	C	JW / PM	The detail will be developed through detailed design but a landscape strategy will be included in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
4h	MD	I think we should consider whether there is any likelihood that any areas within the scheme might get used by local people (incl. kids) for amenity and if so, this should be taken into account as part of the design process (eg safe profiling of attenuation ponds).	C	JW / PM	This will be considered by the safety auditor but will be addressed in the final ES.		
5h	MD	Does the current landscaping design provide adequate space/land-take for all of the following? - Locations of safety fencing and allowance for their working width - Eventual width/spread of any hedgerows and space /access for maintenance of these - Access to all environmental mitigation features and landscape areas for inspection and maintenance - Viable gradients on cuttings and embankments for maintenance of grassland and planting - Space for tree planting to allow for required carriageway clearance of established tree canopy, sight-lines from junctions and forward visibility, as well as clearance from drainage features, structures and sight-lines to signs.	C	JW / PM	Noted. These are being designed and will be included in the design assessed in the final ES.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
6h	MD	It seems like there are no really significant commitments within the ES to delivering environmental enhancements? I realise that it is outside our powers to purchase land specifically for this purpose, but are there opportunities within the scope of the existing scheme and land-take to achieve a net gain for more environmental aspects than those that are already identified in the ES?	C	JW / PM	We continue to seek opportunities for enhancement but the wording must reflect the requirements of the EIA Regulations and the requirements of the Highways Act		
1i	JD	Appendix K.3 – drainage strategy. The Drainage Strategy seems sound and appropriate. We are not anticipating the proposed bypass to exacerbate any known existing problems and therefore the key objective should be to ensure appropriate run-off control and any existing drainage paths are not detrimentally affected.	C	DH	Noted		
2i	JD	We note the proposed typical hybrid pond detailed in drawing A483NB-ATK-HDG-ZZ-DR-D-0506. We would welcome examples of where this design has been used before, in particular with regards to the use of the gabion baffles.	C	DH	Noted: Similar design used on M25 example. Will provide reference to design guidance. Will provide clarification of design approach in order to seek further NRW comment on acceptance in relation to pollution control.		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
3i	JD	We emphasise the need for critical sections of highway drainage to be designed to higher return period standards and consideration of where overland flows exceeding the design standards will flow to, in particular to avoid flood risk to third party property, land and infrastructure. We welcome the approach to adopt a composite solution to possible supplementary storage in swales and/or open channels and oversize pipes/storage tanks, if above ground storage is limited by topography. Where embankment/cutting fence line drainage is on steep ground, the drainage should be designed in close liaison with the landscaping team to take advantage of possible utilisation of trees/hedges to limit mobilisation of silts and further control run-off rates. Current thinking of this aspect of flood mitigation can be found in Coed Cadw 'Holding back the waters'. This approach could be extended to land outside the bypass corridor and is a general flood mitigation approach we encourage Welsh Government to explore further as part of the scheme, recognising the limits within the planning framework.	C	DH	Noted. We note that land outside the scheme limits is not in our control.		
4i	JD	We reiterate that there is no legislative consenting remit on NRW regarding culverts and adoption of the drainage and ponds. We therefore recommend you liaise with Powys County Council on issues such as highway standards and design.	C	DH	Noted		

Schedule of Comments and Responses

Comment Ref:	Initial of reviewer	Comments	Comments status	Initial of respondent	Response to Comments	Further Actions	Actionee
5i	JD	Appendix K.1. – Flood Consequences Assessment. We reiterate comments regarding betterment and wider catchment enhancement in terms of tree/hedge planting as set out above, recognising possible legislative contraints. However, this will have several benefits including surface water control and flood risk.	C	DH	Comments above in relation 3i landscaping opportunities are noted.		
6i	JD	Mitigation measures set out for structures (watercourse crossings) and road intrusion into floodplain have been proposed. We acknowledge the principle of these from a flood risk perspective but from the information within the ES and FCA it is not clear how 50% blockage scenario at the Mochdre Brook bridge will be mitigated? There should be further explanation within the text in 4.2.2 and if there is any increase in flood risk elsewhere, due to the blockage factor, discussions included to quantify the consequences and risks. It is our opinion that a 50% blockage is conservative and therefore may only need clarification as to whether there is increased risk to third parties. However, the appendix A is missing and we cannot provide any further comment without review of this.	C	DH	See point 59 above.		
7i	JD	We note the proposed routing of watercourses. The FCA should identify all diversions / re-routing and ensure that no detriment is caused due to these proposals, for example creation of new flow paths. The mitigation measures should be done in association with Powys (consenting process) and any landowners.	C	DH	See point 60 above.		

Appendix A.3

ELG and NRW Meeting Minutes

Project number: 5105742-115/ELG.001	Page 1 of 7
Project title: A483/A489 Newtown Bypass	Location: Ladywell House, Newtown.
Date of meeting: 22nd May 2013	
Purpose of meeting: Environmental Liaison Group Meeting No. 1	
Prepared by: MB	Date of Circulation: 05/06/2013
Approved by: JW / TD	Date of Approval: 05/06/2013
Present: **James Healey** (JH) – Welsh Government (Project Engineer) **Len Wyatt** (LW) – Welsh Government (Environment Advisor) **Neil Jones** (NJ) – Welsh Government (Environment Advisor Support) Jon Stoddard (JS) – Capita Symonds (Environmental Advisor) **Michelle Delafield** (MD) – NMWTRA (Environmental Manager) **Paul Bufton** (PB) – Powys County Council (Environmental Health Officer) **John Messenger** (JM) – NRW (Species Officer) **Jim Davies** (JD) – NRW (Planning Liaison Officer) **Alun Smith** (AS) – AGC (Project Manager) **David Rowlands** (DR) – AGC (ECI Manager / Design Coordinator) **Richard Bruten** (RB) – AGC (Buildability Manager) **Terry Davies**(TD) – Atkins (Design Project Manager) **Jo Wall** (JW) – TACP (Env. Coordinator) **Max Burrell** (MB) – TACP (ES Coordinator) **Samantha Shove** (SS) – TACP (Ecologist)	Circulation: All present Peris Jones – WG Dewi Bressington - Corderoy Carol Fielding – NRW Will Davies – Cadw Rachel Price – PCC Mark Walters – CPAT Sarah Green – NRW Calum Carr – PCC

Item		Action
1.0	**Welcomes and Introductions**	
1.1	JS welcomed all to the first Environmental Liaison Group meeting for the A483/A489 Newtown Bypass Early Contractor Involvement (ECI) Key Stage 3 of the Scheme.	
1.2	All attendees introduced themselves and their role within the project.	
1.3	Peris Jones of the Welsh Government and Carol Fielding sent their apologies.	
1.4	*Post meeting note: There was an error in the email address when sending the invitation to Mark Walters. This has been rectified and CPAT will attend future ELG meetings. Will Davies of Cadw sent apologies from Cadw and confirmed he is the Cadw contact for the scheme. The AGC Team Archaeologist – Andrew Pearson will also liaise directly with Cadw and CPAT.*	
2.0	**Background to the Process**	
2.1	LW described how the Welsh Government operate regarding the development of new trunk roads:	
2.2	The requirement for the Scheme has been developed at a strategic level through the	

Wales Transport Strategy and the National Transport Plan. These have both been subject to a Strategic Environmental Assessment (SEA) and in the case of the National Transport Plan, a Habitats Regulations Assessment (HRA).

2.3 The Scheme is now at a project level and from an environmental point of view 'four strands' are required as part of the legal process. These are:

- Environmental Impact Assessment (EIA)
- Environmental Design and Management
- Assessment of Implications on European Sites (AIES)
- Environmental Consents/ Licenses (e.g. flooding, species, listed buildings etc.).

2.4 LW wanted to make clear the differences between trunk road schemes, (undertaken under the Highways Act 1980) and other development undertaken under the Town and Country Planning Act. The main points are as follows:

- There is no outline planning permission so there is only one chance to get things right and no chance to change the alignment once the 'Orders' have been made.
- There is no Infrastructure Planning Commission
- No formal planning permission or planning conditions or Section 106 agreements.

2.5 Despite the above there are formal stages to the process as follows:

- Strategic Decisions – Wales Transport Strategy and National Transport Plan (SEA and HRA)
- Transport Options Appraisal (WelTAG and DMRB Stage 2)
- Preferred Route Announcement.
- Orders, Public Inquiry and Ministers Decisions.
- Whilst there are no 'Planning Conditions' there is a 'Record of Commitments' – these are the commitments made to the Statutory Environmental Bodies and other stakeholders which are delivered through Construction Environmental Management Plans (CEMPs) and Maintenance Environmental Management Plans (MEMPs).

2.6 There is also a five year post construction monitoring and maintenance period. Following this the long-term maintenance of road is carried out by the Trunk Road Agency. In this instance this will be the North and Mid Wales Trunk Road Agency (NMWTRA).

3.0 Environmental Liaison Group (ELG)

3.1 LW explained the purpose of the Environmental Liaison Group (ELG) as 'active stakeholder engagement'. The ELG is a way that the Welsh Government engages with key environmental stakeholders on road projects and have been part of road projects for the past 10 years or so. It is a chance for the stakeholders to have their say and is important in achieving the best design for the scheme.

3.2 LW outlined ways in which stakeholder engagement could be most effective:

- The information you give should be your organisation's view not your own personal view
- If you have questions or are uncertain what to do – please ask the project team, the Welsh Government or experienced colleagues in your organisation (LW noted that Stuart Reid of NRW had worked as part of a number of ELGs and was perhaps a good person to ask).
- Please state any concerns you have as early as you can
- Please be consistent as you can in the advice you provide and if you have to change advice / position explain why to increase auditability of your advice.
- Please let us know if something is going wrong!

4.0 Project Background

4.1 JS gave a brief outline of the project history as follows:

- There were studies for a bypass of the town conducted as early as 1969. Due to the number of studies and lack of a bypass to date there is some scepticism amongst the public as to whether the scheme is going to go ahead.

- December 2007 – WG commissioned a WelTAG study to investigate potential options for a bypass with emphasis on social, economic and environmental impacts. Several options were considered to the north and south side of the town
- Public Consultation events were held between 8th and 10th September 2009 which presented the final study options..
- The preferred route was announced by the Deputy First Minister (Ieuan Wyn Jones) on 13th October 2010
- Alun Griffiths (Contractors) Ltd (AGC) formally started the ECI contract on 8th April 2013 following a pre-qualification competition and lengthy tendering process. The contract was announced by Edwina Hart the Minister of Economy, Science and Transport on 28th March 2013

5.0 The ECI Project Team

5.1 AS introduced the ECI Project Team as follows:

- Client – Welsh Government Transport
- Employers Agent – Corderoy / Capita Symonds
- Principal Contractor – Alun Griffiths (Contractors) Ltd.
- Designer – Atkins / TACP

5.2 The key personnel in the ECI Project Team are as follows:

- Project Director – Peris Jones (WG)
- Project Engineer – James Healey (WG)
- WG Environment Advisor – Len Wyatt (WG)
- Project Manager (for WG) – Rhodri Gibson (Corderoy)
- Deputy Project Manager (for WG) – Dewi Bressington (Corderoy)
- Environmental Advisor – Jon Stoddard (Capita Symonds)
- Project Manager – Alun Smith (AGC)
- ECI Manager – Dave Rowlands (AGC)
- Design Project Manager – Terry Davies (Atkins)
- Environmental Coordinator – Jo Wall (TACP)

6.0 Key Stages of the Project

6.1 AS described the Key Stages of the Project. The AGC Team are currently contracted to undertake Key Stages 3 and 4. There will be a separate contract for Key Stage 6 which is the construction stage.

6.2 We commenced Key Stage 3 in April 2013 which is currently programmed to run for 54 weeks. Activities to be undertaken in Key Stage 3 include the following:

- Preliminary design,
- Ground Investigation
- Environmental Surveys
- Archaeological Investigation
- Investigation of design options
- Early engagement with stakeholders
- Public Exhibition – July 2013
- Refinement of Design including mitigation measures

6.3 Key Stage 4 is currently programmed to commence in Spring 2014. Activities to be undertaken in Key Stage 4 include the following:

- Publish draft Orders – Spring 2014
- Draft Orders Public Exhibition – Spring 2014
- Public Inquiry – Autumn 2014
- Ministers Decision – Early 2015?

6.4 Key Stage 6 is currently programmed to commence in Spring 2015 (before 1st April) and will last approximately 130 weeks. Following this there will be a 5 year post construction monitoring and maintenance period. Activities to be undertaken in Key Stage 6 include the following:

- Detailed design – Spring 2015
- Early focus on Environmental Risk Management, control measures and

mitigation
- Detailed design to incorporate and accommodate temporary works mitigation and protection measures
- On-going liaison and regular contact / dialogue with statutory environmental bodies and other stakeholders.

7.0 Scheme Description

7.1 TD provided a description of the scheme and the main issues that the design team would need to consider.One of the main engineering challenges is the very diverse terrain through which the scheme runs.

7.2 At the western end the scheme will tie into the existing A489 via a roundabout. Different options for this junction will be considered.

7.3 Glandulas Caravan Park, at the western end, will be affected. A crossing will be incorporated into the design to provide access to different parts of the site.

7.4 An underpass will be provided to accommodate a severed public rights of way. The conceptual design shows a footbridge in this location.

7.5 Further east the scheme will cross the Mochdre Brook via a clear span bridge to avoid obstructions within the flood plain.

7.6 There are a number of landslip areas along the scheme which will require ground investigation work.

7.7 The original design of the junction with the existing A483 (road to Llandrindod Wells) will be reviewed and probably simplified.

7.8 There is an issue with a 'very high pressure' gas main that will be affected by the scheme. The team will investigate options to avoid this by realigning sections further south.

7.9 East from the A483 junction the scheme will go through a deep cutting. The team will investigate options to bring this further south to avoid landslip areas.

7.10 Options at the A489 Kerry Road junction will be investigated to simplify the junction and avoid the gas main and overhead power lines.

7.11 In the conceptual design the road would cross under the existing railway line at its eastern end. The team will investigate options for going over the railway line before tying in with the existing A489. There is a potential flooding issue and Network Rail would have to take ownership of the overbridge.

7.12 JW stated that the scheme also comprises some online improvements along the existing A483/A489 through Newtown, which include traffic calming measures and better facilities for cyclists and pedestrians. Sections of the A483 and A489 through Newtown will be 'de-trunked' following completion of the scheme and will come under the control of Powys County Council.

8.0 Environmental Issues – Baseline surveys and scoping (progress to date)

8.1 JW advised that initial environmental baseline data had been obtained and assessment work had been carried out during the Key Stage 2 Environmental Impact Assessment undertake in 2009. In addition, interim ecological surveys were undertaken by Capita Symonds during 2012.

8.2 Since the award of contract the AGC Team had started to gather further environmental survey information. JW explained the current situation to date under the following DMRB environmental topic headings:

8.3 **Air Quality** – There is an Air Quality Management Area (AQMA) for two houses along New Road in Newtown for Nitrogen Dioxide (NO_2). The bypass should help this situation by removing traffic from the centre of town.

8.4 The team have received some air quality monitoring data from Powys County Council.

8.5 **Cultural Heritage** – There is a Conservation Area within the town of Newtown together with a number of listed buildings. There are Scheduled Ancient Monuments within the wider area, which should not be affected by the scheme.

8.6 The Roman Road is known along the A483 and A489 and was uncovered during the recent Tesco's development within Newtown. There are also Iron Age and Medieval sites within the locality. A geophysical survey will be undertaken to identify pontential sites along the scheme.

8.7 **Landscape –** The landscape is attractive and characterised by undulating

topography. The land use is mainly pastoral agricultural land with a number of hedgerows and coppices. The aim will be to achieve best landscape 'fit' for the scheme.

8.8 **Nature Conservation** – The environmental scoping report chapter in relation to Nature Conservation was issued prior to the rest of the Environmental Scoping Report in order to agree the scope of the ecological surveys which needed to commence in May. SS gave an overview of the ecological baseline and surveys currently being carried out:

8.9 Reptiles are known to be present at the western end of the scheme with anecdotal evidence of the presence of Adders.

8.10 Dormice are thought to be present along many of the hedgerows and sections of woodland, particularly toward the west of the scheme. Surveys from five years ago showed them to be present and the habitat has not changed significantly since that time. A Dormouse nest was found during the surveys conducted last year by Capita Symonds. Further nest tube and nut search surveys for Dormice will be carried out this year.

8.11 Otters are present along the Mochdre Brook and River Severn.

8.12 There are a number of Badger setts in woodland near to the Scheme. Badger activity is greatest towards the western end of the scheme.

8.13 A number of bat species are known in the area and of particular note is the presence of Barbastelle bats. Bat surveys were undertaken during the Stage 2 EIA and further surveys are taking place this year during May, July and September.

8.14 No surveys of Great Crested Newts will be carried out this year as surveys conducted during the Stage 2 EIA and by Capita Symonds have found no evidence and the habitat is not considered suitable. Ponds affected by the scheme will be assessed for their suitability as Great crested newt habitat and if any are deemed of particular value, further surveys will be considered.

8.15 **Geology and Materials** – JW stated that there are superficial deposits consisting of alluvium, glacial till and periglacial material. These have given rise to the many landslip areas, which will be subject to further ground investigations. The underlying bedrock mainly consists of sedimentary mudstones and sandstones of Silurian age.

8.16 **Noise and Vibration** – A DMRB Detailed assessment will be undertaken for the EIA. The main sensitive receptors will be the near-by schools and community buildings. These and other sensitive receptors will be considered in the noise and vibration chapter of the ES.

8.17 **Effects on all Travellers** – A number of public rights of way will be affected by the scheme, particularly towards the west. The rights of way network will be maintained south and north of the road via crossing points such as underpasses. The team will look to combine the use of underpasses for pedestrians and wildlife (e.g. badgers, bats).

8.18 **Community and Private Assets** – The main private assets affected by the scheme will be agricultural businesses and agricultural land. The agricultural land that will be affected is largely Grades 3 and 4. Powys Agricultural College will also be affected by the Scheme.

8.19 **Water Environment** – The main issues associated with the water environment relate to flooding as Newtown is built on the floodplain of the River Severn. The River Severn also has Grade A Water Quality and so pollution prevention is also very important.

8.20 The Montgomery Canal SAC is situated 1.2km to the east.

8.21 The River Severn and Mochdre Brook support populations of Salmanoids such as Atlantic salmon and Brown trout.

8.22 The Scoping Report follows guidance set out in the DMRB Volume 11 – Environmental Assessment.

8.23 JW described the approach to mitigating environmental impacts:

- Try to reduce impacts on woodland areas
- Try to achieve a 'cut and fill balance' to avoid waste and to reuse as much material within the landscaping as possible e.g. noise bunds and grading out embankments and return to agriculture.
- Where hedgerows need to be removed these would be replaced with more

species rich hedgerows.

- Attenuation ponds would be provided to attenuate surface run-off and reduce flood risk and safeguard water quality. These could also provide aquatic and / or marshy habitats for wildlife.

8.24 MB described how the team were proposing to approach the assessment of cumulative impacts and in combination effects. Account will be taken of:

- Cumulative impacts from the scheme (e.g. combined effects of different environmental impacts on a signal receptor or resource such as construction noise, dust and visual impact combining to have a greater effect on local residents), and
- Cumulative impacts from different projects (in combination with the A483/A489 Newtown Bypass).

8.25 The first type would be assessed using a matrix style approach. The second type would be considered as part of each specialist topic chapter as done in the ES for the A465 Section 3 scheme.

8.26 The other developments to be considered for assessment in combination with scheme would be determined in consultation with the local planning authority. These would include developments with approved planning permission/published Orders with a supporting ES. It is likely to include the diversion of the very high pressure gas main which will be carried out under the Town and Country Planning Act. **MB**

8.27 MB also noted that the environmental topic chapters that rely on traffic model data to support the assessments (e.g. air quality and noise) will consider cumulative impacts during the operational stage as the traffic model will include future traffic growth associated with planned developments such as those proposed in the PCC adopted Unitary Development Plan.

8.28 JW stressed that as the Scheme is being delivered under the Highways Act 1980 land can only be compulsory purchased for the scheme itself and for 'essential mitigation'. Therefore there must be a very strong reason to provide any land for mitigation; otherwise it may not be accepted by the inspector at the Public Inquiry.

8.29 JW recounted that at the recent Public Inquiry for the A465 Section 3 scheme the Inspector had deemed a small parcel of severed land proposed as landscape mitigation unnecessary and it was not compulsory purchased.

8.30 The Environmental Scoping Report will be issued to the Statutory Environmental Bodies in the next few weeks for their formal comment.

9.0 Engagement with Statutory Bodies

9.1 All ELG members will be given access to an extranet site – 'Share Point', where all information relating to the project will be provided. This will negate the need to email documents with large file sizes, which can be problematic. Atkins will email an invitation to each ELG member. This must be activated within 3 days or the invitation will expire. **TD**

9.2 JD enquired whether further NRW personnel could have access to the extranet site. This was confirmed and their names and email addresses should be forwarded to JW so invites can be sent. **JD**

9.3 Documents and reports for comment from the Statutory Environmental Bodies will be uploaded to this site. A library of background documents will also be available on the site. A Schedule of Comments (SOC) form will be provided with each report for comments. The AGC Team will respond to these comments and amendments made to the report / drawings as appropriate. **AGC Team**

9.4 It should be noted that the information on the Share Point site is just for the use of ELG members. However, information could be subject to Freedom of Information requests under the Freedom of Information Act. JD noted that a lot of Environment Agency's time was taken up with 'Freedom of Information Requests' in relation to the provision of power lines in Shropshire

9.5 TD noted that at the Public Information Exhibition to be held in July, the scheme plans would show shaded areas where options are being investigated.

9.6 JW noted that the AGC Team has a full-time Public Liaison Officer named John Jones who is local to Newtown and is supported by Emma Davies our Community Manager. The Scheme will also have a website which will provide information to the public along with regular newsletters.

9.7	DR again stressed the importance of voicing any concerns at an early stage as there is more scope to make adjustments to the proposals early on.	
9.8	TD stated that all other viable alternatives would need to be looked at prior to the Public Inquiry and that a Public Inquiry was almost certain to take place.	
9.9	PB inquired whether PCC staff would be required to respond to objections made at the Public Inquiry. It was confirmed that the Welsh Government and the AGC Team would provide all responses to objections to the scheme at the Public Inquiry. The team would however welcome written support from PCC.	
9.10	JW stated that the time required for the Statutory Environmental Bodies to provide a response to the Environmental Scoping Report is two weeks. She asked if there were any issues with this time frame and all agreed it was satisfactory.	
10.0	**Next Steps**	
10.1	JW confirmed that the next ELG meeting will be held in September 2013, by which time the route of the scheme should be confirmed. Dates and a venue will be circulated closer to the time.	
10.2	The third ELG meeting will be held in December 2013 / January 2014, around the time that the draft ES will be circulated. It may be appropriate for other ES topic specialists to attend this meeting to discuss issues with the relevant Statutory Environmental Bodies.	
10.3	Individual meetings between SEBs and topic specialists may be held prior to this.	
10.4	DR stated that other possible venues for the meetings could be AGC Offices in Abergavenny, Atkins Office in Swansea or TACP/Atkins offices in Cardiff. JD also suggested that NRW Offices in Shrewsbury could also be used.	
10.5	JW asked the SEBs that if they had any useful or relevant background information would they please send it to her.	
10.6	JD stated that Dyfan Walters would need to contact JD in relation to the flooding risk assessment. JD was unsure whether the latest flood model for the area was the property of NRW. Provided that the flood model is NRW, it could be obtained on a hard drive from NRW Offices in St. Mellons, Cardiff. JD to confirm.	**JD**
10.7	It was noted that the team would be providing a submission to the Design Commission for Wales and any letters of support would be helpful.	
10.8	All were asked whether any other organisations should be included in the ELG forum? Any suggestions for additional members to be made to JW.	
10.9	JS suggest that perhaps the local Badger and bat groups could be included?	
10.10	It was also suggested that Sarah Green of NRW should be asked to future meetings. Representatives from the Wildlife Trust and CPRW could also perhaps be	
10.11	considered. *Post meeting note – Calum Carr the PCC Public Rights of Way Officer has expressed an interest in attending the ELG and will be invited to future meetings.*	
10.12	It was also noted that the range of ELG attendees were likely to change depending on what issues arise.	
11.1	**Any Other Business**	
11.1	JM agreed to provide AS with the contact details of Ray Wood.	**JM**

MINUTES OF MEETING

Project number: 5105742-115/ELG.001	Page 1 of 5
Project title: A483/A489 Newtown Bypass	Location: Monty Club, Newtown
Date of meeting: 25th September 2013	
Purpose of meeting: Environmental Liaison Group Meeting No. 2	
Prepared by: MB	Date of Circulation: 25/10/2013
Approved by: JW	Date of Approval: 15/10/2013
Present: **James Healey** (JH) – Welsh Government (Project Engineer) **Neil Jones** (NJ) – Welsh Government (Environment Advisor Support) **Jon Stoddard** (JS) – Capita Symonds (Environmental Advisor) **Michelle Delafield** (MD) – NMWTRA (Environmental Manager) **Paul Bufton** (PB) – Powys County Council (Environmental Health Officer) **John Pearson** (JP) – Powys County Council Development Control **John Messenger** (JM) – NRW (Species Officer) **Carol Fielding** (CF) – NRW (Montgomeryshire Team Leader) **David Rowlands** (DR) – AGC (ECI Manager / Design Coordinator) **Richard Bruten** (RB) – AGC (Buildability Manager) **Nick Madani** (NM) – AGC (Engineer) **Steve Clifton** (SC) – Atkins (Design Project Manager) **Jo Wall** (JW) – TACP (Env. Coordinator) **Max Burrell** (MB) – TACP (ES Coordinator) Michael Lloyd (ML) – PCC (Policy and Regeneration Officer)	Circulation: All present Peris Jones – WG Len Wyatt – WG Dewi Bressington - Corderoy Will Davies – Cadw Alun Smith – AGC Terry Davies – Atkins Sam Shove – TACP Peter McComiskey – TACP Rachel Price – PCC Mark Walters – CPAT Jim Davies – NRW Calum Carr – PCC

Item		Action
1.0	**Welcomes and Introductions**	
1.1	JW welcomed all to the second Environmental Liaison Group meeting for the A483/A489 Newtown Bypass Scheme.	
1.2	All attendees introduced themselves and their role within the project.	
1.3	Peris Jones and Len Wyatt of the Welsh Government, Mark Walters of CPAT and Jim Davies of NRW sent their apologies.	
2.0	**Minutes of the previous meeting**	
2.1	No comments were received on the minutes from the previous meeting and so were taken as a true representation of proceedings.	
2.2	JW went through the items with actions against them:	
2.3	(8.26) MB will contact JP at PCC to establish which proposed developments might be considered in the cumulative effects element of the ES. In response to the Environmental Scoping Report NRW suggested that the following warrant consideration: • The Llandinam 132kV grid connection	

- The Strategic Traffic Management Plan for the Mid Wales Strategic Search Areas (SSAs)
- The proposed Neuadd Goch windfarm,
- The proposed Llandinam windfarm repowering,
- Single turbine applications in the vicinity of Mochdre, Stepaside and Dolfor villages.

2.4 MB noted that there was specific guidance given in the DMRB Volume 11 as how to address the assessment of cumulative impacts.

2.5 It was agreed that MB would liaise with JP to agree other proposed developments . MB

2.6 (9.1) JW confirmed that invitations to the Share Point site had been issued to ELG members. She stressed that if invitations had expired; please get in touch so access can be renewed. The site requires users to update their passwords regularly.

2.7 (9.2) JW confirmed that background information and the Scoping report had been uploaded to Share Point.

2.8 (10.6) JW confirmed that communication between the project team and NRW was happening regarding the water environment. A separate meeting is to be held with NRW on 26th September. .

2.9 (11.1) JM confirmed he had passed the contact details of Ray Wood onto Alun Smith of AGC.

3.0 Environmental Scoping Report

3.1 The Environmental Scoping Report had been issued to the Statutory Environmental Bodies (SEBs) including:

- Natural Resources Wales (NRW)
- Powys County Council (PCC)
- Cadw
- Clwyd-Powys Archaeological Trust (CPAT)

Comments on the Environmental Scoping Report had been received from all of the SEBs and JW and MB thanked them for providing these. The Project Team has taken account of the comments provided and revised the Environmental Scoping Report, which has been issued to the Welsh Government (ECAT) for approval. The comments received and project team responses have been recorded on a Schedule of Comments (SOC) form, which has been issued to the SEBs and made available on Share Point.

3.2 MB took delegates through the main comments received by the SEBs and the team responses to them. It was agreed to arrange a further meeting with NRW to discuss some of the points. **TACP / NRW**

3.3 ML inquired whether Cadw or CPAT would provide advice on potential impacts to Listed Buildings in Newtown as this might be something that the PCC Built Heritage Conservation Officer may wish to comment on. ML to provide contact information for the PCC Built Heritage Conservation Officer. **ML**

3.4 JW stated that the Project Team were currently undertaking Ground Investigations. PB of PCC advised that the Project Team may wish to contact David Jones of PCC regarding contaminated land and agreed to provide contact information. **PB**

4.0 Design Options

4.1 RB explained that the Project Team had been looking at a number of options to change certain junction arrangements along the conceptual design of the scheme at:

- Llanidloes Roundabout
- Dolfor Road
- Kerry Road
- Railway Crossing

4.2 In brief, the new option at Llanidoes Roundabout had been considered to reduce impact on the Caravan Park and woodland. Dolfor and Kerry Road options had been considered to avoid the high number of services in this area, including a very high power gas main. The options to avoid these services would avoid the considerable cost and disruption of having to divert these services in order to construct the conceptual design. The option at the eastern end to go over the railway bridge ensures less disruption to the railway and better control over the works. Note that

	the presentation highlighting advantages and disadvantages of the different options is provided with these minutes.	
4.3	CF stated that NRW are currently being consulted on a new link road into the Mochdre Industrial Estate associated with wind farm developments and asked how this would be addressed by the project?	
4.4	JH and DR advised that the WG and Project Team where aware of this and noted that the planning application for this link road would not affect the current programme of work. However if it were to be built before the scheme, the scheme would have to accommodate it. Conversely, if the scheme were to be built first, there would be no need for the link road. JH stated that he would be willing to answer any queries on the link road from any of the ELG members.	
4.6	JM inquired how the consideration of ecological impacts, especially the extent of areas surveyed will deal with the change to scheme design.	
4.7	JW stated that the changes in scheme design have been anticipated and therefore the survey areas have been extended to accommodate this (e.g. additional bat survey transects carried out along Dolfor Road). It was agreed this was a subject to be discussed further at a separate meeting with NRW.	**TACP / NRW**
4.8	PB asked whether cumulative impacts associated with construction dust would be considered as part of the ES as he noted there is public concern regarding the level of development within the area (particularly wind farms). MB and JW advised that this would be considered as part of the assessment and would be associated with the timing of other developments in the locality. MB also advised that the ES would address the combined effects of impacts such as dust and noise on local residents associated with the Scheme.	
4.9	It was stressed that there are often difficulties in undertaking assessments of cumulative impacts associated with lack of data on which to base the assessments (e.g. availability of ES for other projects). That is why it is important to have good communication with PCC so that relevant information can be provided.	**TACP (MB) / PCC (JP)**
4.10	JW advised that a Construction Environmental Management Plan (CEMP) is to be administered through the construction phase. A pre-CEMP (the outline of the final document) will be produced through Key Stages 3 and 4 of the project.	
4.11	DW stated that following the optioning process, the team has a preferred scheme that has been agreed in principle with the Welsh Government (as shown in presentation). Once formal approval by the Welsh Government is provided the TR111 route alignment that has been protected for planning purposes (as shown in Powys Unitary Development Plan) should be revised to reflect this. He said that formal agreement was anticipated within two weeks.	
4.12	JP advised that the determination period for the link road would be about eight weeks so it may be possible to amend the TR111 prior to it's determination.	
4.13	JS asked whether planting could be undertaken over a high pressure gas mains. JP advised that a planning application for a Gospel Hall at Abermule had a constraints document which states what can and can't be done on a high powered gas main. This should be available with the application on the PCC website.	
4.14	RB noted that the team were trying to balance the scheme's cut and fill and wanted to avoid transporting it across Dolfor Road. JW noted that fill material is required for noise bunding, achieving landscape 'fit' and returning land to agricultural use.	
4.15	JW reminded all that the EIA will consider the detrunking/online improvement works along New Road and Pool Roadwhich will be carried out once the bypass is open.	
5.0	**Update on Environmental Surveys**	
5.1	**Ecology –** There have been no changes to the ecological surveys as were originally proposed. There has been some changes to the proposed GI work to ensure there is no disturbance to a badger sett near Castell-y-dial. Otters are known along Mochdre Brook and the River Severn. Fisheries surveys are not intended as all proposed bridges are clear-span.	
5.2	There is still no conclusive evidence regarding Dormice, however surveys are programmed until November. Discussions will take place with CF and JM of NRW regarding Dormouse mitigation.	**TACP / NRW**
5.3	With regards to bats, nineteen transects are being surveyed. There has been a record of a Lesser horseshoe bat near Mochdre Brook. JM advised that a Lesser	

horseshoe bat roost had been identified in Newtown, not far from Ladywell House. Building roost inspections had also now been carried out.

5.4 Japanese Knotweed had been identified along Green Brook on Dolfor Road and the Coach park on Middle Dolfor Road. JW inquired whether PCC or MNWRA could undertake some herbicidal treatment of Japanese Knotweed prior to construction. JW and MD to discuss options. **JW / MNWTRA (MD)**

5.5 **Landscape –** Peter McComiskey has been working with Sarah Green of NRW regarding the development of key views. However, she has now left and so consultation has been taking place with CF. Around twenty five optional and conceptual key views have been identified.

5.6 JW asked who from PCC should be consulted regarding landscape issues as there is not a specific landscape officer. JP should be the initial contact as he will determine how PCC respond. **PMc / JP**

5.7 **Water Environment –** Comments have been received from NRW on the ES Scoping regarding the water environment. A specific meeting to discuss water environment issues with NRW will be held tomorrow (26/09/2013).

5.8 **Geology and Soils –** NM explained that the GI work was currently on-going and that they'd been in close liaison with landowners. Contact would be made with David Jones of PCC regarding contamination issues **NM**

5.9 **None Motorised Users (NMU) –** An NMU audit is to be undertaken following guidance in the DMRB Vol. 5, Sec 2, Part 5 (HD 42/05). The accommodation of NMU routes will be addressed through the EIA process. The PCC footpath officer Calum Carr will be consulted during this process.

5.10 **Land use and community effects –** The assessment will be carried out as per DMRB guidance. Tony Kernon will be responsible for assessments of impacts on agricultural land and farm businesses. This work will commence following the confirmation of the scheme alignment.

5.11 **Cultural Heritage -** Geophysical surveys are complete and results are expected back soon. Andy Pearson is currently consulting with CPAT regarding the location of archaeological trial pits. Known sites of note include the Roman Road through Newtown and the Castell-y-Dial hill fort and crop markings. Archaeologists will be overseeing relevant the GI trial pits

6.0 Programme

6.1 SC outlined the significant dates on the current programme

- Start of construction is programmed for 2015
- Publication of draft Orders will be in June 2014
- The draft ES is programmed for early February 2014. The SEBs will be given four weeks in which to comment during February – early March 2014.

6.2

- Design Commission for Wales presentation due January 2014
- Next ELG is proposed in December 2014 so ES mitigation can be discussed prior to publishing the draft ES.

6.3 All agreed the next ELG meeting will be held on Thursday 12th December 2013.

6.4 JW confirmed that the project team and relevant specialists were happy to have one to one meetings with the SEBs to discuss any issues.

7.0 Any other business

7.1 MD raised the issue of ensuring there is adequate space for landscape planting and also space for access and maintenance.

7.2 Discussion ensued regarding difficulties in obtaining adequate land under the Highways Act as land can only be compulsory purchased for 'essential mitigation'..

7.3 The issue of signage was raised and the conflict this often has with landscape planting. The signage and lighting strategy will be discussed with Powys County Council.

7.4 JP mentioned that the most recent planning application at Glandulas Caravan Park had a detailed ecological and landscape mitigation strategy associated with it. The scheme should therefore take account of this and integrate proposals where possible. This may be available on the PCC website.

7.5 The issue of local provenience planting stock was raised and discussed. JW stated

	that seed is often obtained locally but germinated and grown on outside Wales and sometimes in Europe. This is an issue especially due to plant diseases.	
7.6	MD asked why the WG specified local stock when it was not available. She suggested that efforts should be made to obtain adequate amounts of seed in anticipation of a scheme going ahead. DR noted that the WG may not be able to spend on a scheme prior to an outcome of a public inquiry. JW confirmed that the project team would consider this further and discuss with WG	JW/NJ/JS

Project number: 5105742-115/NRW/001	Page 1 of 3
Project title: A483/A489 Newtown Bypass	Location: Gateway Centre Shrewsbury
Date of meeting: 26th September 2013	
Purpose of meeting: Review and update NRW/PCC on Water Resources Requirements for scheme	
Prepared by: CA/JW	Date of Circulation: 29/10/2013
Approved by: JW	Date of Approval: 08/11/2013
Present: **James Healey** (JH) – Welsh Government (Project Engineer) **Jim Davies** (JD) – NRW (Planning Officer) **Jason Jones** (JJ) – NRW (Fisheries) **Paul Williams** (PW) – NRW (Environmental Management) **Peter Evans** (PE) – NRW (Flood Risk Analysis) **Oly Lowe** (OL) – NRW (Geomorphology) **Graham Astley** (GA) – Powys County Council (Land Drainage) **Richard Bruten** (RB) – AGC (Buildability Manager) **Janet Duncan** (JD) – Atkins (Water Framework Directive) **Kevin Skinner** (KS) – Atkins (Geomorphology) **Dyfan Walters** (DW) – Atkins (flood risk) **Steve Clifton** (SC) – Atkins (Design Project Manager) **Jo Wall** (JW) – TACP (Env. Coordinator)	Circulation: All present Peris Jones – WG Len Wyatt – WG ECAT Neil Jones – WG ECAT Dewi Bressington - Corderoy Jon Stoddard – Capita Symonds AGC project team

Item **Action**

1.0 Welcomes and Introductions

1.1 JW welcomed all to the meeting and everyone introduced themselves and their role/involvement in the scheme.

2.0 Overview of Design Options

2.1 RB explained that the Project Team had been looking at a number of options to change certain junction arrangements along the conceptual design of the scheme at:

- Llanidloes Roundabout – this would reduce impact on the Holiday (Caravan) Park and woodland. It will encroach into the 1:1000 flood plain.
- Dolfor Road – this would avoid a number of services in the area especially the very high pressure gas main
- Kerry Road – this would avoid diversion of the very high pressure gas main and fits better into the local environment
- Railway Crossing – this would take the scheme over the railway which would result in less disruption to the railway and better control of the works.

2.2 RB stated that following the optioneering process, the team has a preferred scheme that has been agreed in principle with the Welsh Government. Following formal

	approval by the Welsh Government the TR111 route alignment that is protected for planning purposes will be revised accordingly.	
2.3	It was generally agreed that the proposed options would be preferable in terms of the water environment, especially the requirement for culvert extensions, the crossings to the main water courses and moving construction further from the convergence of water courses south of Garth Owen.	
2.4	The deep cuttings were noted as a potential issue requiring effective land drainage.	
2.5	PW noted that the Caravan Park had an extensive sewage system and a permit to treat and discharge into Mochdre Brook. He noted that is currently adequate for the existing caravans but he was not sure whether this included the Park expansion.	
2.6	PW confirmed that drainage consents for all water courses along the scheme (with the exception of the River Severn) would be issued by PCC following the Flood and Water Management Act of 2012.	
2.7	PE asked if there was any flood revetment proposed along the A489 near to the R. Severn and the western end. DW confirmed that there was not at this time.	
2.8	Concerns were raised about existing flooding along Green Brook and whilst it was accepted that the scheme could not address existing flood issues it was noted that the attenuation could ameliorate the current situation and would not make it worse.	
2.9	GA noted that there are currently flood issues within Mochdre Industrial Estate from the stream near Castel-y-Dail and also where the 2 watercourses converge to the south of Garth Owen. DW stated that where possible the flood risk will be ameliorated due to the scheme attenuation.	
2.10	GA noted that siltation of Dolfor brook is an issue and it floods partially due the quantity of debris and the limited capacity of the existing silt mitigation (silt traps).	
2.11	GA agreed to provide PCC information/data to the team.	**PCC (GA)**
2.12	DW stated that the team is looking at attenuation ponds and SUDs but the drainage is still being designed.	
2.13	PE noted that NRW do not have any detailed flood modelling of Mochdre Brook but that Atkins did some modelling as part of the weir removal scheme at Stepaside undertaken some years ago that might be of some use..	
3.0	**Environmental Scoping Report Comments**	
3.1	JW noted that the Environmental Scoping Report and relevant background information was available on the sharepoint site. She stressed that if invitations had expired please get in touch so access can be renewed. The site requires users to update their passwords regularly.	
3.2	GA requested access onto the sharepoint site.	**TACP (JW)**
3.3	JW thanked NRW for providing comments to the Scoping report on issues relating to the water environment and took everyone through the comments. Many of the comments were observations and will be addressed by the team. The main issues discussed were as follows:	
3.4	(Item 4C) DW stated that flood modelling is currently being undertaken and storage opportunities will be reviewed as part of the design. GA will be invited to ELG meetings and will be consulted as the scheme develops.	**TACP / PCC**
3.5	(Item 10C, 11C and 12C) clear span bridges will be used over the Mochdre and Dingle Brooks. Culverts will be required for minor water courses and land drainage. Fish migration was unlikely to be impacted. This approach was accepted	
3.6	(Item 13C) no realignment of watercourses is anticipated.	
4.0	**Water Framework Directive**	
4.1	NRW have not yet developed WFD compliance assessment guidance for Wales but make reference to the unofficial EA guidance.	
4.2	NRW to confirm their WFD contact for North Wales.	**NRW (JD)**
4.3	It was agreed that the WFD Assessment required a preliminary / initial assessment of all 3 elements (hydromorphology, aquatic ecology and water quality). Following consultation with NRW the elements will be defined for consideration in the detailed assessment. The detailed assessment would form an Appendix to the ES.	
4.4	It was agreed that the team would prepare their proposed approach to the WFD assessment for review by NRW.	**Atkins (JD)/ TACP (JW)**
4.5	The requirements of the Highways Act and WFD legislation were discussed in	

relation to essential mitigation (and enhancement). A "proportionate" approach was accepted and careful use of terminology will be needed to ensure all required "mitigation" and "enhancement" is deemed essential under the Highways Act.

4.6 NRW confirmed that their definition of a water body included rivers and any tributary (or ditch) upstream of a water body

4.7 It was noted that the crossing of Mochdre Brook and The Dingle Brook are crossed by wide span bridges. There are a number of culvert extensions and new culverts required where smaller watercourses are crossed but no watercourses will be realigned. NRW confirmed that all culverts will need to be assessed.

4.8 NRW stated that the main water body crossed by the scheme of interest for fish passage was Mochdre Brook. As the proposed bridge is clear span in this location it was not considered to be an issue

4.9 In terms of mitigation NRW stated that a culvert of over approx. 40m length would pose a barrier to fish because of the darkness, and that daylight tubes could be a potential solution. Other options would be to improve the bed of culverts or de-culvert other reaches.

5.0 Programme

5.1 SC outlined the significant dates on the current programme

- Start of construction is programmed for 2015
- Publication of draft Orders will be in June 2014
- The draft ES is programmed for early February 2014. The SEBs will be given four weeks in which to comment during February – early March 2014.

5.2

- Next ELG is proposed for Thursday 12th December 2013 so ES mitigation can be discussed prior to publishing the draft ES.

6.0 Future Liaison and Meetings

6.1 JD confirmed that he would attend the ELG meetings and would request attendance by NRW specialists if required.

6.2 GA agreed to attend ELG meetings as appropriate.

6.3 JW confirmed that further meetings with NRW and team specialists could be held as required. It was agreed that another meeting was not considered necessary at this stage.

7.0 Any Other Business

7.1 The latest PSSR study to be made available on sharepoint and issued to JD.

7.2 The issue of legacy was discussed and it was agreed that where possible within the Highways Act this would be addressed within the design.

7.3 JD agreed to forward water body summary sheets for the R Severn and Mochdre brook. **NRW (JD)**

7.4 JJ confirmed that eel passes would not be required for the current scheme.

Project number: 5105742-115/ELG.001	Page 1 of 6
Project title: A483/A489 Newtown Bypass	Location: Monty Club, Newtown
Date of meeting: 12 December 2013	
Purpose of meeting: Environmental Liaison Group Meeting No. 3	
Prepared by: JB	Date of Circulation: 20.12.13
Approved by: JW	Date of Approval: 20.12.13
Present: **James Healey** (JH) – Welsh Government (Project Engineer) **Neil Jones** (NJ) – Welsh Government (WG Environment Advisor Support) **Jon Stoddard** (JS) – Capita Symonds (Environmental Advisor) **Mark Walters** (MW) – CPAT **Callum Carr** (CC) - Powys County Council (Public Rights of Way Officer) **Sian Barnes** (SB) - Powys County Council (Definitive Map Officer) **Paul Bufton** (PB) – Powys County Council (Environmental Health Officer) **John Pearson** (JP) – Powys County Council (Development Control) **Claire Seddon** (CS) - Powys County Council (Planning Policy) **John Messenger** (JM) – NRW (Species Officer) **Carol Fielding** (CF) – NRW (Montgomeryshire Team Leader) **Richard Bruten** (RB) – AGC (Buildability Manager) **Nick Madani** (NM) – AGC (GI Site Engineer) **Andy Pearson** (AP) – Pearson Archaeology (Archaeologist) **Tony Kernon** (TK) – Kernon Countryside Consultants (Agricultural advisor) **Steve Preedy** (SP) – Atkins (Geotechnical Engineer) **Dan Pope** (DP) – Atkins (Noise specialist) **Dominic Harries** (DH) – Atkins (Drainage specialist) **Jo Wall** (JW) – TACP (Env. Coordinator) **Max Burrell** (MB) – TACP (ES Coordinator) **Peter McComiskey** (PMc) – TACP (Landscape architect) **James Bilham** (JB) – TACP (Ecologist)	Circulation: All present Peris Jones – WG Len Wyatt – WG Dewi Bressington - Corderoy Will Davies – Cadw Alun Smith – AGC David Rowlands – AGC Terry Davies – Atkins Steve Clifton – Atkins Sam Shove – TACP Rachel Price – PCC Michael Lloyd - PCC Jim Davies – NRW Michelle Delafield – NMWTRA Cy Griffiths – PCC

Item		Action
1.0	**Welcomes and Introductions**	
1.1	JW welcomed everyone to the third Environmental Liaison Group meeting for the A483/A489 Newtown Bypass Scheme.	
1.2	All attendees introduced themselves and their role within the project.	

1.3	Apologies were sent from Peris Jones and Len Wyatt of the Welsh Government, Michelle Delafield of NMWTRA, Jim Davies of NRW, Michael Lloyd from PCC, Sam Shove and David Wells of TACP.	
2.0	**Minutes of the previous meeting**	
2.1	No comments were received on the minutes from the previous meeting and so were taken as a true representation of proceedings.	
2.2	JW went through the items with actions against them:	
2.3	(2.3) MB stated that he had contacted JP at PCC regarding which proposed developments might be considered in the cumulative effects section of the ES. MB stated that following the NRW proposals contained in their response to the Environmental Scoping Report a scoping exercise had been carried out to assess the proposed developments that warranted consideration.	
2.4	(2.4) MB has drafted a technical note for discussion with WG with respect to the proposed schemes and how they relate to specific guidance given in the DMRB Volume 11. CF had concerns regarding the consistency between the DMRB and the national guidance. It was agreed that this had been noted and would be addressed.	**TACP**
2.5	(2.5) It was agreed that MB would liaise with JP to agree any other proposed developments.	**MB**
2.6	(2.8) JW confirmed that there was communication between the project team and NRW regarding the water environment and although they were not present at the ELG meeting, they had requested a separate meeting for which the relevant specialists would attend. A meeting was held with NRW on 26th September 2013 in Shrewsbury to discuss the environmental scoping report and associated issues.	
2.7	(3.2) JW noted that a further meeting had taken place with NRW in the form of a teleconference on 29th November 2013 in order to discuss outstanding issues and queries relating to the Environmental Scoping Report Schedule of Comments (SOC) which comprised nature conservation and landscape issues.	
2.8	(3.3) It was noted that contact information had been provided for Cy Griffiths the PCC Built Heritage Conservation Officer and she had been invited to the meeting.	
2.9	(3.4) Following advice from PB regarding contaminated land, it was noted that the project team had been liaising with David Jones of PCC.	
2.10	(4.7) JW confirmed that the survey areas had been extended to accommodate the anticipated changes in the scheme (with 19 bat transects carried out in total). It was noted that a further teleconference meeting with NRW had been undertaken on the 29 November 2013 to discuss this issue.	
2.11	(4.9) It was noted that communication with PCC is ongoing with respect to providing relevant information for the assessment of cumulative impacts.	
2.12	(4.11) CS advised the team that the TR111 route alignment was not shown on Powys Unitary Development Plan. The previous minutes should be revised to *'as referred to in Powys Unitary Development Plan'*.	
2.13	(5.2) Evidence of Dormice were found along the scheme alignment during the November surveys. Discussions will take place with CF and JM of NRW regarding Dormouse mitigation. In relation to dormouse connectivity, it was agreed that Dormice should be kept either side of the scheme and not encouraged to cross.	**TACP/NRW**
2.14	(5.4) JW stated that PCC or MNWTRA had not currently undertaken herbicidal treatment of Japanese Knotweed as the revised alignment is yet to be approved. Treatment will begin early next year.	**TACP / MNWTRA**
2.15	(5.6) It was agreed that PMc will contact JP regarding landscape issues for the scheme, as there is not a specific landscape officer.	**PMc**
2.16	(5.7) As noted above a meeting was held with NRW on 26th September 2013 in Shrewsbury to discuss water environment issues.	
2.17	(5.8) NM confirmed that he had made contact with David Jones of PCC regarding contamination issues, as part of the on-going GI work.	

3.0 Update of Scheme Design Development:

3.1 RB explained the current alignment of the scheme, looking at four key areas and the benefits of the changes:

- the realignment of Llanidoes Roundabout which avoids the impact on the adjacent woodland and the water mains in the area.
- Changes at Dolfor which includes a larger structure across Middle Dolfor road to the south of the proposed scheme;
- the change at Kerry road from a grade separated junction to roundabout;
- crossing over the railway line rather than under.

These changes are designed to avoid the high number of services including a very high power gas main which will reduce the cost, disruption and risk to the programme of having to divert these services.

3.2 RB discussed the locations of the site compounds, with the main compound being situated off the A483 coming into Newtown from the south with smaller compounds situated at each of the structures along the route.

3.3 RB noted that access to the scheme for construction purposes was difficult, with very few easily accessible areas, whilst avoiding usage of current transport links.

3.4 RB also stated that the construction period for the project would be two years and the construction of the online works will be undertaken after the Bypass is complete.

4.0 Update on Environmental Impact Assessment

Overall Environmental Statement (ES)

4.1 MB confirmed that the Environmental Statement (ES) was currently being drafted. The introductory chapters consider the alternative proposals including other alignments assessed as part of the Stage 2 study conducted in 2009 and the options recently considered as part of this ECI Contract. The latest scheme design has improvements in terms of air quality and noise impacts when compared to the TR111 route (conceptual design taken forward from the Stage 2 route selection study).

A strategic policy overview section and construction strategy section would also be included in the introduction to the ES. MB also advised that traffic figures which will be used in air quality and noise assessment modelling are currently being prepared. Chapter specialists were consulting with relevant statutory environmental bodies as necessary.

JW stated that mitigation is only in the initial stages; lighting and signage are still being developed. The main issue is that the revised TR111 for the scheme has not yet been announced and therefore proposals are currently confidential.

Air Quality

4.2 JW stated that the air quality assessment was still waiting on traffic models to be completed and that the air quality model would be completed in the following few weeks. **PB**

Cultural Heritage

4.3 AP stated that the 2008/9 baseline study indicated sparse archaeological findings, with the transition currently being made from desk baseline studies to onsite works with archaeologists overseeing the relevant GI trial pits. Previous geophysical survey results have again indicated sparse archaeological findings in the upland areas. Further Geophysical surveys are to be conducted on the 17th December and in January to March 2014. Andy Pearson is currently consulting with CPAT regarding the location of archaeological trial pits. Known sites of note include the Roman Road through Newtown and the Castell-y-Dial hill fort and crop markings. AP stated that preservation would be by record prior to construction, with sites believed to be of local / district level significance. **AP**

Landscape

4.4 Peter McComiskey has been in consultation with CF of NRW regarding the development of key views. Key views have been identified following comments from NRW. PMc stated that cutting would now be less extreme, which has further benefits of avoiding urbanisation of the landscape. JW has been in discussion with the Welsh Government regarding lighting, it was noted that the Kerry Road junction will not be lit due to its raised location.

Ecology

4.5 There have been no changes to the ecological surveys as were originally proposed. There have been some changes to the proposed GI work to ensure there is no disturbance to a badger sett near Castell-y-dial. Otters are known along Mochdre Brook and the River Severn, with JW stating there are two culverts provided at the western end of the scheme for Otters and mammals. Fisheries surveys are not intended as all proposed bridges are clear-span.

4.6 CF noted that there was a dead otter found on Kerry Road recently. Otter mitigation will be reviewed with JM. **TACP/NRW**

4.7 There is now conclusive evidence regarding Dormice, with Dormice being found along the route. Discussions will take place with CF and JM of NRW regarding Dormouse mitigation. In relation to dormouse connectivity, it was agreed that Dormice should be kept to the south of the scheme and not encouraged to cross **TACP/NRW**

4.8 With regards to badgers, JW stated that mitigation has been planned; discussions will take place with JM and CF of NRW regarding the timing of site clearance of badgers in relation to construction. SB had a query relating to existing rights of way due to proximity of badgers and badger setts to these. **TACP/NRW** **TACP/PCC**

4.9 JW noted that a licence was required for the demolition / recreation of Kinsale due to presence of a bat roost.

Geology and Soils

4.10 SP stated that geological assessment was on-going until January, with completion of works due to occur on 18th December. No evidence of bentonite clay had been found, apart from near the hill fort, with lab studies being conducted on the materials element with results in January. **SP**

Noise

4.11 DP stated that baseline monitoring was underway and due to be completed week ending 20/12/13. Monitoring in the centre of Newtown to be undertaken in the week beginning 16/12/13. DP stated that mitigation would be in the form of barrier/bunding in three locations: Dolfor Road, Glandulais Farm Holiday Home Park and eastern end of the scheme. JW suggested that this mitigation should be integrated using natural resources/bunding form rather than barriers. **DP**

DP made arrangements to meet with PB during one of his planned site visits to show him the locations of his noise monitoring stations. **DP**

Effects on all Travellers

4.12 MB had been in contact with SB and CC of PCC, in relation to the diversion and stopping up of Public Rights of Way affected by the scheme. PCC are seeking the opportunity to rationalise the rights of way network in the vicinity of scheme in view of the latest requirements of the Active Travel (Wales) Bill published in November 2013. MB stated that scheme is likely to result in a benefit through reduced community severance. MB also stated that once the route has been confirmed by the Minister, consultation with user groups such as Sustrans will be undertaken. **MB / PCC**

Land use, Agriculture and community effects

4.13 MB noted that a survey had taken place of the significant community facilities within Newtown. He also advised that the current development plan for Powys was the Adopted UDP and land allocated within this plan for housing and employment would be used in the assessment. The Powys LDP is currently being drafted but land allocations will not be provided in time to be included in the assessment.

4.14 TK is undertaking assessments of impacts on agricultural land and farm businesses. TK stated that the Welsh Government had confirmed there was no best/versatile land, with land mainly consisting of grassland used for beef and sheep farming.

4.15 The scheme is likely to have a significant impact on land severance, especially at:

- Glandulais Farm Holiday Home Park
- Coleg Powys Farm
- Bryn Eira

4.16 JW stated that a Holiday Home Park viability assessment would be carried out if required. **AGC**

4.17 There will also be some severance on the following: Ffryd Vaughan, Great and Upper Brimmon farms, Lower Brimmon farm and The Stables

4.15	CF queried access in relation to retention of hedgerows. JW noted that this would be included in the ecology chapter of the ES. Any hedgerows that are removed will also be replaced, with works intending to create as little damage as possible	**TACP**
	Water Environment and Drainage	
4.16	DH discussed the flood risk associated with the scheme and incorporating flood plain storage as mitigation. The two main flood risk areas are the Mochdre and Dolfor Brooks.	
4.17	CF raised a query from the NRW water team, regarding accommodating the natural movement of the river within the Mochdre Brook. DH noted that the west side of the Brook may be a flood issue and was being assessed	**DH**
4.18	JW stated that a Water Framework Directive assessment screening assessment was being undertaken.	
5.0	**Informal discussions with specialists on initial mitigation proposals** Informal group discussions were held in the afternoon session, in order that teams could discuss and resolve detailed issues. Additional comments / queries and actions are shown below:	
5.1	**Noise:** It was agreed with DP that PB would attend the noise survey on site during the week of 16th December 2013 and would be shown all the monitoring locations.	**DP/PB**
5.2	**Landscape:** Discussions were held between PMc, JP of PCC and NJ of WG. The outcomes are as follows:	
5.3	JP was particularly concerned about the landscape treatment to the three main proposed junctions into Newtown (east and west tie-ins and the A483 junction), in particular the eastern tie-in on Pool Road. Here the form of junction is significantly different from that previously illustrated and will have a greater effect on the entrance environment to the town.	
5.4	JP and PMc agreed to meet on site to review the junction and landscape arrangements once there is sufficient information to illustrate the significant views.	**PMc/JP**
5.5	JP considered that it would be essential to engage with the Town Council to get their involvement in the 'gateway' locations, to consider landscape treatments, themes or art provision. Again it was agreed that this would take place when sufficient information was available.	**PMc**
5.6	JP also expressed concern about signage, particularly the risk of having oversized 'trunk road' signs, and wished to have an input on the signage content.	
5.7	JP noted that a Woodland Management Plan had been required from the Glandulais Farm Holiday Home Park with regard to their extension application, including additional planting that had not been carried out. JP suggested that this Management Plan should be reviewed by the team and extended to cover the proposed highway planting adjacent.	**JP/PMc**
5.8	JP also advised that a study of service constraints in the vicinity of the western tie-in had been carried out previously by statutory undertakers and recommended that this should be obtained by the team.	**AGC**
5.9	JP was interested in the detail of the proposed on-line improvements and was keen to see some soft landscape element to benefit the townscape.	**PMc**
5.10	**Ecology:** Discussions were held between TACP and JM regarding the following ecological issues: Badgers:	
5.11	With regards to the proposed replacement Badger sett, JM raised a concern as to its location given the potential for badgers to dig under the embankments. He recommended that a replacement sett should be provided further south within or adjacent to an existing strip of woodland. TACP to review location of proposed replacement sett and badger mitigation along the scheme.	**TACP**
	JM stated that he would require the results of survey data on Badger numbers and activity before responding regarding the settling in time necessary for the replacement sett. This might require night time surveys to be undertaken. TACP to undertake surveys if required.	**TACP**
5.12	TACP to provide information on Badger paths to help determine mitigation and crossing requirements.	**TACP**

Bats:

5.13 JM considered that Lesser Horseshoe bats are most likely to cross the scheme at the Mochdre and Dingle Brooks and forage in woodland areas further south.

5.14 It was agreed that a 1.2m box culvert to accommodate bats should be considered at the Castel-y-Dial culvert (C4).

5.15 JM recommended that TACP undertake surveys to determine bat roost potential of trees that would be affected. JM raised a concern that there may be issues if Barbastelle bats were found to be roosting in any affected trees, particularly if there was a maternity roost (however he thought this to be very unlikely). **TACP**

Otters:

5.16 An Otter was recently found dead along the Kerry Road. All agreed this seemed unusual due to proximity to nearest water course. The provision of additional Otter crossings was discussed. JM agreed to look to see whether they have any other records and get back to TACP. **JM**

It was felt that a mammal crossing may be needed east of Kerry Road. JM considered that a 900mm dry pipe would be acceptable adjacent to Culvert 13. An alternative option would be to provide a mammal pipe associated with C12 and not encourage otters across the road. **TACP**

Dormice:

5.17 JM seemed happy with the proposed approach to mitigation. JM wanted to be sure no populations would be isolated to the north of the road. JM also wanted to ensure that connectivity east to west is maintained by the mitigation. He considered that a Green Bridge within the Holiday Park was not necessary. **TACP**

Other issues:

5.18 JM welcomed the opportunity to provide some unimproved grassland areas along the cutting/embankment slopes. JM to review opportunities for sourcing appropriate seed from hay meadows locally. **JM**

6.0 Programme

6.1 JW outlined the significant dates on the current programme

6.2
- Early March 2014- Submission of draft ES to Statutory Environmental Bodies (SEB's)
- Mid-March 2014 – ELG Meeting
- End March 2014- Response on draft ES from SEB's
- End June 2014 - Publication of draft Orders
- November 2014- Public Inquiry (if required)
- Autumn 2015 – Start on site

6.3 All agreed the next ELG meeting will be held on **Thursday 13th March 2014.**

6.4 JW confirmed that the project team and relevant specialists were happy to have one to one meetings with the SEBs to discuss any issues if required.

7.0 Any Other Business

7.1 JH stressed the importance of ensuring the programme for the Environmental Impact Assessment was met by both specialists and Statutory Environmental Bodies to ensure construction started on site as planned.

Project number: 5105742-115/NRW/002	Page 1 of 6
Project title: A483/A489 Newtown Bypass	Location: Gateway Centre Shrewsbury
Date of meeting: 8th January 2014	
Purpose of meeting: Review and update NRW/PCC on Water Resources Requirements for scheme	
Prepared by: JB/MB	Date of Circulation: 23/01/2014
Approved by: JW	Date of Approval: 22/01/2014
Present: **James Healey** (JH) – Welsh Government (Project Engineer) **Jim Davies** (JDa) – NRW (Planning Officer) **Jason Jones** (JJ) – NRW (Fisheries) **Richard Dearing** (RD) – NRW (Environment Management) **Peter Evans** (PE) – NRW (Flood Risk) **Oly Lowe** (OL) – NRW (Geomorphology) **Graham Astley** (GA) – Powys County Council (Land Drainage) **Richard Bruten** (RB) – AGC (Buildability Manager) **Janet Duncan** (JD) – Atkins (Water Framework Directive) **Kevin Skinner** (KS) – Atkins (Geomorphology) **Ian Dalgleish** (ID) – Atkins (Water Quality) **Kathryn Connolly** (KC) – Atkins (Water Quality) **Dominic Harries** (DH) – Atkins (Drainage) **Jo Wall** (JW) – TACP (Env. Coordinator) **Max Burrell** (MB) – TACP (ES Coordinator) **James Bilham** (JB) – TACP (Ecologist)	Circulation: All present Peris Jones – WG Len Wyatt – WG ECAT Neil Jones – WG ECAT Dewi Bressington - Corderoy Jon Stoddard – Capita AGC project team

Item		Action
1.0	**Welcomes and Introductions**	
1.1	JW welcomed all to the meeting and everyone introduced themselves and their role/involvement in the scheme.	
2.0	**Review of previous meeting minutes**	
2.1	Comments were received from JJ regarding the minutes of previous meeting:	
2.2	(3.5 & 4.9) JJ queried the opinion that fish migration was unlikely to be impacted through culverts on minor water courses, it was stated that this would depend on the design of culverts to be used. JJ emphasized that 'short' (less than 40m in length) culverts do have an impact to fish migration for both local and salmonid species. For Newtown the impacts are more likely to be the fragmentation of local fish populations. JJ stated that culverts that had natural beds, were short in length and allowed light in were most favourable in terms of aquatic ecology.	
2.3	JW went through the action items:	
2.4	(2.11) GA to supply PCC information/data to the team as previously agreed.	**GA/PCC**
2.5	(3.4) DH to update the team on flood/drainage modelling results during the meeting.	
2.6	(4.2) NRW confirmed that the WFD contact in North Wales was Jeremy Tanner. Contact should be made through JDa.	
2.7	(4.4) JDa confirmed that he had reviewed the proposal for WFD assessment , and	**JDa**

had passed his comments to John Messenger and Carol Fielding of NRW prior to the ELG in December. JDa agreed to follow up the comments and send them to JD.

2.8 JD confirmed that Liz Kinsey and KS are working with JD on the WFD Assessment.

3.0 Update of scheme design development

3.1 RB explained that a number of options had been considered along the scheme to include the following:

- Llanidloes Roundabout – Junction moved north reducing the impacts on woodland, the Glandulas Caravan Park and requiring less earthworks
- Dolfor Road - the junction has been moved south to reduce the diversions of the high pressure gas main but would be clear span across Dingle brook
- Kerry Road - At grade roundabout proposed instead of a grade separated junction, reducing the earthworks and diversion of high pressure gas main.
- Railway Crossing - The scheme will pass over the railway rather than under, linking to a roundabout on the northern side at the existing road level with a link to tie in to the existing A489 passing under the scheme.

3.2 In addition, an option to the south of the caravan park had been assessed.

3.3 The Team are awaiting Ministerial approval of the revised TR111 which will protect the new alignment for planning purposes. The team have been instructed by the WG to continue to progress with the proposed scheme design. Consultation with landowners is ongoing.

3.4 OL acknowledged the clear span bridge across Mochdre Brook but raised a concern re lateral migration of the brook and the potential for slumping of the proposed 3m wide farm track/bridleway towards the watercourse.

3.5 RB explained that movement of the embankment towards the water course had been considered but reassured OL that the existing Mochdre Lane would flood taking water along the road before the proposed track flooded.

3.6 RB stated that the Ground Investigation had been completed just before Christmas.

3.7 RB explained that a crossing/underpass is being considered close to Castell-Y-Dial in order for Coleg Powys to access their fields to the south.

3.8 MB explained a site visit took place on 7th January 2014 with PCC Public Right of Way Officers (Calum Carr and Sian Barnes). PCC propose to rationalise the rights of way network in the vicinity of Glandulas Holiday Home Park by stopping up paths rarely used and providing fewer community routes of a higher quality in accordance with the Active Travel Bill. **PCC**

3.9 RB expressed that deadlines for the ES need to be met in order that draft Orders are published on 20th June 2014.

3.10 JH stated that the revised scheme route covers 20% of the original route. JH also explained that the WG was waiting on a report from land surveyors and valuation of Glandulas Holiday Home Park. **JH (WG)**

3.11 It was noted that the Caravan Park had soakaways/septic tanks, which might be an issue in relation to water quality during construction. RB requested any information available from PCC on size, type and locations. **GA (PCC)**

3.12 ID explained he had limited information from NRW regarding abstractions and requested information on the location of the soakaways. JDa to provide information. **ID/JDa (NRW)**

3.13 KC queried the extent of online improvements for the scheme. JW explained that no land take was currently proposed and therefore the proposals were limited. A meeting with PCC will take place on 9th January 2014 to review these proposals. **JW/PCC**

3.14 OL noted the realignment of the Dingle Brook in the vicinity of the bridge as shown on the initial structures drawings. RB confirmed that no realignment was required.

3.15 RB stated that there would be limited intervention in the Dingle and Dolfor Brook and that the current situation would not be made worse.

3.16 JH asked whether the draft ES to be circulated to NRW would include bridge and culvert designs. JW stated that relevant bridge designs would be included in the ES. If any additional information is required this should be requested by the SEBs. **JW/TACP**

3.17 JJ stated that it would be important to minimise the fragmentation of fish routes/habitats and that the Mochdre Brook was the only location where Salmon were thought to be present.

3.18	PE stated that the scheme is a good opportunity for NRW to work alongside PCC. GA agreed and said PCC would use NRW as consultees.	**NRW/PCC**
3.19	RB noted that there would be a surplus of approximately 260,000 m^3 of material, mainly to the west of the scheme. This would be incorporated into the scheme.	**AGC Team**
3.20	MB advised that a Construction Environmental Management Plan (CEMP) would be produced and administered during construction. This would ensure commitments made in the ES were carried out and best working practice regarding pollution prevention etc. is adhered to.	**AGC Team**
4.0	**Drainage and Flood Risk**	
4.1	DH explained the issues regarding flooding and drainage along the scheme.	
4.2	The embankment of the revised Llanidloes Roundabout design would encroach on the existing 1:1000 year flood plain of the River Severn and additional flood storage would be required.	
4.3	JH queried the location of the attenuation pond at the western end. DH explained that this was the currently favoured position due to topography.	
4.4	GA stated that flooding of the Mochdre Industrial Estate has occurred due to runoff from Coleg Powys land and culvert design should be considered carefully. DH stated that high level crossing of Mochdre Brook had been modelled to confirm any impact on the bridge on flood risk.	**AGC**
4.5	DH stated that due to the high level crossing at Dolfor, there was very low flood risk	
4.6	associated with the high level crossing. DH noted an existing flood risk near to Newtown High School and that increased flows through changes in design/culvert design will be avoided to ensure no adverse impact on the existing situation. DH stated that the Dolfor Brook had been modelled to define the existing (baseline) flood risk situation.	
4.7	DH advised that the brook at Kerry Road had been assessed as low flood risk. He confirmed that the proposed junction at the eastern tie-in to the existing A483. does not encroach onto the floodplain of the River Severn	
4.8	PE confirmed that NRW would not QA the flood modelling, but requested the data be made available to them. This was confirmed and data sharing is to be requested through the WG.	**PE/WG**
4.9	DH explained that existing culverts could be removed around the Dolfor junction roundabouts but either a culvert underneath the roundabout at Dolfor or 2 smaller culverts across the roads would be required. There are pros and cons for each option and this requires further consideration.	**DH/GA**
4.10	DH noted that he met with GA in November and data transfer is currently occurring, with more information to be received from GA.	**Atkins/PCC (DH/GA)**
5.0	**Flood Risk Mitigation**	
5.1	DH confirmed that the location of the existing water main at the western end of the scheme is unknown which will affect the location of excavation required to provide the required compensatory flood storage for the River Severn.	
5.2	DH noted that three options for providing compensatory flood storage were being considered: • Between the existing and proposed roads • North of proposed road, towards River Severn • East of roundabout	**DH**
5.3	Sizing of attenuation ponds is dependent on the Greenfield runoff rates to which the discharge will be limited. It was agreed that runoff rates would be discussed after the meeting.	**DH/GA**
5.4	ID asked whether infiltration had been considered. DH replied that to his knowledge the ponds would be impermeable and therefore infiltration had not been considered.	
5.5	DH stated that filter drains would be used to provide highway drainage of the highway through cuttings.	
5.6	The highway drainage on embankments will be drained using kerb and gulley arrangement.	

5.7	DH to provide JD with the fenceline drainage channel lengths.	**DH/JD**

6.0 Water Quality

6.1	ID and KC took the team through the surface water quality results.	
6.2	KC explained that 8 catchments had been assessed and results had been provided with and without mitigation measures.	
6.3	KC stated that without mitigation measures all catchments would fail the soluble tests for zinc and copper, except for catchment number 6.	
6.4	KC explained even with mitigation Catchment 1 would fail the test for zinc. If Catchment 1 is divided into Catchment 1A East and 1B West in order to pass the soluble tests for zinc and copper with mitigation. Note that 1A East (Mochdre Brook) would pass all the water tests without mitigation.	
6.5	ID queried the serious spillage risk and asked if it was necessary to have measures such as petrol interceptors, soakaways or bypass separators as recommended by DMRB and EA guidance in PPG3.	
6.6	ID was advised to liaise with the North and Mid-Wales Trunk Road Agency (MNWTRA) regarding the design and maintenance of mitigation measures.	**ID / MNWTRA**
6.7	ID stated he had conflicting information regarding abstractions, and that it would be useful to gain abstraction information from NRW or Local Authority. ID will contact GA for further discussion. ID will also include JD in emails when contacting GA.	**ID/GA/JD**
6.8	The Mochdre Dingle was the only designated site that was known to the team, in relation to discharging to water courses. JW noted that there was previously a SINC site in the area which has recently been downgraded. The Montgomery Canal SAC is present 1.2km to the east of the scheme; however no water is discharged to this.	

7.0 Water Framework Directive

7.1	JD advised the team that a screening assessment had been carried out in Mid-November, which included hydromorphology, geomorphology and aquatic ecology. An assessment of watercourses was carried out against water body objectives.	
7.2	JD mentioned she had considered S4 as a culvert, and screened in all culverts into the assessment.	
7.3	JD took the team through the assessment by culvert location.	
7.4	C1 is a culvert extension to a small brook which is set higher than the River Severn with no feasible options to mitigate the culvert extension. This was accepted.	
7.5	C2 may require a 30m extension and has a steep gradient. The main feature of interest is an area of wetland which may be possible to recreate and link to the attenuation pond or flood compensation area.	**TACP/Atkins**
7.6	DH confirmed that S2 (Mochdre Brook) would not impact on the flood plain. JD requested further information in order to screen it in or out. JW will send any further relevant information and photos to JD when available.	**JW (TACP)**
7.7	C3 is on a stream which has a steep gradient with a small tributary present through the woodland area. 70m of this will be lost to a new culvert. It was agreed that this is an important watercourse and mitigation (possibly in the form of a box culvert and/or a culvert with a depressed invert) would be considered further.	**TACP/Atkins**
7.8	3b would require realignment of the watercourse along the toe of the embankment. It was suggested that fencing or planting could be provided along sections of the watercourse, adjacent to Coleg Powys. JJ said he would speak to his colleagues regarding technical advice and advise the team through JDa.	**JJ/JDa**
7.9	At C4 there will be a loss of 30m of a water course which has a very steep gradient. The culvert is likely to be a box type to accommodate bats. An option for a depressed invert was discussed. GA stated that there was an issue regarding flooding in the vicinity and that C4 eventually flows into the Mochdre Brook. It was agreed that treatment of this water course will be considered further.	**TACP/Atkins**
7.10	OL asked whether the team had considered flexi-arch bridges instead of culverts. RB stated that these were unlikely to be suitable due to the height/mass of the embankment.	
7.11	OL suggested viewing C3 and C4 in more detail and suggested focussing time/effort and money on the important watercourses including C3 and C4.	

7.12	C5 and C6 both have a very steep gradient, with runoff occurring in wet weather. 120m of water course would be lost but it was agreed that these are not sensitive watercourses.	
7.13	S4 (which will be a culvert not a structure) is on a watercourse in poor condition; with a width of 25cm. Proposed mitigation would include the net de-culverting around Dolfor junction and morphological improvements of the channel to the east of S4.	
7.14	C7 was not considered an issue and no further mitigation would be required.	
7.15	C8 is 60m and is located close to Black Hall Farm. It is on a sinuous watercourse at the bottom of the valley. It was agreed that this culvert should be considered further potentially with a natural base that could sustain fish movement. JJ suggested a site visit and confirmed that NRW would review the aquatic ecology.	**JDa/JJ/OL**
7.16	It was agreed that no realignment of the water course would be undertaken in the vicinity of S5 and therefore no mitigation was required. JD stated she required further information to screen this out. In relation to Japanese Knotweed in this location, JW advised that NMWTRA had been approached regarding herbicidal treatment prior to construction.	**JW/JD**
7.17	C9 and C10 are along a section of Dolfor brook which is currently a mixture of open channel and culverts. The final location of culverts – whether under the roundabout (approx. 75-80m) or short culverts under the road sections is still to be confirmed.	
7.18	DH noted that the team is looking into the option of de-culverting sections where the old road will be removed. However it was noted that there are potential health and safety issues associated with this. The presence of a high pressure gas main was also noted. The level of this gas main, which is yet to be confirmed, is a key factor which will affect the options for re-routing of the Dolfor Brook.GA noted that debris in the area clogs up existing culverts.	
7.19	JD noted an opportunity to de-culvert C11, on the northern side of the scheme although it may not be possible due to landowner requirements. This will be considered further by the team.	**AGC team**
7.20	JD noted that C12 lies on a watercourse which is being heavily modified through dredging. JD recommended that the existing culvert is replaced, making it longer and wider. Two options were suggested: A new culvert or a wetland area combined with the existing culvert extension. It was noted that the existing culvert goes under a farm building. NRW were of the opinion that it would be better to focus attention on other locations. JW noted that there had been an otter fatality along Kerry Road so appropriate mitigation, such as fencing and dry pipes, may be required.	**JD/JW**
7.21	JD advised that a water course was not present at C13 during the site visit. This will accommodate surface water runoff. No further mitigation is required.	
7.22	There is a small pond that flows north that will be accommodated by C14. JW advised that the team would seek to replace ponds that are lost and extend ponds that are severed. The outflow from the pond will be culverted.	**TACP/Atkins**
7.23	C15 is a culvert under the railway. The existing watercourse runs down the side of a farm and goes under the main road. The watercourse is deemed poor and very overgrown and it was agreed that no further mitigation would be required.	
7.24	JD noted that a groundwater specialist would complete the compliance assessment.	**Atkins**
7.25	JJ stated that NRW general policy is not to culvert, but accepted that culverts would be necessary along the scheme. JJ also noted that a site visit would be undertaken by specialists to consider options, in the next week. NRW (JDa) to set up meeting. JW recommended that a TACP ecologist attend.	**JDa (NRW)/ JW**
7.26	RB advised JD to contact Terry Davies regarding latest structure designs.	**JD**

8.0 Programme

8.1 JW outlined the significant dates on the current programme

- Early March 2014 – Submission of draft ES to SEB's
- 13th March 2014 – ELG Meeting
- End March 2014 – Response from SEB's on draft ES
- 20th June 2014 – Publication of draft Orders
- November 2014 – Public Inquiry (if required)

- Autumn 2015 – Start on site

8.2 She noted the importance of the consultation response to the draft ES and confirmed that the team would be willing to meet with NRW as required to ensure that adequate information was provided in the draft ES to ensure effective review.

9.0 Any Other Business

9.1 DH to consult with JDa regarding greenfield run-off issues **DH/JDa**

MINUTES OF MEETING

Project number: 60597	Page 1 of 7
Project title: A483/A489 Newtown Bypass	Location: Monty Club, Newtown
Date of meeting: 13 March 2014	
Purpose of meeting: Environmental Liaison Group Meeting No. 4	
Prepared by: FS	Date of Circulation: 02/06/2014
Approved by: JW	Date of Approval: 02/06/2014
Present: **Peris Jones** (PJ) – Welsh Government **James Healey** (JH) – Welsh Government (Project Engineer) **Len Wyatt** (LW) – Welsh Government (Environment Advisor) **Jon Stoddard** (JS) – Capita (Environmental Advisor) **Mark Walters** (MW) – CPAT **Callum Carr** (CC) - Powys County Council (Public Rights of Way Officer) **Sian Barnes** (SB) - Powys County Council (Definitive Map Officer) **Paul Bufton** (PB) – Powys County Council (Environmental Health Officer) **John Pearson** (JP) – Powys County Council (Development Control) **Cyllene Griffths** – (CG) – Powys County Council **John Messenger** (JM) – NRW (Species Officer) **Claire Parry** (CF) – NRW **Richard Bruten** (RB) – AGC (Buildability Manager) **David Rowlands** – (DR) – AGC **Nick Madani** (NM) – AGC (GI Site Engineer) **Andy Pearson** (AP) – Pearson Archaeology (Archaeologist) **Tony Kernon** (TK) – Kernon Countryside Consultants (Agricultural advisor) **Julia Norman** (JN) – Kernon Countryside Consultants **David Wells** (DW) – David Wells Ecology (Principle Ecologist) **Michelle Delafield** (MD) – NMWTRA **Terry Davies** (TD) – Atkins (Design Manager) **Steve Preedy** (SP) – Atkins (Geotechnical Engineer) **Dan Pope** (DP) – Atkins (Noise specialist) **Dominic Harries** (DH) – Atkins (Drainage specialist) **Kevin Skinner** (KS) Atkins (WFD) **Jo Wall** (JW) – TACP (Env. Coordinator) **Max Burrell** (MB) – TACP (ES Coordinator) **Peter McComiskey** (PMc) – TACP (Landscape Architect) **Fearn Sims** (FS) – TACP (Landscape Architect)	Circulation: All present Dewi Bressington - Corderoy Will Davies – Cadw Alun Smith – AGC Steve Clifton – Atkins Rachel Price – PCC Hannah Powell – PCC Michael Lloyd – PCC Claire Seddon – PCC Jim Davies – NRW Carol Fielding - NRW

Item		Action
1.0	**Welcomes and Introductions**	
1.1	MB welcomed everyone to the 4th Environmental Liaison Group (ELG) meeting for the A483/A489 Newtown Bypass Scheme.	
1.2	All attendees introduced themselves and their role within the project.	
2.0	**Minutes of the previous meeting**	
2.1	No comments were received on the minutes from the previous meeting and so were taken as a true representation of proceedings.	
2.2	MB went through the items with actions against them:	
2.3	(2.4) MB confirmed that following further discussions with WG, the ES would address cumulative impacts with other projects in a chapter towards the end. Other projects considered would include the Llandinam Windfarm repowering, Llandinam Power Lines, Neuadd-goch Windfarm, single turbine applications and a number of development applications within Newtown.	
2.4	(2.5) MB confirmed that consultation with PCC had taken place regarding other proposed developments to be included in the assessment of cumulative impacts.	
2.5	(2.13) Discussions had taken place with NRW and it was confirmed that NRW has agreed in principle to the proposed approach to dormouse mitigation along the scheme.	
2.6	(2.14) No treatment of Japanese knotweed has been undertaken as it is located on private land not adjacent to the existing trunk roads. It was agreed that no treatment would be undertaken ahead of construction and that a method statement for treatment would be contained within the CEMP.	
2.7	(2.15) PMc and JP to discuss current landscape issues at a separate onsite meeting. *Post meeting note – this was held on 26th March 2014 with PMc, JP and JS in attendance*.	
2.8	(4.2) JW confirmed that air modelling had been carried out and had been included within the drat ES.	
2.9	(4.3) AP confirmed that the archaeological field surveys will be nearing completion. Further liaison will take place between AP and CPAT to confirm the location of trial pits. Known sites of note include the Roman Road through Newtown and the Castell-y-Dail hill fort and crop markings, with sites believed to be of local / district level significance.	**AP**
2.10	(4.6) Discussions with NRW (JM) regarding Otter mitigation have taken place and are ongoing. Mammal-proof fencing is proposed along the majority of the Scheme together with the provision of crossing points at suitable locations.	
2.11	(4.7) Discussions with NRW (JM) regarding Dormouse mitigation have taken place and are ongoing. Dormice would not be encouraged to cross the scheme.	
2.12	(4.8) Discussions with NRW (JM) regarding Badger mitigation are ongoing. Method Statements will be prepared as part of the CEMP to outline the construction programme. SB raised a possible issue concerning badgers digging under proposed public rights of way diversions. This is not considered to be an issue.	
2.13	(4.10) Geological investigation is still on-going – however information obtained to date has been used to determined side slopes and rock cut faces. No further bentonite clay had been found.	**SP**
2.14	(4.11/5.1) DP confirmed that PB had been contacted and was present during the monitoring.	
2.15	(4.12) Proposals for stopping up and diverting public rights of way have been developed in consultation with CC/SB of PCC. TD confirmed that rights of way can only be stopped up if they are affected by the Scheme. NM has consulted with other user groups, such as the Powys Ramblers, Walking Newtown and Sustrans. Findings have been incorporated into the NMU Context Report.	
2.16	(4.16) It was noted that a business viability assessment has been carried out for the Glandulas Holiday Home Park.	
2.17	(4.17) DH stated that a flood assessment of the Mochdre Brook has now been carried out and there are no flood issues associated with Mochdre bridge.	
2.18	(5.4) Following the revised design JP and PMc to confirm date for onsite meeting to discuss landscape proposals. *Post meeting note – this was held on 26th March.*	**PMc/JP**

2.19	(5.5) RB confirmed that the team had been in contact with the Town Council and this will continue as the design develops.	
2.20	(5.7) PMc confirmed that he had received the Woodland Management Plan for the Glandulas Holiday Home Park (extension) planning application from JP and has reviewed it as part of the Landscape Assessment Chapter of the draft ES.	
2.21	(5.8) JW confirmed that services constraints had been considered by the team as part of their assessment within the relevant discipline chapters.	
2.22	(5.9) JW confirmed that the on-line improvements would be carried out as 'de-trunking works' and there would be no land take. However it was understood that more extensive improvements were being considered by others.	
2.23	(5.11, 5.12) DW confirmed that a replacement badger sett was no longer required as part of the mitigation of the scheme due to the revised road alignment. JW confirmed that a further survey would be carried out over the coming months to confirm the current location of active setts. Following the outcome of the survey, further mitigation may need to be considered.	**TACP**
2.24	(5.15) JW confirmed that a survey to identify trees with bat roost potential will be carried out over the coming months.	**TACP**
2.25	(5.16) JM had no further information of Otter kills but LW suggested that TACP contact Liz Chadwick of Cardiff University to obtain current otter road kill data as they hold the most comprehensive records for the road network in Wales. MB confirmed that the local biodiversity records centre and NRW had been contacted to obtain base line information.	**TACP**
2.26	(5.17) see 2.11 above.	
2.27	(5.18) JM confirmed that he was reviewing the possibilities of sourcing appropriate seeds for areas of unimproved grassland.	**JM**

3.0 Update of Scheme Design Development:

3.1 JW explained that the Working Draft of the ES, which the SEBs will comment on, is not based on the most up-to-date Scheme design. In order to complete the Working Draft ES, the Scheme's design was 'frozen' at a point in time and the assessments were based on that design.

3.2 RB led the discussion on the changes to the scheme alignment which include:

- Development of Structures at C3, C8 and possibly S4 in liaison with NRW
- Location and extent of flood compensation and alleviation measures
- Amendments of the vertical alignments around Dolfor Road Roundabout
- Realignment of the link into the Mochdre Industrial Estate to reduce impact on industrial units and the open space to the north of Heol Ashley
- The realignment of the scheme to the north between Ch. 4500 and Ch. 5300 to protect a veteran oak previously on the boundary of the Scheme.
- Identification of areas where re-profiling would help the Scheme fit better within the landscape and enhance its use for agriculture
- Potential site compounds
- Lighting and Signage design.
- A statement at the front of the Draft ES covers these design changes.

3.3 TD stated that the scheme was a 2 + 1 design, which is a three lane carriageway, with an overtaking lane for approximately half the scheme in each direction. It was a common approach used in Scotland. A 1m hatched central reservation will be present along the length of the scheme to allow for maintenance access.

3.4 TD noted that the Scheme crosses over the railway line at the eastern end. The attenuation ponds have been positioned on both sides of the railway.

3.5 At the end of the discussion PJ stated that the Minister had officially announced the revised TR111.

4.0	**Update on Environmental Impact Assessment**	
4.1	JW noted that CDs of the Working Draft ES were available at the ELG for SEBs to take away with them. The document will be uploaded to the Share Point Site W/C 17th March 2014.	**TACP**
4.2	JW advised that due to the sensitive nature of some of the content the Working Draft ES was not for the public domain. A formal request should be made to WG prior to the information being shared with third parties.	
4.3	Air Quality JW noted that the working draft of the Air Quality assessment had been completed. Initial results show a general net benefit for sensitive receptors in Newtown as a result of the Scheme taking traffic out of the town.	
4.4	Cultural Heritage AP stated that further consultation with CPAT would be required in order to finalise the location of the trial pits. Results from the trial pits and further geo-physical surveys would inform the assessment in the final ES. There would also be more emphasis on impacts to listed buildings within the Final ES.	**AP**
4.5	Landscape The draft assessment including proposed mitigation has been completed for the landscape chapter. Further updates will be provided in the Final ES as required, following the onsite meeting between PMc and JP.	
4.6	Ecology Outcomes from the ongoing surveys with respect of badger activity and trees with the potential to support roosting bats will feed into the mitigation proposals for the final ES. Protected species fencing is intended to be provided along the entire length of the scheme due to the potential impact to badgers and otters.	
4.7	Geology and Soils The Working Draft of the Geology and Soils Chapter has been completed. Information from David Jones from PCC regarding localised contamination (mainly agricultural contamination) has been used to inform the assessment. The final GI report is awaited and will be used to inform the final assessment.	
4.8	Noise The draft noise chapter is not included in the Working Draft ES and will be issued as a separate document. There has been a delay in the assessment due to the storms at the start of the year disrupting the long term monitoring to inform the baseline data. DP will liaise directly with PB of PCC regarding the noise and vibration assessment.	**DP**
4.9	Effects on all Travellers The Working Draft of the Effects on Travellers Section has been completed. It assesses the impact of stopping up and diversions to public rights of way, some of which are beneficial. It also includes an assessment of the 'relief from existing severance' due to reductions in traffic through Newtown because of the bypass. These results are also largely beneficial. An assessment of vehicle travellers is included in the chapter. This includes an assessment of views from the road. The assessment of driver stress will be included in the Final ES.	
4.10	MB noted that the increased severance along Dolfor Road (negative impact on user groups crossing this road) in the Working Draft would not be as severe in the Final ES. This is due to refinement of the traffic figures.	
4.11	Community and Private Assets The Working Draft of Community and Private Assets Chapter has been completed. Two residential properties (Kinsale and Gelli) will require demolition and there will be a number of other impacts on private land (not included in the agricultural assessment), such as loss of sections of gardens and realignment of accesses.	
4.12	There will be no effects on land used by the community, such as land designed as 'Open Space' within the Powys UDP.	

4.13 'Impacts on development land' have been considered including land designated within the Powys UDP and 'candidate sites' put forward for inclusion in the Powys LDP (deposit draft expected in June 2014). No UDP development land will be affected but some candidate sites which PCC are currently considering in their assessment process will be. When available the impacts to LDP designations will be assessed and included in the Final ES (if available before publication).

4.14 TK stated that although the footprint of the scheme would require a significant amount of pastoral land to be taken it is of a low agricultural value and therefore the impact in terms of loss of 'best and most versatile agricultural land' is low. There would be a greater impact to farm businesses from severance. However, the scheme would not result in any major adverse effects because although there may be changes in the day to day running of farm businesses, they would be able to continue. Re-profiling of affected agricultural land and provisions of crossing points will help to reduce impacts.

4.15 <u>Road Drainage and the Water Environment</u> **NRW / PCC**

The Working Draft of the Road Drainage and Water Environment Chapter has been completed. DH stated that confirmation is still required that the green field run-off rates used in the assessment are acceptable.

4.16 The Team are currently proposing not to use oil interceptors as the attenuation ponds will also function as a pollution prevention measure. NMWTRA do not favour oil interceptors due to maintenance requirements.

4.17 TD stated that if oil interceptors were not used there would still be an isolation system in case of a major incident and skim boards would be provided.

4.18 MD inquired whether the attenuation ponds would require any special maintenance requirements in order to meet the environmental function of pollution control. TD explained that due to the way that they are designed they are self-regulating and there should be no additional maintenance actions required.

4.19 <u>Water Framework Directive (WFD) Assessment</u>

KS outlined the WFD Assessment undertaken and the field work and consultation that had taken place to inform the assessment. The Assessment has been undertaken to meet the requirements of the WFD. As no formal guidelines are available the assessment has followed EA guidelines, agreed with NRW.

4.20 LW stated that he had not known of one being undertaken on a road scheme before and asked how it fitted with DMRB and the ES. MB advised that the Draft WFD assessment had been included within the ES Working Draft Volume 3 (Technical Appendices). This appendix supports the main Road Drainage and Water Environment Chapter in Volume 1 which follows the DMRB guidance. There is no specific DMRB guidance for undertaking a WFD Assessment.

4.21 <u>Signage</u>

JP asked whether the scheme had been reviewed by DCFW. TD confirmed it had and another meeting will be held on 20th March to go through the revised design.

4.22 JP inquired about the signage strategy and potential impacts on the landscape. TD advised that a signage strategy would be provided as part of the draft Orders and would be considered in the ES.

4.23 JS inquired whether the Scheme would form the extent of the LDP development boundary in Newtown and whether the LDP development sites were taking account of the Scheme. JP advised that the Scheme is a fundamental part of PCC thinking when drafting the deposit LDP. Mike Lloyd of PCC Planning Policy Team has attended previous ELG meetings and Local Authority Liaison Group Meetings and so is familiar with the Scheme.

4.24 JW outlined the current programme as follows:

- 17th April – Responses required from consultees on Working Draft ES
- April – August 2014 – Revisions and updates of ES, reviews by WG
- September 2014 – Publication of Draft Orders
- Early 2015 – Public Inquiry
- Autumn 2015 – Start of Bypass Construction
- End 2017 – Complete Bypass Construction
- 2018 – De-trunking Works
- 2018 – 2022 – Environmental Monitoring and Aftercare

4.25	JS reminded everyone that the Working Draft ES was confidential and should not be allowed in the public domain. Comments should be provided on the standard Schedule of Comments (SoC) word document that will be issued.	
4.26	The Team would be happy to meet with the consultees to discuss the ES Working Draft, either before or after comments are submitted.	
4.27	A Public Information Exhibition will be held on Tuesday 8th April 2014. RB encouraged all to attend and to let others know.	
5.0	**Any Other Business**	
5.1	MD had a number of queries regarding signage and whether space would be available for maintenance of landscape planting. It was agreed that MD would forward a list of concerns to JW and a separate meeting be arranged to discuss.	**MD / JW & TD**
5.2	JP welcomed the reduction in standardisation of signage proposed by the Team.	
6.0	**Informal discussions with specialists on initial mitigation proposals**	
6.1	Informal group discussions were held in the afternoon session, in order that teams could discuss and resolve detailed issues. Additional comments / queries and actions are shown below:	
6.2	**Noise:** DP outlined the results of the noise modelling with PB. It was agreed that where possible the noise mitigation would be through earth modelling but where space did not allow fencing would be used.	
6.3	PB raised an issue as to how the proposed new residential estates would be addressed. The traffic data would be reviewed to determine whether there is an allowance for these developments or whether it would be cumulative impacts. This would be detailed in the final ES.	**DP**
6.4	**Ecology:** Discussions were held between TACP, JM and LW regarding the following ecological issues:	
6.5	<u>Badgers:</u> JM inquired about the vaccination of badgers. Although it was understood that the current proposal does not impact directly on currently known badger setts, JM expressed concern that the badger population would still be put under stress due to the severance of foraging habitat. LW stated that this by itself would not be sufficient to put a case forward for vaccinating badgers. However, due to the severance of the foraging habitat the badgers are now more likely to come into contact with fields that are occupied with cows and thus there is an increased risk of the likelihood of TB being spread. DW to review the process and cost involved associated with the vaccination of badgers.	**TACP**
6.6	<u>Bats:</u> Overall JM agreed with the mitigation approach proposed for bats; however he raised a concern about the potential impact on the commuting pipistrelles to the east of Kerry Road. JM suggested that pipistrelles should be discouraged from using this flight line. This might be achieved by encouraging them to cross the scheme further east by reducing the height of vegetation to 2m on approach to the roundabout. MD expressed concerns as to the effectiveness of mammal underpasses particularly where there is a significant height difference between the existing and the proposed. DW explained the logic behind the principles and explained why the example that she gave did not work. DW explained that this would be covered more intensively at the detailed design stage.	**TACP**
6.7	<u>Otters:</u> In principle JM agreed with the location of the proposed mammal crossings. JM and DW discussed the otter kill along Kerry Road. It was decided that additional mitigation would not be required in relation to this.	
6.8	<u>Public Rights of Way:</u> Discussions were held with CC/SB of PCC and TD, MB and NM of the AGC Team.	

6.9	TD confirmed that the maintenance of the overbridge at Glandulas Holiday Home Park would be the responsibility of the Welsh Government, but the surfacing would be the responsibility of the user. The current proposed width for this overbridge is 8.5m as the required standard road width is 5.5m, plus 2.5m for the bridleway and a nominal 0.5m road verge. CC and SB advised that they thought this was probably unnecessary as they had assume that an equestrian could wait safety on one side of the bridge while a vehicle crossed. The same is also assumed for the Coleg Powys underpass (currently proposed as 4.5m wide). CC and SB to discuss and provide further advice.	**CC & SB**
6.10	SB & CC clarified that the status of replacement public rights of way should be bridleway as this allows access for both pedestrians and equestrians.	
6.11	SB & CC had no objection to closing the northern end of BW16 as connectivity to this part of the bridleway network would be maintained by the Scheme proposals.	
6.12	CC & SB advised that the Scheme's new section of Bridleway that ties into BW16, should be realigned a little way to the south due to the steepness of the gradient. This was agreed.	**Atkins**
6.13	TD advised that the newly proposed bridleway along the de-trunked section north of Llanidloes Roundabout would need to provide access for maintenance for BT.	
6.14	It was agreed that south-eastern section could be stopped up as the new Glandulas Holiday Home Park overbridge provides the replacement crossing.	**Atkins**
6.15	It was agreed that surfacing for bridleways would be 3m wide compacted aggregate or grassed, depending on location.	**Atkins**
6.16	The permissive path through the wooded area on Coleg Powys land was discussed. It was suggested that Coleg Powys be contacted to see whether access to this path would be permitted following construction.	**AGC Team**

MINUTES OF MEETING

Project number: 60597	Page 1 of 4
Project title: A483/A489 Newtown Bypass	Location: Elephant and Castle Hotel, Newtown
Date of meeting: Wednesday 11th June 2014	
Purpose of meeting: To discuss updates to the Scheme and results from recent ecological surveys and approaches to mitigation	
Prepared by: MB / JH	Date of Circulation: 20/06/2014
Approved by: JW	Date of Approval: 20/06/2014
Present: James Healey (JH) – Welsh Government Jon Stoddard (JS) – Capita John Messenger (JM) – Natural Resources Wales Michelle Delafield (MD) – NMWTRA Hannah Powell (HP) – Powys County Council Richard Bruten (RB) – Alun Griffiths Contractors Terry Davies (TD) – Atkins Jo Wall (JW) – TACP David Wells (DW) – CEC Jean Hamilton (JH) – TACP Max Burrell (MB) – TACP	Circulation: All present Peris Jones – Welsh Government Dewi Bressington – Corderoy

1.0	**Introduction**	**Action**
1.1	MB welcomed all to the meeting and all attendees introduced themselves and their role in the project.	
2.0	**Latest Scheme Design**	
2.1	TD presented the latest Scheme drawings to those present and explained in detail the current design and latest amendments.	
2.2	The development of the design has been an iterative process but is now nearing the point where there is limited scope for change. The statutory environmental bodies were urged to advise the AGC Team ASAP if there were fundamental issues they had with the scheme design. Changes to the design which may require further land take would be more difficult to make at a later stage.	**NRW/PCC/ NMWTRA**
2.3	JW and TD asked whether there were any general questions on the Scheme design.	
2.4	JM questioned how affective the structures such as culverts and arches would be at providing connectivity for animals along the scheme. Would there be issues with the splash zone affecting bats or the gradient and water volumes affecting badgers and otters?	
2.5	TD advised that the Dolfor and Mochdre Valleys would be largely unaffected as the Scheme would cross on high bridge structures. Baffles would be provided within the arch structures (C3 and C8) to retain the natural bed. This would encourage a more natural sinuosity to the stream, through the structure. Other culverts would be dry 90%, of the time and so should not be an issue.	
2.6	JM asks if pedestrian and vehicle underpasses will be lit. TD confirmed that they will not be lit.	
2.7	JS asked what would happen to the old road at Llanidloes roundabout. TD confirmed that half of its width would remain for access and as a bridleway, the reainader would be ripped up and planted/seeded.	
3.0	**Presentation and discussion of proposed ecological mitigation**	
3.1	JW presented the proposed ecological mitigation shown on the latest scheme drawings. The main points discussed are described below:	
3.2	Mammal resistant fencing would be used along the entire length of the Scheme. This would be 1500mm high, post and wire square mesh as opposed to post and four rail fencing with a	

diamond mesh. The diameter of the mesh is smaller at the bottom and would be buried to a depth of 500mm, with a buried turn towards the outside of the road.

3.3 JS asked whether the standards could be checked to ascertain whether a crank along the top of the fencing should be used, as the DMRB Vol. 10 specification requires this in relation to Otters. **TACP / DW**

3.4 JW and TD gave examples of other recent schemes where a crank was not required. The visual and health and safety impacts of fencing with a crank was also noted, especially adjacent to footpaths. If a crank is required then it would only be used where otter resistant fencing is required adjacent to water courses. The plans would then show x2 types of mammal proof fencing; for badgers and otters. DW noted that it is mammal-**resistant** fencing as opposed to mammal-**proof** fencing – never going to be 100% badger/otter proof. This fencing is supposed to act as a guide for the animals, and if underpasses are correctly located and installed, the animals would preferentially use these rather than trying to dig underneath or climb over.

3.5 Connectivity for mammals across the scheme would be achieved through a series of culverts and dry pipes at various intervals along the scheme.

3.6 JS inquired whether a flap value was proposed on the outfall into the Severn from Culvert 2a to allow access for eels. This was unnecessary as it discharges as an open swale into the river.

3.7 New and retained hedgerows and woodland edge planting would provide connectivity for Dormice along the Scheme.

3.8 The maintenance and effectiveness of mammal fencing, underpasses and other mitigation and landscaping would be monitored by the AGC Team for five years, post construction. If any issues were encountered during this time remedial action would be taken.

3.9 Lighting of the Scheme would be kept to a minimum. It is currently proposed that lighting columns would only be provided at the roundabouts. This would consist of three lighting columns adjacent to each arm of the roundabout. Lighting would be LED and full cut-off beam to minimise light spill.

3.10 JH and DW presented the latest survey information regarding badgers onsite. The main sett identified within Ffridd Wood on Coleg Powys land may not require a replacement sett as stated in the Draft ES but this will continue to be monitored. JH to confirm distance with GPS this week. **TACP**

3.11 HP inquired whether badger foraging habitat would be severed by the Scheme. DW confirmed this was probably not the case given the connectivity provided by underpasses, culverts and dry mammal pipes although no bait marking surveys have been undertaken.

3.12 Crossing points are provided at C3A to the west and C4 to the east of the main sett in Ffridd Woodland, and at several other locations along the Scheme. JW explained that the Mochdre Bridge and Dolfor Valley will be crossed by clear-span structures, so will act as safe crossing points in themselves. Mammal-resistant fencing will link into the abutments of structures.

3.13 JW noted that the box culvert at C4 would be designed to provide connectivity for bagders, bats and otters. JM asked how big it would be and raised concern about the splash zone discouraging bat use. TD stated that it would be 1.2m x 1.2m

3.14 MD asked if one-way gates should be provided along the alignment, in order to allow animals to get out if they do happen to get on to the road.

3.15 TD pointed out that the furthest they would have to go to escape from the road is 2km – length of scheme. DW stated that if fencing is installed correctly, the animals shouldn't get onto the road. MD stated that they could get in from either end of the Scheme. JM suggested that if an animal gets onto the road it would probably be in a state of panic, and would be unlikely to find a one-way gate if it were there. JM also stated that the important thing here is post-construction monitoring, which will allow fine-tweaking of mitigation if any problems are discovered. This approach was agreed and JW confirmed that there will be 5 years post construction monitoring. DW also pointed out that the roundabouts at each end of the Scheme will be lit, which should discourage badgers from going on to the road.

3.16 In summary 13 setts were identified within the Scheme study area. Of those, 5 are thought to be within 30m of the Scheme and so could be affected. Two of these five are thought to be directly affected by the Scheme footprint, and so would require badgers to be excluded from the setts under licence prior to construction. These are:

- A subsidiary sett (No. 10) between Brimmon Lane and Kerry Road.
- A subsidiary sett (No. 13) at the proposed Pool Rd. Roundabout on Network Rail Land. *Post meeting note – access was granted to this land and a survey conducted on 13/06/2014 confirmed this as a small active sett with three entrances. This sett is located approximately 600m from the nearest main sett. Due to the low number of*

entrances, this is assumed to be a subsidiary sett, but further monitoring will be required to confirm this status. If the sett appears to be in use during the winter months, it would be considered a main sett and a replacement sett would be required **TACP**

- A main sett in Ffridd Wood (No. 5). This will be monitored to determine whether an artificial sett would be required.

3.17 HP asked whether bait-marking surveys should be carried out at Sett 13. The requirement for such surveys would be dependent on whether a sett has been confirmed at this location. *Post-meeting note – a badger sett has been confirmed at this location. However, it is considered that monitoring of activity at this sett during the winter months will be sufficient to classify its status. The possible severance of badger territories as a result of the Scheme has already been mitigated through the inclusion of underpasses and other safe crossing points along the alignment, so it is not considered necessary to gather further information on clan territory extents.*

3.18 HP questioned whether breeding bird surveys should be carried out in June 2014. DW said that surveys were conducted on the 16th April, 23rd April and 14th May 2014 mainly to determine the presence of early breeding bird species. HP asked whether surveys were conducted for Lesser-spotted woodpecker. DW said that it is unlikely that this species would occur in the area, due to lack of suitable habitat.

3.19 RB confirmed that all vegetation clearance works would be carried out outside the bird nesting season. DW stated that late-breeding birds would be a minor concern, as there are few late-breeding species but if found felling would be delayed for any trees which contain nests, until the young have fully fledged.

3.20 HP was satisfied that no further breeding bird surveys are required to inform the site clearance.

3.21 MD asked whether wildflower seeding would be undertaken. JW confirmed that the intention was to seed with wildflower mix (collected by Montgomery Wildlife Trust) on some cutting faces. It was agreed that no topsoil will be used where wildflower seed is sown, TD raised concerns about run off on side slopes during construction and the need for seeding for slope stabilisation.

3.22 MB noted that the following documents had recently been circulated regarding bats:

- Bat Tree Roost Report 2014
- Bat Ghost Licence
- Bat Tree Method Statement
- Bat Building Survey Report

3.23 MB acknowledged the comments received from NRW on the bat tree roost report, Ghost Licence and Method Statement. With regards to the resent comments on the Method Statement, MB confirmed that the suggested methods of bring trees down and leaving felled trees in situ for 48 hours would be incorporated. **TACP**

3.24 With regards to comments on the Ghost Licence, MB confirmed that x2 dusk emergence and x1 dawn re-entry survey would be carried out on Kinsale in line with the BCT Good Practice Guidelines (2nd Ed.). This would provide further detail as to the status of this roost and insure that the appropriate mitigation is provided. **TACP**

3.25 If the roost were confirmed as a maternity roost for Whiskered Bat, mitigation in the form of a build structure rather than bat boxes would be required.

3.26 The team noted that WG would have ownership of land relating to Kinsale, the coach park and possibly Ashbrook which is on the corner of Middle Dolfor Road. If a replacement roost in a structure was required then this could be used in the mitigation strategy.

3.27 HP noted that the Bat Building Report referred to bats swarming around or entering Kinsale and Ashbrook during activity surveys in the introduction, but no mention was made of this during the section on Ashbrook in the report. *Post meeting note: the activity surveys only noted bats entering or leaving Kinsale and Tyn-y-Green. The report will be amended to reflect this.* **TACP**

3.28 MB summarised the team's approach to dealing with potential bat roosts in trees:

3.29 A preliminary tree roost assessment has been carried out during Spring 2014, which has identified 33 category 1 or 1* trees that are either directly affected by the scheme or are in close proximity to lighting at the roundabouts. These trees will be subject to climbing inspections carried out spring / summer 2015. If roosts are identified during these inspections then further dusk emergence / dawn re-entry surveys will be carried out to establish the status of these roosts. Whilst undertaking the climbing inspections, holes which are confirmed to not have bats in through endoscopic inspections will be sealed off to prevent bats adopting them prior to felling.

3.30 Felling of trees that have undergone further survey or which are 'category 2' will take place

	once AGC have control of the site in September / October 2015 in accordance with the Bat Tree method statement.	
3.31	HP noted work being carried out by Henry Andrews which provides an inventory of tree features that are used by bats. She stated that the work suggested substantially more surveys are required throughout the year to establish whether a tree is used by bats as a roost.	
3.32	DW stated this might be useful when undertaking the tree climbing surveys to identify features most likely to be used.	
3.33	JM advised that individual studies should not be used to dictate survey effort and that the current best practice guidance should be followed.	
3.34	DW noted that measures put forward in the Bat Tree Method Statement (e.g. soft felling etc.) help reduce the risk to bats that might be missed during surveys.	
3.35	JM noted that there are bat boxes present within the woodland areas to be affected by the Scheme. MB stated that those trees in the preliminary roost assessment which had bat boxes had been noted.	
3.36	It was agreed to try and find out who had put the boxes up and for what reason (e.g. have they been put up as part of some other mitigation). MB suggested that they were probably put up by Coleg Powys students and the Castell-y-Dail Centre as part of a project. JM states that any bat boxes within the alignment of the Scheme which are not in use should be taken down and relocated, as bats may colonise these prior to construction.	**TACP**
3.37	JM stated that White Clawed Crayfish had been re-discovered along the Severn. He was undecided whether further consideration of this species would be required. JM to speak with colleagues and advise ASAP.	**JM - NRW**

4.0 Programme

4.1
- September 2014 – Final ES published with the draft Orders
- February / March 2015 – Public Inquiry
- August / September 2015 – 'Notice to Treat' (AGC gain control of the site)

4.2 Once the 'Notice to Treat' has been served AGC can commence site clearance works. This will include the following:
- Tree felling (in accordance will relevant ecological Method Statements – e.g. bats and dormice.
- Badgers excluded from affected setts
- Dormouse autumn phase hedgerow clearance
- Slow worm translocation

4.3	JW asked those present to let the AGC Team know if their responses to the comments on draft ES SOC form had not been addressed satisfactorily and if any further information/ clarity was required.	**NRW/ NMWTRA/ PCC/ JS**
4.4	The AGC Team will be meeting with the Welsh Government's Environmental adviser on Monday 16th June to discuss the latest Scheme design and issues raised by the SEBs on the draft ES.	
4.5	TD reiterated the importance of letting the AGC Team know ASAP if they required any fundamental changes to the Scheme design.	

5.0 Any other business

5.1 JS inquired whether any off-site planting was required? JW advised that discussions are ongoing regarding some off-site planting at Sunridge.

Appendix A.4

WelTAG Appraisal Summary Tables

Option 5.2a – Southern Bypass Option 2a + local transport measures

Option 5.2a Description – New highway bypass south of Newtown, passing south of Mochdre Industrial Estate and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Economy			
Transport Economic Efficiency	Cost: £51.5M PVC £50.3M/51.6M (Low/High) PVB £48.1/97.2 (Low/High) NPV -£2.2M/45.5M (Low/High) BCR £0.96/1.88 (Low/High)	All road users to benefit from reduced journey times and vehicle operating costs savings.	
EALI (wider economic Impacts)	The route opens up possible pockets of development opportunities along bypass corridor and allows further development of the existing industrial estates. The removal of through traffic within the town could improve its attractiveness to potential commercial growth.	The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	
Environment			
Noise	This bypass option would re-direct through traffic around Newtown. The proposed route is mainly rural with some residential and industrial areas on the corridor boundaries. Option 5a would significantly reduce through traffic in the centre of Newtown, but may expose residential areas to noise from bypass traffic. There will be a net reduction in noise annoyance of 84 people in design year.	Along existing route and in vicinity of bypass corridor.	Large beneficial (+++)
Local Air Quality	1424 properties experience a reduction in NO_2 and PM_{10} 256 properties experience an increase in NO_2 and PM_{10} Assessment score: PM_{10} = -248.21 NO_2 = -826.75	Benefits weighted towards less wealthy residents of town.	Large beneficial (+++)
Greenhouse Gas Emissions	NPV of cost £330,000. A decrease in carbon emissions of 180 tonnes/yr.	Throughout Newtown	Moderate beneficial (++)
Landscape	Route largely separated from urban area but affecting more isolated and strongly rural landscape characters. Attractive views affected by urban intrusion into rural scenes.	Rural landscape character and views from Newtown.	Moderate adverse (--)
Townscape	Impact on townscape and affected properties largely limited to southern urban fringe. Some northern areas affected by changes to distant views.	Views from Newtown.	Slight adverse (-)
Bio-diversity	There is a crossing of the Mochdre Brook with potential impacts upon Otter, fish species, bat feeding sites, Kingfisher etc. There are also possible indirect impacts upon Montgomery Canal SAC although these are considered unlikely to be of any significance. Dormice are likely to be impacted upon. Semi-natural broad-leaved woodlands severed in vicinity of Castell y Dail. Likely to impact on Badger territories and one outlier sett. Glandulais Farm Wildlife Site (SINC) impacted upon although no longer considered to be of ecological value. Two ponds with breeding amphibians likely to be lost. Large adverse in areas where Dormice may be impacted (this could possibly be downgraded by careful route alignment). Moderate adverse where semi-natural broad-leaved woodland areas may be cut through and possibly also moderate adverse in relation to general impact of severance on Badgers and bats as well as overall hedgerow loss and generally slight adverse across much of the rest of the corridor.	Most of the impacts of greater significance are within more westerly section that is unique to this option (also 7.2a) with Dormice near Glandulais Farm and also "The Dingle", Mochdre Brook and associated interests and semi-natural broad-leaved woodland all likely to be impacted upon. The more easterly section common to all options will have less ecological impact but is likely to impact upon ponds with breeding amphibians and Badger territories. Impacts upon bats may occur wherever hedgerows, watercourses, woodland is lost/severed.	Moderate adverse (--)
Heritage	No SAMs affected. Effect on historic setting of 5 Grade II Listed Buildings; indirect physical effect on one of these buildings. Direct physical and visual effect on Iron Age hill fort and its associated archaeology (non-scheduled site). Predicted physical impacts on three other known archaeological sites of Medium (regional) value. Known resource indicates high potential for disturbance of buried archaeological remains. Significant damage to traditional fieldscape. Gradients for road entail significant construction footprint. Local transport measures alone unlikely to be of any significance.	Throughout route corridor	Moderate to Large adverse (--/---)
Water environment	The construction of a new road through a 'green field' will increase surface water runoff, obstruct flood flow within the flood plain and cause a loss of flood plain storage if no mitigation measures are established, however these impacts can be mitigated. The significance of effect has been determined for the design year and post-mitigation.	Mochdre Brook and minor watercourses along the Option 5.2a corridor.	Neutral (0)
Soils	The construction of a highway will involve the construction of a number of cuttings that will impact upon the geology and soils along the route. The route may also cross a number of areas of head deposits, depending upon the depth, extent and nature of these deposits slope stability issues may arise. The potential and magnitude of this can not be determined without detailed ground investigation. The option runs sub-parallel to and crosses a number of structural axis, both anticline and syncline, and faults. This may lead to side slope stability problems and slope failures within cuttings due to movement of soil or rock along fault planes or along bedding planes within structural axis. The impact of highway construction upon these cannot be assessed without detailed ground investigation. The route crosses at least five areas of land slides mapped by the BGS. The stability condition, nature, extent and depth of foundered strata are unknown and therefore the impact of the construction of a highway along the line of this option cannot be assessed without detailed ground investigation.	Throughout route corridor.	It is not possible to estimate the significance due to the lack of information; the significance may range from large adverse to large beneficial.

Option 5.2a Description – New highway bypass south of Newtown, passing south of Mochdre Industrial Estate and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
	Therefore, until a detailed ground investigation has been undertaken the impact of this option with respect to geology and soils cannot be assessed.		
Society			
Transport safety	Number accidents saved: 225/76 (Low/High) PVB = £3.8M/-3.7M (Low/High)	Most road users to benefit	Slight beneficial (+)
Personal security	The southern bypass (option 2a) is likely to create less through and high sided traffic and rat running, especially along Plantation Road, Heol Treowen and within the town centre, therefore the potential and perceived risk will be reduced. This is likely to have a slight beneficial impact. Local transport measures are unlikely to have a significant impact on personal security.	Throughout Newtown especially to the South of the town centre	Slight beneficial (+)
Permeability	The bypass element of Option 5.2a will reduce AADT along the A483 / A489 through Newtown by 23%. This will result in a slight existing severance. The local transport measures will have no impact	Throughout Newtown and north and south of existing A483 / A489 through Newtown. Localised benefits along Plantation Lane and Heol Treowen.	Slight beneficial (+)
Physical Fitness	Both the bypass element and local transport measures element of Option 5.2a will not provide any encouragement to use active modes of travel.	Throughout Newtown	Neutral (0)
Social Inclusion	The southern bypass (option 2a) has the potential for improving bus reliability both through Newtown and to/from other centres and settlements as well as reducing the traffic on roads within Newtown. This is likely to have a slight beneficial effect. Additionally, local transport measures have the potential for slightly improving bus reliability through Newtown. This is also likely to have a slight beneficial effect, with an overall impact of slight beneficial.	Throughout Newtown, and towns/settlements accessing Newtown for key services	Slight beneficial (+)
Equality, Diversity & Human Rights	The southern bypass (option 2a) has the potential for reduced fear for non-motorised transport, which will benefit disadvantaged groups. It will also create easier links for Welsh speakers to Welsh speaking areas in the West. This is likely to have a slight beneficial impact. Local transport measures are likely to have a neutral impact. The overall impact is therefore slight beneficial.	Throughout Newtown, towns and settlements and disadvantaged groups especially to the south of Newtown. Welsh speakers.	Slight Beneficial (+)
Transport Planning Objectives			
TPO 1	Neutral Local economy will benefit as pockets of development land are opened up by bypass. Businesses along old route may have a disbenefit due to reduced traffic.		
TPO 2	Moderate beneficial (++) A decrease in carbon emissions of 180 tonnes/yr		
TPO 3	Moderate Adverse (- -) Traffic on Heol Treowen increases E/B in AM. Traffic on Milford Road increases W/B in AM & PM peak. Positive effects on Plantation Lane at all times & Heol Treowen in PM peak. Objectives met for Plantation Lane W/B in both AM & PM peaks.		
TPO 4	Neutral Insignificant forecast modal shift due to limited public transport improvements. Improvements provided to encourage walking and cycling.		
TPO 5	Neutral Public transport forecast not to deteriorate due to limited public transport proposals.		
TPO 6	Significant Beneficial (+++) By 2016 journey time reduced by 17% and 20% in AM and PM peaks respectively between Caersws and Aberbachan. By 2016 journey time reduced by 33% in AM and PM peaks between 'The Dingle' and Aberbechan. By 2016 journey time reduced by 29% and 25% in AM and PM peaks respectively between 'The Dingle' and Caersws.		
TPO 7	Moderate Beneficial (++) By 2016 accidents reduce by 21.8% through Newtown. This does not meet the 25% reduction outlined in the objectives.		
Public acceptability: Likely to be acceptable to general public if reduces traffic on main road through Newtown. Local transport measures element acceptable			
Acceptability to other stakeholders: Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Local transport measures element acceptable			
Technical and operational feasibility: Technically and operationally feasible, although possible geotechnical difficulties in landslip areas. Structure crossing railway may pose technical difficulties. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.			
Financial affordability and deliverability: Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.			
Risks: Acceptability of landscape and visual impact; effects on services; flooding. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.			
Comment:			

Option 5.2a Description – New highway bypass south of Newtown, passing south of Mochdre Industrial Estate and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
This option provides a reasonable fit with the Transport Planning Objectives and reasonable overall score against the Welsh Impact Areas. **It is therefore recommended that this option be taken forward to Public Consultation**			

Option 5.2b – Southern Bypass Option 2b + local transport measures

Option 5.2b Description – New highway bypass south of Newtown, passing through Mochdre Industrial Estate on the approximate line of Heol Ashley and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Economy			
Transport Economic Efficiency	Cost: £43.1M PVC £42.3M/46.6M (Low/High) PVB £53.0/104.5 (Low/High) NPV £10.8M/57.9M (Low/High) BCR £1.25/2.24 (Low/High)	All road users to benefit	
EALI (wider economic Impacts)	The route opens up possible pockets of development opportunities to the east of Newtown. May lead to the loss of existing industrial land and will disrupt the current permeability of the Mochdre Industrial Estate. The green corridor will only provide an alternative to the existing trunk road.	The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	
Environment			
Noise	This bypass option would re-direct through traffic around Newtown. The proposed routeis mainly rural to the east and passes through Mochdre Industrial Estate to the west. Option 5b would significantly reduce through traffic in the centre of Newtown, but may expose residential areas to noise from bypass traffic. There will be a net reduction in noise annoyance of 81 people in design year.	Centre of Newtown and in vicinity of proposed bypass corridor.	Moderate beneficial (++)
Local Air Quality	1424 properties experience a reduction in NO2 and PM10 275 properties experience an increase in NO2 and PM10 Assessment score: Pm10 = -312.71 NO2 = -1114.09	Benefits weighted towards less wealthy residents of town.	Large beneficial (+++)
Greenhouse Gas Emissions	NPV of cost £384,000. Decrease in carbon emissions of 210 tonnes/yr.	Throughout Newtown	Moderate beneficial (++)
Landscape	Part of the route passes through industrial area but also affects more isolated and strongly rural landscape characters. Attractive views affected by urban intrusion into rural scenes.	Adverse effects on rural eastern section, impact on western industrial area would be largely neutral.	Moderate adverse (--)
Townscape	Attractive views from town affected by urban intrusion into rural scenes. Impact on Mochdre Industrial Estate could be adverse or beneficial depending on detail.	Adverse effects acting more on rural eastern townscape setting as impact on western industrial area would be largely neutral.	Slight adverse (-)
Bio-diversity	Dormice are likely to be impacted upon. Likely to impact on Badger territories and one outlier sett. Two ponds with breeding amphibians likely to be lost. Large adverse in areas where Dormice may be impacted (this could possibly be downgraded by careful route alignment). Possibly moderate adverse impact in relation to general impact of severance on Badgers and bats as well as overall hedgerow loss and generally slight adverse across much of the rest of the corridor.	Where the option passes through Mochdre Industrial Estate there is unlikely to be any significant impacts. Impacts upon Dormice in the vicinity of "The Dingle" are likely to be the most significant impact of this option. The more easterly section common to all options will have a generally slight negative impact but is likely to impact upon ponds with breeding amphibians and Badger territories. Impacts upon bats may occur wherever hedgerows, watercourses, woodland is lost/severed.	Slight/Moderate adverse (-/--)
Heritage	No SAMs affected. Moderate effect on visual setting of one Grade II Listed Building. W of the A483: area already developed – no known sites and survival of buried archaeology probably limited. Along the Mochdre Industrial Estate predicted physical impacts on three known archaeological sites of Medium (regional) value; potential for disturbance of buried archaeological remains; damage to, and fragmentation of, traditional fieldscape. Local transport measures alone unlikely to be of any significance.	Impacts on buried archaeology likely only within eastern part of route. No anticipated impacts arising from construction of western part.	Slight to Moderate adverse (-/--)
Water environment	The construction of a new road through a 'green field' will increase surface water runoff, obstruct flood flow within the flood plain and cause a loss of flood plain storage if no mitigation measures are established, however these impacts can be mitigated. The significance of effect has been determined for the design year and post-mitigation.	All minor watercourses along the Option 5.2b corridor including Green Brook.	Neutral (0)
Soils	The construction of a highway will involve the construction of a number of cuttings that will impact upon the geology and soils along the route. The route may also cross a number of areas of head deposits, depending upon the depth, extent and nature of these deposits slope stability issues may arise. The potential and magnitude of this can not be determined without detailed ground investigation. This option runs sub-parallel to and crosses a number of structural axis, both anticline and syncline, and faults. This may lead to side slope stability problems and slope failures within cuttings due to movement of soil or rock along fault planes or along bedding planes within structural axis. The impact of highway construction upon these cannot be assessed without detailed ground investigation. The route crosses at least three areas of land slides mapped by the BGS. The stability condition, nature, extent and depth of foundered strata are unknown and therefore the impact of the construction of a highway along the line of this option cannot be assessed without detailed ground investigation. Therefore, until a detailed ground investigation has been undertaken the impact of this option with respect to geology and soils cannot be assessed.	Throughout route corridor.	It is not possible to estimate the significance due to the lack of information; the significance may range from large adverse to large beneficial.

Option 5.2b Description – New highway bypass south of Newtown, passing through Mochdre Industrial Estate on the approximate line of Heol Ashley and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Society			
Transport safety	Number accidents saved: 199/56 (Low/High) PVB = £5.7/-1.7M (Low/High)	Most road users to benefit	Slight beneficial (+)
Personal security	The southern bypass (option 2b) is likely to create less through and high sided traffic and rat running, especially along Plantation Road, Heol Treowen and within the town centre, therefore the potential and perceived risk will be reduced. This is likely to have a slight beneficial impact. Local transport measures are unlikely to have a significant impact on personal security.	Throughout Newtown especially to the south of the town centre	Slight beneficial (+)
Permeability	The bypass element of Option 5.2b will reduce AADT along the A483 / A489 through Newtown by 25% This will result in a slight relief from existing severance. The local transport measures will have no impact	Throughout Newtown and north and south of existing A483 / A489 through Newtown. Localised benefits along Plantation Lane and Heol Treowen.	Slight beneficial (+)
Physical Fitness	Both the bypass element and local transport measures element of Option 5.2b will not provide any encouragement to use active modes of travel.	Throughout Newtown	Neutral (0)
Social Inclusion	Both the southern bypass (option 2b) and local transport measures have the potential for improving bus reliability both through Newtown and to/from other centres and settlements as well as reducing traffic on roads within Newtown. In combination these impacts will have a slight beneficial impact.	Throughout Newtown, and towns/settlements accessing Newtown for key services	Slight beneficial (+)
Equality, Diversity & Human Rights	The southern bypass (option 2b) has the potential for reduced fear for non-motorised transport which will benefit disadvantaged groups as well as creating easier links for Welsh speakers to Welsh speaking areas in the West. This is likely to have a slight beneficial impact. Local transport measures are likely to have a neutral impact. The overall impact is therefore slight beneficial.	Throughout Newtown and the surroundings towns/settlements, welsh speakers and disadvantaged groups especially to the south of Newtown.	Slight beneficial (+)
Transport Planning Objectives			
TPO 1	Neutral (0) Local economy will benefit as pockets of development land are opened up by bypass. May disrupt the current permeability of Mochdre Industrial Estate. Businesses along old route may have a disbenefit due to reduced traffic.		
TPO 2	Moderate beneficial (++) Decrease in carbon emissions of 210 tonnes/yr.		
TPO 3	Slight Beneficial (+) Traffic along Heol Treown and Plantation Lane experiences a significant reduction with some through traffic targets met. Milford Road does not meet targets as W/B traffic increases. This is due to the bypass being to the south of town. All other options reduce traffic.		
TPO 4	Neutral (0) Insignificant forecast modal shift due to limited public transport improvements. Improvements provided to encourage walking and cycling.		
TPO 5	Neutral (0) Public transport forecast not to deteriorate due to limited public transport proposals.		
TPO 6	Slight Beneficial (+) By 2016 journey time reduced by 9% and 13% in AM and PM peaks respectively between Caersws and Aberbachan. By 2016 journey time reduced by 38% in AM and 39% in PM peaks between 'The Dingle' and Aberbechan. By 2016 journey time reduced by 9% and 7% in AM and PM peaks respectively between 'The Dingle' and Caersws.		
TPO 7	Moderate Beneficial (++) By 2016 accidents reduce by 24.1% through Newtown. This does not meet the 25% reduction outlined in the objectives.		
Public acceptability: Public may accept if provides reduction in traffic on main road through Newtown. Local transport measures element acceptable			
Acceptability to other stakeholders: Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Section through already developed area more acceptable to environmental stakeholders. Local transport measures element acceptable			
Technical and operational feasibility: Technically feasible, but safety of College roundabout needs review. Difficulty of providing suitable safe right-turn facilities through Mochdre Industrial Estate needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.			
Financial affordability and deliverability: Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.			
Risks: Loss of business in Mochdre Industrial Estate; Does not address permeability/severance issues; does not reduce traffic on New Road; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.			
Comment: This option provides a better fit with the Transport Planning Objectives and the Welsh Impact Areas than Option 5.2A. This could limit further development of the Mochdre industrial Estate by limiting access to the trunk road. **It is therefore recommended that this option be taken forward to Public Consultation.**			

Option 5.2c – Southern Bypass Option 2c + local transport measures

Option 5.2c Description –New highway bypass south of Newtown, passing between Maesyrhandir and Mochdre Industrial Estate on the approximate line of the original TR111 route, and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Economy			
Transport Economic Efficiency	Cost: £43.6 PVC £42.6M/44.0M (Low/High) PVB £56.1/108.4 (Low/High) NPV £13.5M/64.4M (Low/High) BCR £1.32/2.46 (Low/High)	All road users to benefit	
EALI (wider economic Impacts)	The route opens up possible pockets of development opportunities along eastern bypass corridor and allows further development of the existing industrial estates. The removal of through traffic within the town could improve its attractiveness to potential commercial growth. The bypass would provide more efficient access to the Mochdre Industrial Estate.	The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	
Environment			
Noise	The bypass option would re-direct through traffic around Newtown. The proposed route is mainly rural to the east and passes between residential and industrial land to the west. Option 5cwould significantly reduce through traffic in the centre of Newtown, but may expose residential areas to noise from bypass traffic. There will be a net reduction in noise annoyance of 67 people in design year.	Centre of Newtown and in vicinity of proposed bypass corridor.	Moderate beneficial (++)
Local Air Quality	1318 properties experience a reduction in NO_2 and PM_{10} 514 properties experience an increase in NO2 and PM10 Assessment score: PM_{10} = -283.07 NO_2 = -687.56	Benefits for less wealthy residents in centre of town achieved at cost of disbenefits for a smaller number of less wealthy residents on the outskirts.	Moderate beneficial (++)
Greenhouse Gas Emissions	NPV of cost £379,000. Decrease in carbon emissions of 206 tonnes/yr.	Throughout Newtown	Moderate beneficial (++)
Landscape	Much of route affecting more isolated and strongly rural landscape characters. Attractive views affected by urban intrusion into rural scenes.	Rural landscape character and views from Newtown.	Moderate adverse (--)
Townscape	Attractive views affected by urban intrusion into rural scenes. Direct effect on the townscape character of adjacent Maesyrhandir housing and green space/ amenity corridor and Mochdre Industrial Estate.	Views from Newtown. Townscape and property effects most adverse in western section adjacent to Maesyrhandir housing area.	Slight adverse (-)
Bio-diversity	Dormice are likely to be impacted upon. Likely to impact on Badger territories and one outlier sett. Two ponds with breeding amphibians likely to be lost. Large adverse in areas where Dormice may be impacted (this could possibly be downgraded by careful route alignment). Possibly moderate adverse impact in relation to general impact of severance on Badgers and bats as well as overall hedgerow loss and generally slight adverse across much of the rest of the corridor.	Where the option passes north of the Mochdre Industrial Estate there is unlikely to be any significant impacts. Impacts upon Dormice in the vicinity of "The Dingle" are likely to be the most significant impact of this option. The more easterly section common to all options will have a generally slight negative impact but is likely to impact upon ponds with breeding amphibians and Badger territories. Impacts upon bats may occur wherever hedgerows, watercourses, woodland is lost/severed.	Slight/Moderate adverse (-/--)
Heritage	No SAMs or Listed Buildings affected. W of the A483: no impacts upon known archaeological sites; area already developed and archaeological survival limited. E of A483: predicted physical on three known archaeological sites of Medium (regional) value; potential for disturbance of buried archaeological remains; damage to, and fragmentation of, traditional fieldscape. Local transport measures alone unlikely to be of any significance.	Impacts on buried archaeology likely only within eastern part of route. No anticipated impacts arising from construction of western part.	Slight to Moderate adverse (-/--)
Water environment	The construction of a new road through a 'green field' will increase surface water runoff, obstruct flood flow within the flood plain and cause a loss of flood plain storage if no mitigation measures are established, however these impacts can be mitigated. The significance of effect has been determined for the design year and post-mitigation.	All minor watercourses along the Option 5.2b corridor including Green Brook.	Neutral (0)
Soils	The construction of a highway will involve the construction of a number of cuttings that will impact upon the geology and soils along the route. The route may also cross a number of areas of head deposits, depending upon the depth, extent and nature of these deposits slope stability issues may arise. The potential and magnitude of this can not be determined without detailed ground investigation. The option runs sub-parallel to and crosses a number of structural axis, both anticline and syncline, and faults. This may lead to side slope stability problems and slope failures within cuttings due to movement of soil or rock along fault planes or along bedding planes within structural axis. The impact of highway construction upon these cannot be assessed without detailed ground investigation. The route crosses at least three areas of land slides mapped by the BGS. The stability condition, nature, extent and depth of foundered strata are unknown and therefore the impact of the construction of a highway along the line of this option cannot be assessed without detailed ground investigation. Therefore, until a detailed ground investigation has been undertaken the impact of this option with respect to geology and soils cannot be assessed.	Throughout route corridor.	It is not possible to estimate the significance due to the lack of information; the significance may range from large adverse to large beneficial.
Society			

Option 5.2c Description –New highway bypass south of Newtown, passing between Maesyrhandir and Mochdre Industrial Estate on the approximate line of the original TR111 route, and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Transport safety	Number accidents saved: 295/166 (Low/High) PVB = £8.1/0.9M (Low/High)	Most road users to benefit	Slight beneficial (0)
Personal security	The southern bypass (option 2c) is likely to create less through and high sided traffic and rat running, especially along Plantation Road, Heol Treowen and within the town centre, therefore the potential and perceived risk will be reduced. This is likely to have a slight beneficial impact. Local transport measures are unlikely to have a significant impact on personal security.	Throughout Newtown especially to the South of the town centre.	Slight beneficial (+)
Permeability	The bypass element of Option 5.2c will reduce AADT along the A483 / A489 through Newtown by 28%. This will result in a slight relief from existing severance. The local transport measures will have no impact	Throughout Newtown and north and south of existing A483 / A489 through Newtown. Localised benefits along Plantation Lane and Heol Treowen.	Slight beneficial (+)
Physical Fitness	Both the bypass element and local transport measures element of Option 5.2c will not provide any encouragement to use active modes of travel.	Throughout Newtown	Neutral (0)
Social Inclusion	The southern bypass (option 2c) has the potential for improving bus reliability both through Newtown and to/from other centres and settlements as well as reducing traffic on roads within Newtown. This is likely to have a slight beneficial impact. Local transport measures also have the potential for improving bus reliability through Newtown. This is also likely to have a slight beneficial effect, with an overall impact of slight beneficial.	Throughout Newtown, and towns/settlements accessing Newtown for key services	Slight beneficial (+)
Equality, Diversity & Human Rights	The southern bypass (option 2c) has the potential for reduced fear for non-motorised transport, which will benefit disadvantaged groups as well as creating easier links for Welsh speakers to Welsh speaking areas in the West. This is likely to have a slight beneficial effect. Local transport measures are likely to have a neutral impact. The overall impact is therefore slight beneficial.	Throughout Newtown and the surroundings towns/settlements, Welsh speakers and disadvantaged groups especially to the south of Newtown.	Slight beneficial (+)
Transport Planning Objectives			
TPO 1	Neutral (0) Local economy will benefit as pockets of development land are opened up by bypass. The bypass would provide more efficient access to the Mochdre Industrial Estate. Businesses along old route may have a disbenefit due to reduced traffic.		
TPO 2	Moderate beneficial (++) Decrease in carbon emissions of 206 tonnes/yr.		
TPO 3	Moderate Beneficial (++) Most objectives achieved for through traffic reductions (apart from Milford Road). Milford Road E/B traffic reduced by 29% with W/B traffic increasing by 17%. HGV's reduce across all nominated routes but not by required 90%.		
TPO 4	Neutral (0) Insignificant forecast modal shift due to limited public transport improvements. Improvements provided to encourage walking and cycling.		
TPO 5	Neutral (0) Public transport forecast not to deteriorate due to limited public transport proposals.		
TPO 6	Significant Beneficial (+++) By 2016 journey time reduced by 16% and 20% in AM and PM peaks respectively between Caersws and Aberbachan. By 2016 journey time reduced by 37% in AM and 38% in PM peaks between 'The Dingle' and Aberbechan. By 2016 journey time reduced by 20% and 17% in AM and PM peaks respectively between 'The Dingle' and Caersws.		
TPO 7	Significant Beneficial (+++) By 2016 accidents reduce by 29.9% through Newtown. This exceeds the 25% reduction outlined in the objectives.		
Public acceptability: Red corridor section likely to be unacceptable owing to proximity to school/nursery school and occupying green space between industrial estate and housing. Noise/air quality issues on red corridor section. Local transport measures element acceptable.			
Acceptability to other stakeholders: Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Local transport measures element acceptable			
Technical and operational feasibility: Technically feasible, but safety of College roundabout needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.			
Financial affordability and deliverability: Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.			
Risks: Objections from schools, residents and Town Council; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.			
Comment: Whilst technically feasible and having generally positive impacts, the bypass element of this option is likely to be unacceptable to residents, schools and Town Council due to the loss of an amenity area and the current open space along the TR111 line. **Because of the overall match to TPOs and society it is however recommended that this option be taken forward to Public Consultation.**			

Option 7.2a – Southern Bypass Option 2a + Trunk Road on-line improvements only + local transport measures

Option 7.2a Description – New highway bypass south of Newtown, passing south of Mochdre Industrial Estate and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Economy			
Transport Economic Efficiency	Cost: £54.4M PVC £53.3M/54.6M (Low/High) PVB £47.3/97.0 (Low/High) NPV -£5.9M/42.5M (Low/High) BCR £0.89/1.78 (Low/High).	All road users to benefit from reduced journey times and vehicle operating costs savings.	
EALI (wider economic Impacts)	The route opens up possible pockets of development opportunities along the bypass corridor and allows further development of the existing industrial estates. The removal of through traffic within the town could improve its attractiveness to potential commercial growth.	The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	
Environment			
Noise	The proposed routes are mainly rural with some residential and industrial areas on the corridor boundaries. This option would significantly reduce through traffic in the centre of Newtown, but may expose residential areas to noise from bypass traffic. There will be a net reduction in noise annoyance of 90 people in design year.	Centre of Newtown and in vicinity of bypass corridor.	Large beneficial (+++)
Local Air Quality	1424 properties experience a reduction in NO_2 and PM_{10} 256 properties experience an increase in NO2 and PM10 Assessment Score: PM_{10} = -258.11 NO_2 = -851.14	Benefits weighted towards less wealthy residents of town.	Large beneficial (+++)
Greenhouse Gas Emissions	NPV of cost £379,000. Decrease in carbon emissions of 180 tonnes/yr.	Throughout Newtown	Moderate beneficial (++)
Landscape	Route largely separated from urban area but affecting more isolated and strongly rural landscape characters. Attractive views affected by urban intrusion into rural scenes. Online improvements have no significant impact	Rural landscape character and views from Newtown.	Moderate adverse (--)
Townscape	Impact on townscape and affected properties largely limited to southern urban fringe. Some northern areas affected by changes to distant views. (as Option 5.2a) Online improvements have no significant impact	Views from Newtown.	Slight adverse (-)
Bio-diversity	There is a crossing of the Mochdre Brook with potential impacts upon Otter, fish species, bat feeding sites, Kingfisher etc. There are also possible indirect impacts upon Montgomery Canal SAC although these are considered unlikely to be of any significance. Dormice are likely to be impacted upon. Semi-natural broad-leaved woodlands severed in vicinity of Castell y Dail. Likely to impact on Badger territories and one outlier sett. Glandulais Farm Wildlife Site (SINC) impacted upon although no longer considered to be of ecological value. Two ponds with breeding amphibians likely to be lost. Large adverse in areas where Dormice may be impacted (this could possibly be downgraded by careful route alignment). Moderate adverse where semi-natural broad-leaved woodland areas may be cut through and possibly also moderate adverse in relation to general impact of severance on Badgers and bats as well as overall hedgerow loss and generally slight adverse across much of the rest of the corridor. Local transport measures and online improvements will have no significant impact.	Most of the impacts of greater significance are within more westerly section that is unique to this option (also 7.2a) with Dormice near Glandulais Farm and also "The Dingle", Mochdre Brook and associated interests and semi-natural broad-leaved woodland all likely to be impacted in this section. The more easterly section common to all options will have less ecological impact but is likely to impact upon ponds with breeding amphibians and Badger territories. Impacts upon bats may occur wherever hedgerows, watercourses, woodland is lost/severed.	Moderate adverse (--)
Heritage	No SAMs affected. Effect on historic setting of 5 Grade II Listed Buildings; indirect physical effect on one of these buildings. Direct physical and visual effect on Iron Age hill fort and its associated archaeology (non-scheduled site). Predicted physical impacts on three other known archaeological sites of Medium (regional) value. Known resource indicates high potential for disturbance of buried archaeological remains. Significant damage to traditional fieldscape. Gradients for road entail significant construction footprint. Online improvements and local transport measures have the potential to offset that impact score by improving traffic flow and taking traffic away from historic town core and so improving setting of Listed Buildings, Conservation Area etc. Neutral or slight beneficial. Overall moderate to large adverse	Historic town core: Listed Buildings, Conservation Area	Moderate to Large Adverse (--/---)
Water environment	The construction of a new road through 'green field' will increase surface water runoff, obstruct flood flow within the flood plain and cause a loss of flood plain storage if no mitigation measures were established, however these impacts can be mitigated. Any improvements on existing highway may include upgrading existing drainage systems, which could improve capacity and water quality. The significance of effect has been determined for the design year and post-mitigation.	River Severn, Mochdre Brook and all other minor watercourses along the Option 7.2a corridor.	Neutral (0)
Soils	The construction of a highway will involve the construction of a number of cuttings that will impact upon the geology and soils along the route. The route may also cross a number of areas of head deposits, depending upon the depth, extent and nature of these deposits slope stability issues may arise. The potential and magnitude of this can not be determined without detailed ground investigation. The option runs sub-parallel to and crosses a number of structural axis, both anticline and syncline, and faults. This may lead to side slope	Throughout route corridor.	It is not possible to estimate the significance due to the lack of information; the significance may range from large adverse to large beneficial.

Option 7.2a Description – New highway bypass south of Newtown, passing south of Mochdre Industrial Estate and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
	stability problems and slope failures within cuttings due to movement of soil or rock along fault planes or along bedding planes within structural axis. The impact of highway construction upon these cannot be assessed without detailed ground investigation. The route crosses at least five areas of land slides mapped by the BGS. The stability condition, nature, extent and depth of foundered strata are unknown and therefore the impact of the construction of a highway along the line of this option cannot be assessed without detailed ground investigation. Therefore, until a detailed ground investigation has been undertaken the impact of this option with respect to geology and soils cannot be assessed. The online improvements to the trunk road will have negligible impact on the soils and geology.		
Society			
Transport safety	Number accidents saved: 234/84 (Low/High) PVB = £3.8M/-3.6M (Low/High)	Most road users to benefit	Slight beneficial (+)
Personal security	The southern bypass (option 2c) is likely to create less through and high sided traffic and rat running, especially along Plantation Road, Heol Treowen and within the town centre, therefore the potential and perceived risk will be reduced. This is likely to have a slight beneficial impact. Local transport measures are unlikely to have a significant impact on personal security. The online improvements may encourage more people walking and cycling through the centre of Newtown with the potential for greater surveillance, this is considered to be a slight beneficial impact. .	Throughout Newtown especially to the South of the town centre	Slight beneficial (+)
Permeability	The bypass element of Option 7.2a will reduce AADT along the A483 / A489 through Newtown by 23%. This will result in a slight relief from existing severance. New crossing facilities will be provided as part of the online improvements, which will be of some benefit in terms of permeability.	Throughout Newtown and north and south of existing A483 / A489 through Newtown. Localised benefits along Plantation Lane and Heol Treowen.	Slight beneficial (+)
Physical Fitness	Both the bypass element and local transport measures element of Option 7.2a will not provide any encouragement to use active modes of travel. The online improvements element of the option will provide further pedestrian and cycle lanes, which will link into existing facilities.	Throughout Newtown and along existing A483 / A489.	Slight beneficial (+)
Social Inclusion	The southern bypass (option 2a) has the potential for improving bus reliability both through Newtown and to/from other centres and settlements as well as reducing the traffic on roads within Newtown. This is likely to have a slight beneficial effect. Additionally, local transport measures have the potential for improving bus reliability through Newtown. This is also likely to have a slight beneficial effect. Online improvements are also likely to improve journey time reliability through Newtown by reducing queuing traffic, which is also likely to have a slight beneficial impact. Overall impact of slight beneficial.	Throughout Newtown, and towns/settlements accessing Newtown for key services	Slight beneficial (+)
Equality, Diversity & Human Rights	The southern bypass (option 2a) has the potential for reduced fear for non-motorised transport, which will benefit disadvantaged groups. It will also create easier links for Welsh speakers to Welsh speaking areas in the West. This is likely to have a slight beneficial impact. Local transport measures are likely to have a neutral impact. Online improvements also have the potential for reduced fear for non-motorised transport by providing better walking and cycling facilities, which will also benefit disadvantaged groups. This is also likely to have a slight beneficial impact with an overall impact of slight beneficial.	Throughout Newtown, towns and settlements and disadvantaged groups especially to the south of Newtown. Welsh speakers.	Slight beneficial (+)
Transport Planning Objectives			
TPO 1	Neutral (0) Local economy will benefit as pockets of development land are opened up by bypass. Businesses along old route may have a disbenefit due to reduced traffic.		
TPO 2	Moderate beneficial (++) Decrease in carbon emissions of 180 tonnes/yr.		
TPO 3	Slight Adverse (-) Some objectives met with traffic decreasing along most nominated routes with W/B traffic on Milford Road the only exception. HGV's decrease along all routes except Heol Treowen but this is due to 3 HGV's travelling to farms in the area.		
TPO 4	Slight Beneficial (+) Potential for increased forecast modal shift due to extended improvements to walking and cycling facilities. Limited public transport improvements		
TPO 5	Neutral (0) Public transport forecast not to deteriorate due to limited public transport proposals.		
TPO 6	Significant Beneficial (+++) By 2016 journey time reduced by 17% and 20% in AM and PM peaks respectively between Caersws and Aberbachan. By 2016 journey time reduced by 33% in AM and PM peaks between 'The Dingle' and Aberbechan. By 2016 journey time reduced by 28% and 25% in AM and PM peaks respectively between 'The Dingle' and Caersws.		
TPO 7	Moderate Beneficial (++) By 2016 accidents reduce by 21.8% through Newtown. This does not meet the 25% reduction outlined in the objectives.		

Option 7.2a Description – New highway bypass south of Newtown, passing south of Mochdre Industrial Estate and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Public acceptability: Likely to be acceptable as an interim measure			
Acceptability to other stakeholders: Local transport measures element acceptable			
Technical and operational feasibility: Traffic signal improvements (with exception of Morrison's access) are likely to be implemented. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.			
Financial affordability and deliverability: Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.			
Risks: Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.			
Comment: Option performs as well as option 5.2A against Welsh Impact Areas and is better than option 5.2A for the Transport Planning Objectives. **It is recommended that this option be taken forward to Public Consultation.**			

Option 7.2b – Southern Bypass Option 2b + Trunk Road on-line improvements only + local transport measures

Option 7.2b Description – New highway bypass south of Newtown, passing through Mochdre Industrial Estate on the approximate line of Heol Ashley and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Economy			
Transport Economic Efficiency	Cost: £46.1M PVC £45.2M/46.6M (Low/High) PVB £52.3/103.9 (Low/High) NPV £7.1M/57.2M (Low/High) BCR £1.16/2.23 (Low/High)	Mochdre Industrial estate, Newtown town centre and southern region of Newtown	
EALI (wider economic Impacts)	The route opens up possible pockets of development opportunities to the east of Newtown. May lead to the loss of existing industrial land and will disrupt the current permeability of the Mochdre Industrial Estate. The green corridor will only provide an alternative to the existing trunk road.		
Environment			
Noise	The southern bypass would re-direct through traffic around the south of Newtown. The proposed route is mainly rural with some residential and industrial areas to the north. This option would significantly reduce through traffic in the centre of Newtown, but may expose residential and industrial areas to north of corridor to traffic noise. There will be a net reduction in noise annoyance of 89 people in design year.	Centre of Newtown and in the vicinity of proposed bypass corridor	Moderate beneficial (++)
Local Air Quality	1424 properties experience a reduction in NO_2 and PM_{10} 275 properties experience an increase in NO_2 and PM_{10} Assessment Score: PM_{10} = -337.70 NO_2 = -1138.22	Benefits weighted towards less wealthy residents of town.	Large beneficial (+++)
Greenhouse Gas Emissions	NPV of cost £377,000. Decrease in carbon emissions of 206 tonnes/yr.	Throughout Newtown	Moderate beneficial (++)
Landscape	Part of the route passes through industrial area but also affects more isolated and strongly rural landscape characters. Attractive views affected by urban intrusion into rural scenes. Online improvements have no significant impact	Adverse effects acting more on rural eastern section as impact on western industrial area would be largely neutral.	Moderate adverse (--)
Townscape	Attractive views affected by urban intrusion into rural scenes. Impact on Mochdre Industrial Estate could be adverse or beneficial depending on detail. (As Option 5b) Online improvements have no significant impact	Adverse effects acting more on rural eastern section as impact on western industrial area would be largely neutral.	Slight adverse (-)
Bio-diversity	Dormice are likely to be impacted upon. Likely to impact on Badger territories and one outlier sett. Two ponds with breeding amphibians likely to be lost. Large adverse in areas where Dormice may be impacted (this could possibly be downgraded by careful route alignment). Possibly moderate adverse impact in relation to general impact of severance on Badgers and bats as well as overall hedgerow loss and generally slight adverse across much of the rest of the corridor. Local transport measures and online improvements will have no significant impact	Where the option passes through Mochdre Industrial Estate there is unlikely to be any significant impacts. Impacts upon Dormice in the vicinity of "The Dingle" are likely to be the most significant impact of this option. The more easterly section common to all options will have a generally slight negative impact but is likely to impact upon ponds with breeding amphibians and Badger territories. Impacts upon bats may occur wherever hedgerows, watercourses, woodland is lost/severed.	Slight/Moderate adverse (-/--)
Heritage	. No SAMs affected. Moderate effect on visual setting of one Grade II Listed Building. W of the A483: area already developed – no known sites and survival of buried archaeology probably limited. Along the Mochdre Industrial Estate predicted physical impacts on three known archaeological sites of Medium (regional) value; potential for disturbance of buried archaeological remains; damage to, and fragmentation of, traditional fieldscape. Online improvements and local transport measures have the potential to offset that impact score by improving traffic flow and taking traffic away from historic town core and so improving setting of Listed Buildings, Conservation Area etc. Neutral or slight beneficial (0/+)	Impacts on buried archaeology likely only within eastern part of bypass route. No anticipated impacts arising from construction of western part. Historic town core: Listed Buildings, Conservation Area	Slight to Moderate adverse (-/--)
Water environment	The construction of a new road through 'green field' will increase surface water runoff, obstruct flood flow within the flood plain and cause a loss of flood plain storage if no mitigation measures are established. Any improvements on existing highway may include upgrading existing drainage systems, which could improve capacity and water quality, however these impacts can be mitigated. The significance of effect has been determined for the design year and post-mitigation.	River Severn, Mochdre Brook and all other minor watercourses along the Option 7.2b corridor.	Neutral (0)
Soils	The construction of a highway will involve the construction of a number of cuttings that will impact upon the geology and soils along the route. The route may also cross a number of areas of head deposits, depending upon the depth, extent and nature of these deposits slope stability issues may arise. The potential and magnitude of this can not be determined without detailed ground investigation. This option runs sub-parallel to and crosses a number of structural axis, both anticline and syncline, and faults. This may lead to side slope stability problems and slope failures within cuttings due to movement of soil or rock along fault planes or along bedding planes within structural axis. The impact of highway construction upon these cannot be assessed	Throughout route corridor.	It is not possible to estimate the significance due to the lack of information; the significance may range from large adverse to large beneficial.

Option 7.2b Description – New highway bypass south of Newtown, passing through Mochdre Industrial Estate on the approximate line of Heol Ashley and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
	without detailed ground investigation. The route crosses at least three areas of land slides mapped by the BGS. The stability condition, nature, extent and depth of foundered strata are unknown and therefore the impact of the construction of a highway along the line of this option cannot be assessed without detailed ground investigation. Therefore, until a detailed ground investigation has been undertaken the impact of this option with respect to geology and soils cannot be assessed. The online improvements to the trunk road will have negligible impact on the soils and geology.		
Society			
Transport safety	Number accidents saved: 208/64 (Low/High) PVB = £5.8/-1.6M (Low/High)	Most road users to benefit	Slight beneficial (+)
Personal security	The southern bypass (option 2b) is likely to create less through and high sided traffic and rat running, especially along Plantation Road, Heol Treowen and within the town centre, therefore the potential and perceived risk will be reduced. This is likely to have a slight beneficial impact. Local transport measures are unlikely to have a significant impact on personal security. The online improvements may encourage more people walking and cycling through the centre of Newtown with the potential for greater surveillance, this is considered to be a slight beneficial impact. .	Throughout Newtown especially to the south of the town centre	Slight beneficial (+)
Permeability	The bypass element of Option 7.2b will reduce AADT along the A483 / A489 through Newtown by 25%. This will result in a slight relief from existing severance. New crossing facilities will be provided as part of the online improvements, which will be of some benefit in terms of permeability.	Throughout Newtown and north and south of existing A483 / A489 through Newtown. Localised benefits along Plantation Lane and Heol Treowen.	Slight beneficial (+)
Physical Fitness	Both the bypass element and local transport measures element of Option 7.2b will not provide any encouragement to use active modes of travel. The online improvements element of the option will provide further pedestrian and cycle lanes, which will link into existing facilities.	Throughout Newtown and along existing A483 / A489	Slight beneficial (+)
Social Inclusion	Both the southern bypass (option 2b) and local transport measures have the potential for improving bus reliability through Newtown as well as reducing traffic on roads within Newtown. Online improvements are also likely to slightly improve journey time reliability through Newtown by reducing queuing traffic, which is also likely to have a slight beneficial impact. These improvements are all slight and therefore In combination these impacts will have a slight beneficial impact.	Throughout Newtown, and towns/settlements accessing Newtown for key services	Slight beneficial (+)
Equality, Diversity & Human Rights	The southern bypass (option 2b) has the potential for reduced fear for non-motorised transport which will benefit disadvantaged groups as well as creating easier links for Welsh speakers to Welsh speaking areas in the West. This is likely to have a slight beneficial impact. Local transport measures are likely to have a neutral impact. Online improvements also have the potential for reduced fear for non-motorised transport, by providing better walking and cycling facilities, which will also benefit disadvantaged groups. This is also likely to have a slight beneficial impact. These improvements are all slight and therefore the overall impact is slight beneficial.	Throughout Newtown and the surroundings towns/settlements, Welsh speakers and disadvantaged groups especially to the south of Newtown.	Slight beneficial (+)
Transport Planning Objectives			
TPO 1	Neutral (0) Local economy will benefit as pockets of development land are opened up by bypass. May disrupt the current permeability of Mochdre Industrial Estate. Businesses along old route may have a disbenefit due to reduced traffic.		
TPO 2	Moderate beneficial (++) Decrease in carbon emissions of 206 tonnes/yr.		
TPO 3	Slight Beneficial (+) Through traffic along Heol Treowen and Plantation Lane meet TPO's. Milford Road does not meet targets with W/B traffic increasing This is due to the bypass being to the south of town.		
TPO 4	Slight Beneficial (+) Potential for increased forecast modal shift due to extended improvements to walking and cycling facilities. Limited public transport improvements		
TPO 5	Neutral (0) Public transport forecast not to deteriorate due to limited public transport proposals.		
TPO 6	Moderate Beneficial (++) By 2016 journey time reduced by 10% and 13% in AM and PM peaks respectively between Caersws and Aberbachan. By 2016 journey time reduced by 39% in AM and PM peaks between 'The Dingle' and Aberbechan. By 2016 journey time reduced by 9% and 6% in AM and PM peaks respectively between 'The Dingle' and Caersws.		
TPO 7	Moderate Beneficial (++) By 2016 accidents reduce by 24.1% through Newtown. This does not meet the 25% reduction outlined in the objectives.		
Public acceptability: Public may accept if provides reduction in traffic on main road through Newtown. Local transport measures element acceptable			
Acceptability to other stakeholders:			

Option 7.2b Description – New highway bypass south of Newtown, passing through Mochdre Industrial Estate on the approximate line of Heol Ashley and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Section through already developed area more acceptable to environmental stakeholders. Local transport measures element acceptable			
Technical and operational feasibility: Technically feasible, but safety of College roundabout needs review. Difficulty of providing suitable safe right-turn facilities through Mochdre Industrial Estate needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.			
Financial affordability and deliverability: Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.			
Risks: Loss of business in Mochdre Industrial Estate; Does not address permeability/severance issues; does not reduce traffic on New Road; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information. Potential for disturbance of buried archaeological remains.			
Comment: This option provides a better fit with the Transport Planning Objectives than option 5.2B and slightly better score against the Welsh Impact Areas. **It is therefore recommended that this option be taken forward to Public Consultation.**			

Option 7.2c – Southern Bypass Option 2c + Trunk Road on-line improvements only + local transport measures

Option 7.2c Description – New highway bypass south of Newtown, passing between Maesyrhandir and Mochdre Industrial Estate on the approximate line of the original TR111 route, and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Economy			
Transport Economic Efficiency	Cost: £45.9 PVC £44.9M/46.3M (Low/High) PVB £55.6/107.5 (Low/High) NPV £10.7M/61.2M (Low/High) BCR £1.24/2.32 (Low/High)	All road users to benefit	
EALI (wider economic Impacts)	The route opens up possible pockets of development opportunities along eastern bypass corridor and allows further development of the existing industrial estates. The removal of through traffic within the town could improve its attractiveness to potential commercial growth. The bypass would provide more efficient access to the Mochdre Industrial Estate.	The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	
Environment			
Noise	The bypass would re-direct through traffic around the south of Newtown. The proposed route is mainly rural with some residential and industrial areas to the north. This option would significantly reduce through traffic in the centre of Newtown, but may expose residential and industrial areas to north of Corridor to traffic noise. There will be a net reduction in noise annoyance of 70 people in design year.	Centre of Newtown and areas in the vicinity of the proposed route.	Moderate beneficial (++)
Local Air Quality	1318 properties experience a reduction in NO_2 and PM_{10} 514 properties experience an increase in NO_2 and PM_{10} Assessment score: PM10 = -265.74 NO2 = -722.51	Benefits for less wealthy residents in centre of town achieved at cost of disbenefits for a smaller number of less wealthy residents on the outskirts.	Moderate beneficial (++)
Greenhouse Gas Emissions	NPV of cost £373,000. Decrease in carbon emissions of 203 tonnes/yr.	Throughout Newtown	Moderate beneficial (++)
Landscape	Much of route affecting more isolated and strongly rural landscape characters. Attractive views affected by urban intrusion into rural scenes. Online improvements have no significant impact	Rural landscape character and views from Newtown.	Moderate adverse (--)
Townscape	Attractive views affected by urban intrusion into rural scenes. Direct effect on the townscape character of adjacent Maesyrhandir housing and green space/ amenity corridor and Mochdre Industrial Estate. (As Option 5c) Online improvements have no significant impact	Views from Newtown. Townscape and property effects most adverse in western section adjacent to Maesyrhandir housing area.	Slight adverse (-)
Bio-diversity	Dormice are likely to be impacted upon. Likely to impact on Badger territories and one outlier sett. Two ponds with breeding amphibians likely to be lost. Large adverse in areas where Dormice may be impacted (this could possibly be downgraded by careful route alignment). Possibly moderate adverse impact in relation to general impact of severance on Badgers and bats as well as overall hedgerow loss and generally slight adverse across much of the rest of the corridor. Local transport measures and online improvements will have no significant impact	Where the option passes north of the Mochdre Industrial Estate there is unlikely to be any significant impacts. Impacts upon Dormice in the vicinity of "The Dingle" are likely to be the most significant impact of this option. The more easterly section common to all options will have a generally slight negative impact but is likely to impact upon ponds with breeding amphibians and Badger territories. Impacts upon bats may occur wherever hedgerows, watercourses, woodland is lost/severed.	Slight/Moderate adverse (-/--)
Heritage	No SAMs or Listed Buildings affected. W of the A483: no impacts upon known archaeological sites; area already developed and archaeological survival limited. E of A483: predicted physical on three known archaeological sites of Medium (regional) value; potential for disturbance of buried archaeological remains; damage to, and fragmentation of, traditional fieldscape. Online improvements and local transport measures have the potential to offset that impact score by improving traffic flow and taking traffic away from historic town core and so improving setting of Listed Buildings, Conservation Area etc. Neutral or slight beneficial (0/+)	Impacts on buried archaeology likely only within eastern part of bypass route. No anticipated impacts arising from construction of western part. Historic town core: Listed Buildings, Conservation Area	Slight to Moderate adverse (-/--)
Water environment	The construction of a new road through 'green field' will increase surface water runoff, obstruct flood flow within the flood plain and cause a loss of flood plain storage if no mitigation measures are established, however these impacts can be mitigated. Any improvements on existing highway may include upgrading existing drainage systems, which could improve capacity and water quality. The significance of effect has been determined for the design year and post-mitigation.	River Severn, Mochdre Brook and all other minor watercourses along the Option 7.2c corridor.	Neutral
Soils	The construction of a highway will involve the construction of a number of cuttings that will impact upon the geology and soils along the route. The route may also cross a number of areas of head deposits, depending upon the depth, extent and nature of these deposits slope stability issues may arise. The potential and magnitude of this can not be determined without detailed ground investigation. The option runs sub-parallel to and crosses a number of structural axis, both anticline and syncline, and faults. This may lead to side slope stability problems and slope failures within cuttings due to movement of soil or rock along fault planes or along bedding planes within structural axis. The impact of highway construction upon these cannot be assessed without detailed ground investigation. The route crosses at least three areas of land slides mapped by the BGS.	Throughout route corridor.	It is not possible to estimate the significance due to the lack of information; the significance may range from large adverse to large beneficial.

Option 7.2c Description – New highway bypass south of Newtown, passing between Maesyrhandir and Mochdre Industrial Estate on the approximate line of the original TR111 route, and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
	The stability condition, nature, extent and depth of foundered strata are unknown and therefore the impact of the construction of a highway along the line of this option cannot be assessed without detailed ground investigation. Therefore, until a detailed ground investigation has been undertaken the impact of this option with respect to geology and soils cannot be assessed. The online improvements to the trunk road will have negligible impact on the soils and geology.		
Society			
Transport safety	Number accidents saved: 306/176 (Low/High) PVB = £8.3/1.1M (Low/High)	Most road users to benefit	Slight beneficial
Personal security	The southern bypass (option 2c) is likely to create less through and high sided traffic and rat running, especially along Plantation Road, Heol Treowen and within the town centre, therefore the potential and perceived risk will be reduced. This is likely to have a slight beneficial impact. Local transport measures are unlikely to have a significant impact on personal security. The online improvements may encourage more people walking and cycling through the centre of Newtown with the potential for greater surveillance, this is considered to be a slight beneficial impact.	Throughout Newtown especially to the south of the town centre.	Slight beneficial (+)
Permeability	The bypass element of Option 7.2c will reduce AADT along the A483 / A489 through Newtown by 28%. This will result in a slight relief from existing severance. New crossing facilities will be provided as part of the online improvements, which will be of some benefit in terms of permeability.	Throughout Newtown	Slight beneficial (+)
Physical Fitness	Both the bypass element and local transport measures element of Option 7.2c will not provide any encouragement to use active modes of travel. The online improvements element of the option will provide further pedestrian and cycle lanes, which will link into existing facilities.	Throughout Newtown and along existing A483 / A489.	Slight beneficial (+)
Social Inclusion	Both the southern bypass (option 2c) and local transport measures have the potential for slightly improving bus reliability through Newtown as well as reducing traffic on roads within Newtown. This is likely to have a slight beneficial impact. Online improvements are also likely to improve journey time reliability through Newtown by reducing queuing traffic, which is also likely to have a slight beneficial impact. These improvements are all slight and therefore in combination these impacts will have a slight beneficial impact.	Throughout Newtown, and towns/settlements accessing Newtown for key services	Slight beneficial (+)
Equality, Diversity & Human Rights	The bypass (option 2c) has the potential for reduced fear for non-motorised transport, which will benefit disadvantaged groups as well as creating easier links for Welsh speakers to Welsh speaking areas in the West. This is likely to have a slight beneficial effect. Local transport measures are likely to have a neutral impact. Online improvements also have the potential for reduced fear for non-motorised transport, by providing better walking and cycling facilities, which will also benefit disadvantaged groups. This is also likely to have a slight beneficial impact. These improvements are all slight and therefore the overall impact is slight beneficial.	Throughout Newtown and the surroundings towns/settlements, Welsh speakers and disadvantaged groups especially to the south of Newtown.	Slight beneficial (+)
Transport Planning Objectives			
TPO 1	Neutral (0) Local economy will benefit as pockets of development land are opened up by bypass. The bypass would provide more efficient access to the Mochdre Industrial Estate. Businesses along old route may have a disbenefit due to reduced traffic.		
TPO 2	Moderate beneficial (++) Decrease in carbon emissions of 203 tonnes/yr.		
TPO 3	Moderate Beneficial (+ +) Most objectives achieved for reduction in through traffic (apart from Milford Road). Milford Road E/B traffic reduced by 18-37% with W/B traffic increasing by 11-17%. HGV's reduce across all nominated routes but not by required 90%.		
TPO 4	Slight Beneficial (+) Potential for increased forecast modal shift due to extended improvements to walking and cycling facilities. Limited public transport improvements		
TPO 5	Neutral (0) Public transport forecast not to deteriorate due to limited public transport proposals.		
TPO 6	Significant Beneficial (+++) By 2016 journey time reduced by 17% and 20% in AM and PM peaks respectively between Caersws and Aberbachan. By 2016 journey time reduced by 38% in AM and PM peaks between 'The Dingle' and Aberbechan. By 2016 journey time reduced by 20% and 17% in AM and PM peaks respectively between 'The Dingle' and Caersws.		
TPO 7	Significant Beneficial (+++) By 2016 accidents reduce by 29.9% through Newtown. This exceeds the 25% reduction outlined in the objectives.		
Public acceptability: Red corridor section likely to be unacceptable owing to proximity to school/nursery school and occupying green space between industrial estate and housing. Noise/air quality issues on red corridor section. Local transport measures element acceptable.			
Acceptability to other stakeholders:			

Option 7.2c Description – New highway bypass south of Newtown, passing between Maesyrhandir and Mochdre Industrial Estate on the approximate line of the original TR111 route, and crossing the main Cambrian railway line east of Dyffryn Industrial Estate + Improvements to the existing trunk road A483 and A489 only, including linking of all existing traffic signals in Newtown, provision of new traffic signals at the Kerry Road roundabout and Morrison's junction, and improvements to right turn facilities at existing industrial estate accesses+ improvements to public transport, cycling, NMU provision, bus priority, public transport connectivity and safe routes to schools/college.			
Appraisal Criteria	**Assessment**	**Distribution**	**Significance**
Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Local transport measures element acceptable			
Technical and operational feasibility: Technically feasible, but safety of College roundabout needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.			
Financial affordability and deliverability: Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.			
Risks: Objections from schools, residents and Town Council; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.			
Comment: Whilst technically feasible and having a good fit for the Welsh Impact Areas ant Transport Planning Objectives, the bypass element of this option is likely to be unacceptable to residents, schools and Town Council due to the loss of an amenity area and the current open space along the TR111 line. **Because of the overall match to TPOs and society it is however recommended that this option be taken forward to Public Consultation.**			

SUMMARY OF APPRAISAL OF DIFFERENT OPTIONS

	Summary of significance/other quantitative finding					
Appraisal Criteria	**Option 5a**	**Option 5b**	**Option 5c**	**Option 7a**	**Option 7b**	**Option 7c**
Welsh Impact Areas						
Economy						
Transport Economic Efficiency	Cost: £51.5M PVC £50.3M/51.6M (Low/High) PVB £48.1/97.2 (Low/High) NPV -£2.2M/45.5M (Low/High) BCR £0.96/1.88 (Low/High)	Cost: £43.1M PVC £42.3M/46.6M (Low/High) PVB £53.0/104.5 (Low/High) NPV £10.8M/57.9M (Low/High) BCR £1.25/2.24 (Low/High)	Cost: £43.6 PVC £42.6M/44.0M (Low/High) PVB £56.1/108.4 (Low/High) NPV £13.5M/64.4M (Low/High) BCR £1.32/2.46 (Low/High)	Cost: £54.4M PVC £53.3M/54.6M (Low/High) PVB £47.3/97.0 (Low/High) NPV -£5.9M/42.5M (Low/High) BCR £0.89/1.78 (Low/High).	Cost: £46.1M PVC £45.2M/46.6M (Low/High) PVB £52.3/103.9 (Low/High) NPV £7.1M/57.2M (Low/High) BCR £1.16/2.23 (Low/High)	Cost: £45.9 PVC £44.9M/46.3M (Low/High) PVB £55.6/107.5 (Low/High) NPV £10.7M/61.2M (Low/High) BCR £1.24/2.32 (Low/High)
EALI (wider economic Impacts)	All road users to benefit from reduced journey times and vehicle operating costs savings. The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	All road users to benefit The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	All road users to benefit. The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	All road users to benefit from reduced journey times and vehicle operating costs savings. The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.	Mochdre Industrial estate, Newtown town centre and southern region of Newtown	All road users to benefit The local economy will tend to benefit most. Businesses along the old route may have a disbenefit due to reduced through traffic.
Environment						
Noise	3	2	2	3	2	2
Local Air Quality	3	3	2	3	3	2
Greenhouse Gas Emissions	2	2	2	2	2	2
Landscape	-1	-2	-2	-2	-2	-2
Townscape	-1	-1	-1	-1	-1	-1
Bio-diversity	-1	-1.5	-1.5	-2	-1.5	-1.5
Heritage	-2.5	-1.5	-1.5	-2.5	-1.5	-1.5
Water environment	0	0	0	0	0	0
Soils	0	0	0	0	0	0
Society						
Transport safety	1	1	1	1	1	1
Personal security	2	2	2	2	2	2
Permeability	1	1	1	1	1	1
Physical Fitness	0	0	0	1	1	1
Social Inclusion	1	1	1	1	1	2
Equality, Diversity & Human Rights	1	1	1	1	1	1
Transport Planning Objectives1						
TPO 1	0	0	0	0	0	0
TPO 2	2	2	2	2	2	2
TPO 3	-2	1	2	-1	1	2
TPO 4	0	0	0	1	1	1
TPO 5	0	0	0	0	0	0
TPO 6	3	1	3	3	2	3
TPO 7	2	2	3	2	2	3
Public acceptability:	Likely to be acceptable to general public as it reduces traffic on main road through Newtown. Local transport measures element acceptable	Public may accept as it provides reduction in traffic on main road through Newtown. Local transport measures element acceptable	The initial section likely to be unacceptable owing to proximity to school/nursery school and occupying green space between industrial estate and housing. Noise/air quality issues on the initial section. Local transport measures element acceptable.	Likely to be acceptable to general public as it reduces traffic on main road through Newtown.	Public may accept if provides reduction in traffic on main road through Newtown. Local transport measures element acceptable	The initial section likely to be unacceptable owing to proximity to school/nursery school and occupying green space between industrial estate and housing. Noise/air quality issues on the initial section. Local transport measures element acceptable.

	Summary of significance/other quantitative finding					
Appraisal Criteria	**Option 5a**	**Option 5b**	**Option 5c**	**Option 7a**	**Option 7b**	**Option 7c**
Acceptability to other stakeholders:	Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Local transport measures element acceptable	Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Section through already developed area more acceptable to environmental stakeholders. Local transport measures element acceptable	Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Local transport measures element acceptable	Local transport measures element acceptable	Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Section through already developed area more acceptable to environmental stakeholders. Local transport measures element acceptable	Likely to be generally acceptable to other stakeholders subject to mitigation of impacts. Local transport measures element acceptable
Technical and operational feasibility:	Technically and operationally feasible, although possible geotechnical difficulties in landslip areas. Structure crossing railway may pose technical difficulties. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.	Technically feasible, but safety of College roundabout needs review. Difficulty of providing suitable safe right-turn facilities through Mochdre Industrial Estate needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.	Technically feasible, but safety of College roundabout needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.	Traffic signal improvements (with exception of Morrison's access) are likely to be implemented. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.	Technically feasible, but safety of College roundabout needs review. Difficulty of providing suitable safe right-turn facilities through Mochdre Industrial Estate needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.	Technically feasible, but safety of College roundabout needs review. Local transport measures element feasible, although improvement to cycle path under Dolfor Road bridge difficult.
Financial affordability and deliverability:	Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.	Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.	Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.	Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.	Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.	Affordable. Possibility of contribution from wind farm developers. Local transport measures element relatively affordable and deliverable, but by Local Authority, NOT Welsh Assembly Government.
Risks:	Acceptability of landscape and visual impact; effects on services; flooding. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.	Loss of business in Mochdre Industrial Estate; Does not address permeability/severance issues; does not reduce traffic on New Road; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.	Objections from schools, residents and Town Council; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.	Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.	Loss of business in Mochdre Industrial Estate; Does not address permeability/severance issues; does not reduce traffic on New Road; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information. Potential for disturbance of buried archaeological remains.	Objections from schools, residents and Town Council; effects on services. Lack of funding for local transport measures element. Lack of detailed geotechnical information Potential for disturbance of buried archaeological remains.
Comment:	This option provides a reasonable fit with the Transport Planning Objectives and reasonable overall score against the Welsh Impact Areas. **It is therefore recommended that this option be taken forward to Public Consultation**	This option provides a better fit with the Transport Planning Objectives and the Welsh Impact Areas than Option 5.2A. This could limit further development of the Mochdre industrial Estate by limiting access to the trunk road. **It is therefore recommended that this option be taken forward to Public Consultation.**	Whilst technically feasible and having generally positive impacts, the bypass element of this option is likely to be unacceptable to residents, schools and Town Council due to the loss of an amenity area and the current open space along the TR111 line. **Because of the overall match to TPOs and society it is however recommended that this option be taken forward to Public Consultation.**	Option performs as well as option 5.2A against Welsh Impact Areas and is better than option 5.2A for the Transport Planning Objectives. **It is recommended that this option be taken forward to Public Consultation.**	This option provides a better fit with the Transport Planning Objectives than option 5.2B and slightly better score against the Welsh Impact Areas. **It is therefore recommended that this option be taken forward to Public Consultation.**	Whilst technically feasible and having a good fit for the Welsh Impact Areas ant Transport Planning Objectives, the bypass element of this option is likely to be unacceptable to residents, schools and Town Council due to the loss of an amenity area and the current open space along the TR111 line. **Because of the overall match to TPOs and society it is however recommended that this option be taken forward to Public Consultation.**

Appendix A.5

Design Options Appraisal Summary Tables

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

SUMMARY OF INITIAL SCREENING APPRAISAL OF OPTIONS

	A489 Llanidloes Road Roundabout Options					
Appraisal Criteria	**Option 1A Conceptual Design**	**Option 1B Roundabout Repositioned**	**Option 1C Roundabout near Castell-y-Dail**	**Option 1D Roundabout near Hafren View**	**Option 1E Glandulas Holiday Home Park Alternative**	**Options 1F Modified Stage 2 Brown Route**
Welsh Impact Areas						
Economy						
Transport Economic Efficiency		No measurable change in traffic movements but overall cost savings likely to give this option an improved BCR	It would introduce more traffic to Heol Ashley and provide a less direct access to Newtown for vehicles travelling from the west.	No measurable change in traffic movements but overall increased construction costs are likely to give this option a reduced BCR	No measurable change in traffic movements but overall increased construction costs are likely to give this option a reduced BCR	It would substantially increase traffic along Heol Ashley, resulting in potentially longer journey times and capacity problems at the modified Mochdre Lane Roundabout.
EALI (wider economic Impacts)		Neutral - No difference to Conceptual Design	Neutral - No difference to Conceptual Design	Neutral - No difference to Conceptual Design	Neutral - No difference to Conceptual Design	Neutral – No significant difference to Conceptual design though some adverse impact on existing Industrial Units
Environment						
Environmental Overview						
Option 1B has less impact on the scarp slope and associated loss of mature broadleaved woodland and impact on bio-diversity. Options 1A, 1C, 1D and 1E all have a major impact on the mature broadleaved woodland located near Hafren View with Options 1D and 1E creating major cuttings up to 43m and 40m deep, respectively. Option 1C also has a major impact upon the Castell-y-Dail woodland through which the route would pass in cutting up to 34m deep. Option 1B encroaches further into the 1;1000 floodplain and would therefore require additional flood compensatory land. In addition to the loss of woodland, Options 1D and 1E would sever dormouse habitat and have greater impact than 1A and 1B on bats and breeding birds and may require replacement Badger setts. The deep cutting for Option 1D and 1E would be visually intrusive with direct long views which include views from the north of the River Severn and it could not be fully mitigated. All options except Option 1F would have a visual impact on the Holiday Park. Option 1F would have an adverse visual impact on residential properties within the Maesydail and Maesyrhandir housing areas and Mochdre Industrial Estate units. Impacts on air quality and noise from Options 1A to 1E would be limited to caravan plots in Glandulais Holiday Home park, Hafren View, Glanhafren Hall, the Beeches and Mochdre Lane properties. Option 1C would also introduce impacts on the Castell-y-Dail dwellings while Option 1F would impact on residents living along the southern edges of the Maesydail and Maesyrhandir areas. Options 1A to 1E may impact on the Roman road and unknown archaeology. Option 1C also has a major impact on the Castell-y-Dail Hillfort. Option 1D has greater potential impact on the River Severn especially during construction.						
Noise	-1	-1	-1	-1	-1	-2
Local Air Quality	-1	-1	-1	-1	-1	-2
Greenhouse Gas Emissions	-1	-1	-1	-1	-1	-2
Landscape	-1	0	-2	-2	-2	-1
Townscape	0	0	0	0	0	-1
Bio-diversity	-2	-1	-2	-2	-2	-1
Heritage	-1	-1	-2	-1	-1	0
Water environment	-1	-1	-1	-1	-1	-1
Soils	-1	0	-1	-1	-1	0
Society						
Society Overview						
Options 1A to 1E will improve transport safety due to the improved sight lines along A489 near Hafren View. Option 1F would not provide any improvement to these existing sightlines. Options 1A to 1E are similar in terms of personal safety and physical fitness. FP 7 will be severed for Options 1A to 1E. Options 1A, 1C and 1E will also have a minor impact on FP9 and FP8 while Option 1D would have a major impact on these routes in addition to FP2, FP6 and bridleway BW16. Option 1F would avoid diversion of these routes but it would have a minor impact of NCN81. Options 1A, 1B and 1C will sever the Glandulais Holiday Home park and have a similar impact on caravan plots and/or amenity. Similar mitigation could be provided to reduce severance. Option 1E would involve greater loss of caravan plots at Glandulas Holiday Home Park. Option 1C and 1F would increase severance due to increased traffic on Heol Ashley. Option 1F would also increase severance between Heol Ashley and Maesydail. Option 1D would require the demolition of Hafren View. Option 1F would require the demolition of six Industrial Estate Units. There will be no impact on social inclusion and Equality, Diversity and Human Rights						
Transport safety	+1	+1	+1	+1	+1	0
Personal security	0	0	0	0	0	-1
Permeability	-1	-1	-2	-1	-1	-2

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	A489 Llanidloes Road Roundabout Options					
Appraisal Criteria	**Option 1A Conceptual Design**	**Option 1B Roundabout Repositioned**	**Option 1C Roundabout near Castell-y-Dail**	**Option 1D Roundabout near Hafren View**	**Option 1E Glandulas Holiday Home Park Alternative**	**Options 1F Modified Stage 2 Brown Route**
Physical Fitness	0	0	0	0	0	0
Social Inclusion	0	0	0	0	0	0
Equality, Diversity & Human Rights	0	0	0	0	0	0
Transport Planning Objectives and Mandatory Requirements (√ supports TPO or mandatory assumptions, 0 no impact, x does not meet TPO or mandatory assumptions)						
TPO 1	0	0	0	0	0	0
TPO 2	√	√	√	√	√	√
TPO 3	√	√	√	√	√	√
TPO 4	0	0	0	0	0	0
TPO 5	0	0	0	0	0	0
TPO 6	√	√	√	√	√	x
TPO 7	√	√	√	√	√	√
Mandatory Assumptions	√	√ (*requirement for speed limit*)	√	√	√ (*requirement for speed limit*)	√ (*requirement for speed limit*)
Public acceptability:	Potential objections from properties to include Hafren View and Glanhafren Hall and Glandulais Holiday Home Park	Potentially more acceptable to properties including Hafren View and Glanhafren Hall and Glandulais Holiday Home Park	Potential objections from properties located to the west side of Newtown due to indirect access from the west. Also potential for objections from Hafren View, Glandulais Holiday Home Park and Castell-y-Dail dwellings due to direct impacts of the route. Likely to be supported by Black Hall and adjacent landowners due to reduced traffic past their properties.	Potentially more acceptable to Glanhafren Hall and Glandulais Holiday Home Park. Hafren View would need to be demolished and this would be likely to raise an objection.	Potential objections from properties Hafren View, Glanhafren Hall and Glanrhyd.	More acceptable to properties west of Black Hall farm. Potential objections from affected Industrial Unit owners and their employees and residents in Maesydail and Measrhandir and Garth Owen. Less overtaking opportunities for through traffic.
Acceptability to other stakeholders:	Potential additional mitigation/costs required by NRW (loss of woodland and flood storage), BT and CPAT (Heritage), Potential support from PCC re de-trunking	More acceptable to NRW, BT, Severn Trent and PCC. Potential additional mitigation/costs required by NRW (flood storage) and CPAT / CADW (Heritage)	Potential additional mitigation/costs required by NRW (loss of woodland including Castell-y-Dail and flood storage), BT, Wales & West (Gas main) and CPAT (Heritage – Impact on Castell-y-Dail Hillfort). Would not be acceptable to WG and PCC due to the steepness of the diverted A483 (see below).	Potential additional mitigation/costs required by NRW (loss of woodland, landscape effects and proximity to River Severn) and CPAT (Heritage), Potential objection/additional mitigation/costs required by Coleg Powys/Powys County Council west of Mochdre Lane.	Potential additional mitigation/costs required by NRW (loss of woodland and landscape effects) and CPAT/CADW (Heritage), Potential objection/additional mitigation/costs required by Powys County Council.	More acceptable to NRW, BT, Severn Trent. Less acceptable to PCC as more traffic likely to use existing roads.
Technical and operational feasibility:	More earthworks and impact on steeply sloping ground. Reduced impact on PMA to properties.	Less earthworks and reduced impact on steeply sloping ground. Better access to existing A489 for services maintenance Departure from Standard required (70kph)	The diverted A483 linking to the Mochdre Industrial Estate would be excessively steep with a maximum gradient of 24% (max permitted 8%). This would also include sub-standard vertical curves which are over 5 design steps below Desirable Minimum. More earthworks and impact on steeply sloping ground including at Castell-y-Dail (up to 34m deep cutting). Indirect access to western side of Newtown for vehicles travelling from the west. Allows for removal of one trunk road junction compared to the Conceptual Design.	Major impact on steeply sloping ground with cuttings up to 43m deep, resulting in a earthworks surplus of an additional 600,000m^3 Better access to existing A489 for services maintenance Improved horizontal alignment at tie in with existing A489.	Major impact on steeply sloping ground with cuttings up to 40m deep, resulting in a earthworks surplus of an additional 115,000m^3 Better access to existing A489 for services maintenance Departure from Standard required (70kph)	Reduced scheme overtaking opportunities. The existing section of Heol Ashley would require a 40mph speed limit to be imposed which along with predicted congestion at the modified Mochdre Lane Roundabout would discourage traffic from using the bypass. Major impact on the overall earthworks balance of the scheme.
Financial affordability and deliverability:	Requirement for services diversions to include water, BT, electricity	Reduced requirement for diversions for water and BT Reduced loss of caravan pitches	Requirement for services diversions to include water, BT, electricity and gas	Major increase in earthworks surplus of an additional 600,000m3	Increase in earthworks surplus of an additional 115,000m3 Loss of caravan pitches	Major increase in overall scheme earthworks balance with a surplus of 500,000m3.

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	A489 Llanidloes Road Roundabout Options					
Appraisal Criteria	**Option 1A Conceptual Design**	**Option 1B Roundabout Repositioned**	**Option 1C Roundabout near Castell-y-Dail**	**Option 1D Roundabout near Hafren View**	**Option 1E Glandulas Holiday Home Park Alternative**	**Options 1F Modified Stage 2 Brown Route**
	Loss of caravan pitches Environmental seasonal constraints	Reduced environmental seasonal constraints	Loss of caravan pitches Environmental seasonal constraints	Requires demolition of Hafren View Avoids loss of caravan pitches Environmental seasonal constraints Requirement for services diversions to include water, BT, electricity	Requirement for services diversions to include water, BT, electricity Environmental seasonal constraints	Requires demolition of six factory units., with major disruption to other factories during service road construction and access alterations Requirement for services diversions to include water, BT, electricity and gas including disruption to the adjacent factories
Risks:	Services diversions and interface with third parties Ecological mitigation and programme Increased fill volumes Potential increase to flood compensation requirements	Reduced services diversions – reduction of potential 3 months delay for water diversion Reduced ecological constraints Reduced fill Potential increase to flood compensation requirements	Services diversions including high pressure gas main and interface with third parties Ecological and Heritage mitigation and programme Potential increase to flood compensation requirements	Services diversions and interface with third parties Ecological mitigation and programme Major increase in earthworks disposal	Services diversions and interface with third parties Ecological mitigation and programme Increase in earthworks disposal	Major services diversions and interface with third parties Impact on Industrial Estate Businesses' Major increase in earthworks disposal Potential traffic congestion along Heol Ashley
Comment:	**This Option is taken forward as it is the Conceptual Design**	**It is recommended that this Option is taken forward**	**This option has been rejected primarily due to the extremely steep gradients along the A483, which extends from the Dolfor Road tie in at a level of 199.5m to the Mochdre Industrial Estate Road tie in at 127.2m over a distance of 710m.** **There are also traffic issues with Mochdre Industrial Estate as this would be the main access route in to and out of Newtown and the associated major ecology, heritage and landscape effects.**	**This option has been rejected due to the need to demolish Hafren View, extensive earthworks required and the associated major detrimental ecological and landscape impacts.**	**This option has been rejected due to the extensive earthworks required and the associated major detrimental ecological and landscape impacts.**	**This option has been rejected due to the extensive service roads needed to serve the Mochdre Industrial Estate, the high volume of earthworks disposal required, the reduced overtaking opportunities and the reduced speeds on the western section potentially attracting less traffic to the bypass.**

	A483 Dolfor Road Roundabout Options			
Appraisal Criteria	**Option 2A Conceptual Design**	**Option 2B AGC Tender Design Option**	**Option 2C Proposed Southern Alignment**	**Option 2D Grade Separated Junction near Castell-y-Dail**
Welsh Impact Areas				
Economy				
Transport Economic Efficiency		No measurable change in traffic movements but overall cost savings, and reduced traffic disruption during construction likely to give this option an improved BCR compared with the Conceptual design but less than Option 2c	No measurable change in traffic movements but overall cost savings, and reduced traffic disruption during construction likely to give this option an improved BCR	Grade separated junction would reduce traffic delays compared to roundabout arrangement within the Conceptual Design and likely result in potentially improving the BCR. However this option would introduce more traffic to the Mochdre Industrial Estate Road with potential to cause localised congestion.
EALI (wider economic Impacts)		No difference to Conceptual Design	No difference to Conceptual Design	No difference to Conceptual Design
Environment				
Environmental Overview Option 2B has less overall environmental impacts on the Garth Owen Estate especially in terms of construction and operational noise, local air quality and visual impact as the main line is further from the residential area. Option 2C has less overall impact on noise, local air quality and visual impact than Options 2A and 2B as it is located further from the Garth Owen Estate and Mochdre Industrial Estate and the cutting to the east of Dolfor road will be reduced. There will be increased construction impacts on properties along Middle and Upper Dolfor road for Option 2C but this is over a limited duration. Option 2C will be closer to Bryn Eira farm but will be in a cutting for most of its length and will have greater impact on farmland to the west of Dolfor road. The cutting east of Dolfor road would be greater for Option 2A and more visible however Option 2C will have a deep cutting to the west of Dolfor road, however Options 2A and 2B cut into the toe of the relict landslip whereas the cutting for Option 2C will be near the top of the landslip. Option 2C will require greater loss of vegetation and associated Dormouse habitat than Options 2A and 2B but these impacts can be mitigated. All options have a similar impact on the water quality. Option 2C and 2D will require less culverting of Green brook. Option 2C has less direct impact and loss of properties. Option 2D would introduce more traffic on the Mochdre Industrial Estate Road and hence increase the noise and air quality pollution along this section of the scheme.				
Noise	-1	-1	0	-1
Local Air Quality	-1	-1	0	-1
Greenhouse Gas Emissions	-1	-1	-1	-2
Landscape	-2	-1	-1	-1
Townscape	-1	-1	0	-1
Bio-diversity	-1	-1	-1	-1
Heritage	0	0	0	0
Water environment	-1	-1	0	-1
Soils	-2	-2	-2	-2
Society				
Society Overview All options will improve transport safety due to the improved sight lines along A483. Option 2C slightly better for personal security as it is further from Garth Owen Estate and Mochdre Industrial Estate. All options are similar in terms of physical fitness. There will be a short diversion for BW N3DA required for all options. There will be severance of Bryn Eira farm although Option 2C allows for larger workable fields as long as access is provided. Loss of 2 properties (already purchased by WG) for Option 2A, I property for Option 2B and loss of a coach park for Option 2C. Option 2C has greater loss of agricultural land to the west of Dolfor road. Option 2D would increase severance due to increased traffic on the Mochdre Industrial Estate Road. There will be no impact on social inclusion and Equality, Diversity and Human Rights				
Transport safety	+1	+1	+1	+1
Personal security	-1	-1	0	-1
Permeability	-1	-1	-1	-2

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	A483 Dolfor Road Roundabout Options			
Appraisal Criteria	**Option 2A Conceptual Design**	**Option 2B AGC Tender Design Option**	**Option 2C Proposed Southern Alignment**	**Option 2D Grade Separated Junction near Castell-y-Dail**
Physical Fitness	0	0	0	0
Social Inclusion	0	0	0	0
Equality, Diversity & Human Rights	0	0	0	0
Transport Planning Objectives and Mandatory Requirements (√ supports TPO or mandatory assumptions, 0 no impact, x does not meet TPO or mandatory assumptions)				
TPO 1	0	0	0	0
TPO 2	√	√	√	√
TPO 3	√	√	√	√
TPO 4	0	0	0	0
TPO 5	0	0	0	0
TPO 6	√	√	√	√
TPO 7	√	√	√	√
Mandatory Assumptions	0	0	0	0
Public acceptability:	Potential for objections from properties in Garth Owen Estate and along Middle and Upper Dolfor road. potential for objections from industrial units in Mochdre Industrial Estate	Reduced potential for objections from properties in Garth Owen Estate and industrial units in Mochdre Industrial Estate.	Limited potential for objections from properties in Garth Owen Estate and industrial units in Mochdre Industrial Estate. Potential objections from properties along Middle and Upper Dolfor roads.	Potential for more objections from properties in Garth Owen Estate and industrial units in Mochdre Industrial Estate because of additional traffic adding to severance. Likely to be supported by Black Hall farm and adjacent landowners due to reduced traffic past the properties.
Acceptability to other stakeholders:	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. Diversions to be agreed with service providers including gas, water, electricity and BT.	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. Diversions to be agreed with service providers including gas, water, electricity and BT.	Reduced mitigation to be agreed with NRW re water quality and flooding. Mitigation to be agreed with NRW re ecological issues. Mitigation to be agreed with CPAT re heritage. Minor diversions required for water and BT.	Mitigation to be agreed with NRW re flooding, water quality and ecological issues and CPAT re heritage. Diversions to be agreed with service providers including gas, water, electricity and BT. Would not be acceptable to Welsh Government and Powys County Council due to the steepness of the diverted A483 (see below).
Technical and operational feasibility:	Embankments and retaining walls adjacent to Mochdre Industrial estate. Retaining walls and bridge over Dolfor Road and for access into Mochdre Industrial Estate. 22m deep cutting east of Dolfor Road.	Reduced retaining structures, bridge into Mochdre Industrial Estate eliminated. Reduced depth of cutting east of Dolfor road.	Reduced construction adjacent to Mochdre Industrial Estate. Cuttings up to 24m deep to west of Dolfor Road, 120m long structure over Middle Dolfor Road	The diverted A483 linking to the Mochdre Industrial Estate would be excessively steep with a maximum gradient of 26% (max permitted 8%). This would also include sub standard vertical curves which are over 5 design steps below Desirable Minimum. More earthworks and impact on steeply sloping ground including at Castell-y-Dail. Bridge and retaining walls required for grade separated junction located in relic landslip area. Reduced construction to the south of the Mochdre Industrial Estate units.
Financial affordability and deliverability:	High cost of services and programme risk due to services diversions including very high pressure gas main. Potential claims from properties in Garth Owen Estate and Mochdre Industrial Estate.	Cost and programme risk due to services slightly reduced compared to Option 2A. Potential claims from properties in Garth Owen estate and Mochdre Industrial Estate. Additional purchase of property along Upper Dolfor Road.	Avoids diversion of very high pressure gas main and electricity. Reduced diversions of BT and water. Reduced requirements for TM	High cost of structures and services and programme risk due to services diversions including high pressure gas main.
Risks:	Programme and cost risk relating to services diversions esp very high pressure gas main. Interface with live traffic on existing	Programme and cost risk relating to services diversions esp very high pressure gas main slightly less than Option 2A.	Programme and cost risk relating to services diversions significantly reduced. No diversion of very high pressure gas main required.	Programme and cost risk relating to services diversions esp high pressure gas main. Interface with live traffic on existing roads esp A483. Impact on relict

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	A483 Dolfor Road Roundabout Options			
Appraisal Criteria	**Option 2A Conceptual Design**	**Option 2B AGC Tender Design Option**	**Option 2C Proposed Southern Alignment**	**Option 2D Grade Separated Junction near Castell-y-Dail**
	roads esp A483 Impact on relict landslip Proximity of works to Garth Owen Estate and Mochdre Industrial Estate Potential for buried archaeology	Interface with live traffic on existing roads esp A483 les than Option 2A Impact on relict landslip reduced Proximity of works to Garth Owen Estate and Mochdre Industrial Estate reduced Potential for buried archaeology reduced	Interface with live traffic on existing roads esp A483 significantly reduced Impact on relict landslip reduced Proximity of works to Garth Owen Estate and Mochdre Industrial Estate reduced Potential for buried archaeology	landslip esp with construction of bridge and retaining walls for grade separated junction. Potential for buried archaeology
Comment:	**This Option is taken forward as it is the Conceptual Design**	**This option is preferred to the Conceptual Design Option 2A but will only be taken forward if Option 2C is not accepted**	**It is recommended that this Option is taken forward**	**This option has been rejected primarily due to the extremely steep gradients required along the A483, which extends from the Dolfor Road tie in at a level of 184.9m to the Mochdre Industrial Estate Road tie in at 133.9m over a distance of 380m.** **The additional traffic along the Mochdre Industrial Estate road and the impact of the grade separated junction located within the relict landslip areas were also unfavourable aspects.**

	Kerry Road Junction Options	
Appraisal Criteria	**Option 3A Conceptual Design**	**Option 3B At-grade Four Arm Roundabout**
Welsh Impact Areas		
Economy		
Transport Economic Efficiency		It would introduce a roundabout, thereby moderately increasing travel times on the bypass and the A489 Kerry Road. However the overall costs are considerably less due to avoiding the high pressure gas main diversion and the elimination of the under-bridge. Benefits to traffic would be the increased length of 2+1 Road with overtaking opportunities. Hence the BCR is anticipated to be only marginally less positive than Option 3A.
EALI (wider economic Impacts)		No difference to Conceptual Design
Environment		
Environmental Overview		
Option 3A requires greater earthworks and will have a greater landscape and visual impact than Option 3B. Both options lie within an area of potential bats, Badgers and Dormice, whilst there is greater loss of vegetation clearance for Option 3A there is also the opportunity for a mammal crossing within the design. There is potential for buried archaeology. The Options lie within Grade 4 and 5 agricultural land and in close proximity to Lower Brimmon Farm. The Options are similar in terms of impact on noise and air quality during operation but the imapcts during construction will be reduced for Option 3B.		
Noise	-1	-1
Local Air Quality	-1	-1
Greenhouse Gas Emissions	-1	-1
Landscape	-2	-1
Townscape	-2	-1
Bio-diversity	-1	-1
Heritage	-1	0
Water environment	0	0
Soils	-1	0
Society		
Society Overview		
Both options will improve transport safety due to the improved sight lines along A489. Option 3A reduces driver stress due to greater clarity with roundabout arrangement Option 3A severs FP N22. Option 3A requires greater land take and loss of agricultural land belonging to Lower Brimmon Farm. There will be no impact on social inclusion and Equality, Diversity and Human Rights		
Transport safety	+1	+1
Personal security	0	0
Permeability	-1	0
Physical Fitness	0	0
Social Inclusion	0	0
Equality, Diversity & Human Rights	0	0
Transport Planning Objectives and Mandatory Requirements √ supports TPO or mandatory assumptions, 0 no impact,		

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	Kerry Road Junction Options	
Appraisal Criteria	**Option 3A Conceptual Design**	**Option 3B At-grade Four Arm Roundabout**
x does not meet TPO or mandatory assumptions		
TPO 1	0	0
TPO 2	√	√
TPO 3	√	√
TPO 4	0	0
TPO 5	0	0
TPO 6	√	√
TPO 7	√	√
Mandatory Assumptions	√	X (not grade-separated)
Public acceptability:	Potential objection from Lower Brimmon Farm	Potentially more acceptable to Lower Brimmon Farm. Potential for greater delays on Kerry Road and mainline
Acceptability to other stakeholders:	Diversions required for high pressure gas, electricity and BT. Potential concern from Design Commission for Wales	More acceptable to DCfW. No HP gas diversion required. Minor other service diversions required.
Technical and operational feasibility:	More earthworks and structures, disruption to Kerry Road traffic. Bridge required to carry bypass over Kerry Road	Less earthworks and reduced construction. Departure from standards may be required for Kerry road northern link or speed limit imposed.
Financial affordability and deliverability:	Requirement for services diversions to include HP gas, water, BT, electricity	No requirement for very high pressure gas ain and electricity diversions Reduced loss of land to Lower Brimmon Farm
Risks:	Services diversions and interface with third parties especially very high pressure gas and electricity Earthworks and structures	Reduced services diversions – reduction of potential 6 months delay for very high gas main diversion Reduced earthworks and site clearance Greater offline construction Requirement to complete construction works around live services
Comment:	**This Option is taken forward as it is the Conceptual Design**	**It is recommended that this Option is taken forward**

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	Railway Crossing and A483 Pool Road Roundabout Options				
Appraisal Criteria	**Option 4A Conceptual Design**	**Option 4B Three armed Roundabout at Gelli, scheme over Railway**	**Option 4C Three armed Roundabout north of Pool road, scheme over Railway**	**Option 4D Three armed Roundabout south of Railway, scheme over Railway**	**Option 4E Three armed roundabout north of Pool Road, scheme over railway and diverted link to Newtown**
Welsh Impact Areas					
Economy					
Transport Economic Efficiency		Shorter bypass but additional costs due to 300,000 cum of fill required north of railway likely to give slightly lower BCR than Conceptual Design and Option 4e.	Longer bypass and additional costs due to 400,000 cum of fill required north of railway likely to give slightly lower BCR than Conceptual Design and Option 4e.	Shorter bypass but additional costs due to two bridges over railway and 300,000 cum of fill required north of railway likely to give slightly better BCR than Conceptual Design but less than Option 4e.	Potentially longer link to Newtown but overall reduced cost likely to give slightly better BCR
EALI (wider economic Impacts)		No difference to Conceptual Design	No difference to Conceptual Design	No difference to Conceptual Desig	No difference to Conceptual Design
Environment					
Environmental Overview					
Option 4A passes under the railway in a deep cutting. The works under the railway will require Network Rail permissions and will therefore have greater programme constraints in this location than the other options. Options 4B, 4C and 4D cross over the railway to the east of Option 4A and require extensive earthworks to link into the existing A489 with associated impacts on the properties along Pool road. These will have locally significant landscape and visual impacts. Option 4D will require 2 bridges over the railway and option 4E will require a bridge over the railway and another bridge over the realigned A489. The property Gelli will be demolished or severely impacted upon in Options 4B, 4C, 4D and 4E. Whilst Option 4A passes under the railway in cutting with the potential for encountering buried archaeology all options crossing over the railway will require greater work within the vicinity of Pool road which have the potential for encountering the Roman road. All Options are likely to encroach into the 1:1000 year flood risk area and require additional flood storage capacity and attenuation. All Options will cause severance of hedgerows which could provide bat flight lines and Dormice habitat. All Options pass through reptile habitat requiring mitigation					
Noise	0	-1	-1	-1	-1
Local Air Quality	0	-1	-1	-1	-1
Greenhouse Gas Emissions	-1	-1	-1	-1	-1
Landscape	-1	-2	-2	-2	-1
Townscape	-1	-1	0	-2	-1
Bio-diversity	-1	-1	-1	-1	-1
Heritage	0	0	0	-1	-1
Water environment	-1	-1	-1	-1	-1
Soils	-2	-2	-2	-1	-1
Society					
Society Overview					
All options will improve transport safety due to the improved sight lines along A483. Options 4B, 4C and 4D have elevated earthworks in relation to the properties along Pool road. Option 4D ties in to Pool road to the west in close proximity to the Felmongery and on embankment. All options sever Grade 4/5 agricultural land. Gelli will be demolished for Options 4B, 4D and 4E. Options 4B, 4C, 4D and 4E will require a minor diversion to NMU routes and may require a new PMA under the railway or other provisions. Options 4A and 4E will require the stopping up of the level crossing. There will be no impact on social inclusion and Equality, Diversity and Human Rights					
Transport safety	+1	+1	+1	+1	+1
Personal security	0	-1	-1	-1	0
Permeability	-1	-1	-1	-1	-1
Physical Fitness	0	0	0	0	0
Social Inclusion	0	0	0	0	0
Equality, Diversity & Human Rights	0	0	0	0	0
Transport Planning Objectives and Mandatory Requirements (√ supports TPO or mandatory assumptions, 0 no impact, x does not meet TPO or mandatory assumptions)					

A483/A489 Newtown Bypass:
Summary High Level Appraisal Table

	Railway Crossing and A483 Pool Road Roundabout Options				
Appraisal Criteria	**Option 4A Conceptual Design**	**Option 4B Three armed Roundabout at Gelli, scheme over Railway**	**Option 4C Three armed Roundabout north of Pool road, scheme over Railway**	**Option 4D Three armed Roundabout south of Railway, scheme over Railway**	**Option 4E Three armed roundabout north of Pool Road, scheme over railway and diverted link to Newtown**
TPO 1	0	0	0	0	0
TPO 2	√	√	√	√	√
TPO 3	√	√	√	√	√
TPO 4	0	0	0	0	0
TPO 5	0	0	0	0	0
TPO 6	√	√	√	√	√
TPO 7	√	√	√	√	√
Mandatory Assumptions	√	X (does not take bypass under railway)	X (does not take bypass under railway)	X (does not take bypass under railway)	X (does not take bypass under railway)
Public acceptability:	Potentially more acceptable to properties along Pool road and Dyffryn Enterprise Park	Potential for objections from 6 properties along Pool road in vicinity of proposals	Potential for objections from 7 properties along Pool road in vicinity of proposals	Potential for objections from 7 properties along Pool road in vicinity of proposals and Dyffryn Enterprise Park. Major diversions required during construction.	Potentially more acceptable to properties along Pool road and Dyffryn Enterprise Park due to lower embankments.
Acceptability to other stakeholders:	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. Potential issues and delays from Network Rail Diversions to be agreed with service providers including HP gas, trunk water mains and BT.	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. More acceptable to NR No very high pressure main diversion required. Limited works require for water pipes.	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. More acceptable to NR No very high pressure main diversion required. Limited works require for water pipes.	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. More acceptable to NR. No very high pressure main diversion required. Limited works require for water mains, though long lengths of duplication pipes required.	Mitigation to be agreed with NRW re flooding and water quality and CPAT re heritage. More acceptable to NR No very high pressure main diversion required. Limited works require for water mains.
Technical and operational feasibility:	Complex bridge structure under railway requiring NR sign off. Works to bridge structure to be undertaken in accordance with NR rail closures. Limited movement of fill material across railway	Requirement of fill to north of railway. Difficulty of construction around existing carriageway. Roundabout and link roads requiring embankments up to 10m with link road gradients up to 10%. Less constraints due to NR. Reduced services diversions	Requirement of fill to north of railway. Difficulty of construction around existing carriageway. Roundabout and link roads requiring embankments up to 14m with link road gradients up to 9%. Less constraints due to NR. Reduced services diversions.	Requirement of 300,000 cu m of fill to north of railway. Roundabout and link roads requiring embankments up to 12m over existing road, with link road gradients up to 9%. Very difficult to construct around existing carriageway. Two rail bridges required. Difficult tie-ins to A489 to west and east. Less constrained than option 4A by NR Reduced services diversions	Minimal requirement of fill to north of railway. Simpler construction. Reduced services diversions. Maximum gradients of 6%.
Financial affordability and deliverability:	Diversions required for very high pressure gas main, 450mm water mains, and BT. Programme delays and requirement to work around services diversions. Approvals required from NR Potential earthworks surplus of up to 500,000cum	Cost and programme risk due to services reduced compared to Option 4A. Potential claims from properties along Pool road. Additional purchase of Gelli	Cost and programme risk due to services reduced compared to Option 4A. Potential claims from properties along Pool road. Additional purchase of Gelli	Cost and programme risk due to services reduced compared to Option 4A. Potential claims from properties along Pool road. Additional purchase of Gelli Additional cost of second rail bridge and 300,000 cum of fill north of railway.	Cost and programme risk due to services reduced compared to Option 4A. Potential claims from properties along Pool road. Additional purchase of Gelli and farm building Additional cost of bridge across realigned A489 and new diverted link to Newtown
Risks:	Programme and cost risks relating to NR approvals and closures Programme and cost risk relating to services diversions especially very high pressure gas main and trunk water mains. Interface with live traffic on A489 Potential for buried archaeology	Limited programme and cost risk relating to services diversions Road structure with earth retaining walls in close proximity to A489. Interface with live traffic on A489 Potential for buried archaeology	Limited programme and cost risk relating to services diversions Road structure with earth retaining walls in close proximity to A489. Interface with live traffic on A489 Potential for buried archaeology	Limited programme and cost risk relating to services diversions Road structure with earth retaining walls in close proximity to A489. Interface with live traffic on A489 Requirement for 300,000 cum fill to north of railway Work in close proximity to Dyffryn Enterprise Park Potential for buried archaeology	Limited programme and cost risk relating to services diversions and NR Road structure with earth retaining walls in close proximity to A489. Interface with live traffic on A489 Potential for buried archaeology
Comment:	**This Option is taken forward as it is the Conceptual Design**	**This option has been rejected due to buildability and proximity to properties along Pool Road**	**This option has been rejected due to buildability and proximity to properties along Pool Road**	**This option has been rejected due to buildability and proximity to properties along Pool road and Dyffryn Enterprise Park**	**It is recommended that this Option is taken forward**